



Colleges of Arts and Sciences

Contents

Degrees, Minors and Certificates Offered	83	East Asian Languages and Literatures.....	110
Administration	84	Economics	112
General Information	84	English	115
Accreditations and Affiliations.....	85	Environmental Studies	118
Degrees, Minors and Certificates.....	85	Ethnic Studies	120
Certificate Programs	85	Geography	120
Marine Option Program	85	Hawaiian and Indo-Pacific Languages and Literatures	122
Advising.....	85	History	125
Undergraduate Programs	86	Information and Computer Sciences	127
Colleges of Arts and Sciences Program Requirements	86	Interdisciplinary Studies	129
Arts and Sciences Program Requirements for Students Who En- tered UH Mānoa Fall 2006	87	Interpretation and Translation Studies	130
Option 1: Breadth	88	Journalism	130
Option 2: Depth.....	88	Languages and Literatures of Europe and the Americas	131
BA Degree	87	Library and Information Science	134
BFA Degree.....	89	Linguistics	136
BMus Degree.....	89	Mathematics	140
BS Degree.....	89	Microbiology	141
Second or Multiple Majors and Minors.....	89	Music	143
Second Baccalaureate Degree	89	Peace Studies	147
Professional Programs	90	Philosophy	149
Graduate Programs	90	Physics	151
Student Organizations	90	Political Science	153
Honors and Awards	91	Population Studies	155
Instructional and Research Facilities	91	Psychology	157
Center for Biographical Research	91	Public Administration	159
Language Learning Center	91	Religion	160
Mānoa Writing Program	91	Russian Area Studies	162
Second Language Teaching and Curriculum Center.....	92	Second Language Acquisition	162
National Foreign Language Resource Center	92	Second Language Studies	165
Academy for Creative Media.....	92	English Language Institute	167
American Studies	93	Hawai'i English Language Program	168
Anthropology	95	Sociology	168
Art and Art History	98	Speech	171
Astronomy	100	Theatre and Dance	172
Biology	101	Urban and Regional Planning	176
Botany	103	Women's Studies	179
Chemistry	106	Zoology	182
Communication	108		

Degrees, Minors, and Certificates

The Colleges of Arts and Sciences offer undergraduate and graduate degrees, minors, and certificate programs in the following areas. Changes in programs and degrees approved after December 2005 may not be reflected in this listing.

Field	Degree or Certificate
American Studies (p. 93)	Min, BA, MA, PhD
Anthropology (p. 95)	Min, BA, MA, PhD
Art and Art History (p. 98)	Min, BA, BFA, MA, MFA
Astronomy (p. 100)	MS, PhD
Biology (p. 101)	Min, BA, BS
Botany (p. 103)	Min, BA, BS, MS ¹ , PhD ¹
Burmese (p. 122)	U Cert ⁷
Chemistry (p. 106)	Min, BA, BS, MS, PhD
Chinese (p. 110)	U Cert, Min, BA, MA ² , PhD ²
Classics (p. 131)	U Cert, BA, MA ³
Clinical Psychology (p. 157)	G Cert
Communication (p. 108)	BA, MA, G Cert, PhD
Computer Science (p. 127)	Min, BS, MS, PhD
Conflict Resolution (p. 147)	G Cert
Dance (p. 172)	Min, BA, MA, MFA
Dance Theatre (p. 172)	BFA
East Asian Languages and Literatures (p. 110)	MA ² , PhD ²
Economics (p. 112)	U Cert, Min, BA, MA, PhD
English (p. 115)	Min, BA, MA, PhD
English as a Second Language (p. 164)	BA ⁴ , MA ⁵ , PhD ⁵
Environmental Studies (p. 118)	U Cert, BA ⁴
Ethnic Studies (p. 120)	U Cert, BA
Ethnobotany (p. 103)	BS
Filipino (p. 122)	U Cert ⁷ , Min, BA ⁸
French (p. 131)	U Cert, BA, MA ³
Geography (p. 120)	Min, BA, G Cert., MA, PhD
German (p. 131)	U Cert, BA, MA ³
Hawaiian (p. 122)	U Cert ⁷ , BA, MA
Hawaiian Language Immersion Education (p. 122)	Min
Hindi (p. 122)	U Cert ⁷ , BA ⁶
Historic Preservation (p. 93)	G Cert
History (p. 125)	Min, BA, MA, PhD
Human Language and Computers (p. 136)	U Cert
Human Resources/Organizational Management (p. 112, 153, 168)	U Cert
Ilokano (p. 122)	U Cert ⁷ , Min, BA ⁶
Indonesian (p. 122)	U Cert ⁷ , BA ⁶
Indo-Pacific Languages (p. 122)	U Cert ⁷ , BA ⁶
Information and Computer Sciences (p. 127)	BA
Interdisciplinary Studies (p. 129)	BA ⁴
Japanese (p. 110)	U Cert, Min, BA, MA ² , PhD ²
Journalism (p. 130)	BA
Korean (p. 110)	U Cert, Min, BA, MA ² , PhD ²
Language Acquisition (p. 136)	U Cert

- The MS and PhD in botanical sciences are offered in botany.
- The MA and PhD in East Asian languages and literatures are offered in Chinese, Japanese, and Korean.
- The MA in languages and literatures of Europe and the Americas is offered in Classics, French, German, and Spanish.
- Students can receive a BA in interdisciplinary studies in creative media, English as a second language, environmental studies, European cultural studies, Indo-Pacific languages, linguistics, peace studies, and women's studies. In addition, students can design their own majors utilizing this program.
- The Department of Second Language Studies offers the MA in English as a second language and the PhD in second language acquisition.
- The BA in interdisciplinary studies for Indo-Pacific languages has several concentrations: Hindi, Indonesian, Samoan, Sanskrit, Thai, and Vietnamese.
- The Certificate in Indo-Pacific Languages is offered in Burmese, Filipino, Hawaiian, Hindi, Ilokano, Indonesian, Samoan, Sanskrit, Tahitian, Thai, and Vietnamese.
- BA in Philippine Language and Literature with concentration in Filipino or Ilokano

Field	Degree or Certificate
Language and Cognition (p. 136)	U Cert
Languages and Literatures of Europe and the Americas (p. 131)	MA ³
Languages of Hawaii and the Pacific (p. 136)	U Cert
Latin America and Iberian Studies (p. 131)	U Cert
Library and Information Science (p. 134)	G Cert, MLISc
Linguistics (p. 136)	U Cert, BA ⁴ , MA, PhD
Marine Biology (p. 101)	BS
Marine Option Program (p. 85)	U Cert
Mathematics (p. 140)	Min, BA, BS, MA, PhD
Microbiology (p. 141)	Min, BA, BS, MS, PhD
Museum Studies (p. 93)	G Cert
Music (p. 143)	U Cert, Min, BA, BEd, BMus, MA, MMus, PhD
Ocean Policy (p. 120)	G Cert
Peace Studies (p. 147)	U Cert, BA ⁴ , G Cert
Philosophy (p. 149)	Min, BA, MA, PhD
Philippine Language and Literature (p. 122)	BA
Physics (p. 151)	Min, BA, BS, MS, PhD
Planning Studies (p. 176)	G Cert
Political Economy (p. 112, 153, 168)	U Cert
Political Science (p. 153)	Min, BA, MA, PhD
Population Studies (p. 155)	G Cert
Professional Writing (p. 115)	U Cert
Psychology (p. 157)	BA, MA, PhD
Public Administration (p. 159)	G Cert, MPA
Religion (p. 160)	Min, BA, G Cert, MA
Russian (p. 131)	U Cert, BA
Russian Area Studies (p. 162)	U Cert
Samoan (p. 122)	U Cert ⁷ , BA ⁶
Sanskrit (p. 122)	U Cert ⁷ , BA ⁶
Second Language Acquisition (p. 162)	PhD ⁵
Second Language Studies (p. 165)	BA ⁴ , MA, G Cert
Social Sciences & Health (p. 112, 153, 168)	U Cert
Sociology (p. 168)	U Cert, Min, BA, MA, G Cert, PhD
Spanish (p. 131)	U Cert, BA, MA ³
Speech (p. 171)	Min, BA, MA
Tahitian (p. 122)	U Cert ⁷
Telecommunications Information Resource Management (p. 108)	G Cert
Thai (p. 122)	U Cert ⁷ , BA ⁶
Theatre (p. 172)	Min, BA, MA, MFA, PhD
Urban and Regional Planning (p. 176)	G Cert, MURP, PhD
Vietnamese (p. 122)	U Cert ⁷ , BA ⁶
Women's Studies (p. 179)	U Cert, BA ⁴ , G Cert
Zoology (p. 182)	Min, BA, BS, MS, PhD

BA—bachelor of arts
 BFA—bachelor of fine arts
 BMus—bachelor of music
 BS—bachelor of science
 G Cert—graduate certificate
 MA—master of arts
 MFA—master of fine arts
 Min—minor
 MLISc—master of library and information science
 MMus—master of music
 MPA—master of public administration
 MS—master of science
 MURP—master of urban and regional planning
 PhD—doctor of philosophy
 U Cert—undergraduate certificate

Administration

College of Arts and Humanities

Hawai'i Hall 314
2500 Campus Road
Honolulu, HI 96822
Tel: (808) 956-6460
Fax: (808) 956-9085

Interim Dean: Thomas R. Bingham
Interim Associate Dean: Frank Beaver, II

Departments and programs: American Studies, Art and Art History, Historic Preservation, History, Music, Philosophy, Religion, Speech, and Theatre and Dance.

College of Languages, Linguistics and Literature

Bilger 101
2545 McCarthy Mall
Honolulu, HI 96822
Tel: (808) 956-8516
(808) 956-8671
Fax: (808) 956-9879

Interim Dean: Joseph H. O'Mealy
Interim Associate Dean: Jean Yamasaki Toyama

Departments and programs: East Asian Languages and Literatures, English, Hawaiian and Indo-Pacific Languages and Literatures, Interpretation and Translation Studies, Languages and Literatures of Europe and the Americas, Linguistics, Russian Studies, Second Language Acquisition, and Second Language Studies.

College of Natural Sciences

Bilger 102
2545 McCarthy Mall
Honolulu, HI 96822
Tel: (808) 956-6451
Fax: (808) 956-9111

Interim Dean: Charles F. Hayes

Departments and programs: Biology, Botany, Chemistry, Information and Computer Sciences, Library and Information Science, Marine Option Program, Mathematics, Microbiology, Physics and Astronomy, and Zoology.

College of Social Sciences

Hawai'i Hall 310
2500 Campus Road
Honolulu, HI 96822
Tel: (808) 956-6570
Fax: (808) 956-2340

Dean: Richard Dubanoski
Interim Associate Dean: Chung H. Lee

Departments, schools, and programs: Anthropology, Communications, Economics, Ethnic Studies, Geography, Journalism, Peace Studies, Political Science, Population Studies, Psychology, Public Administration, Social Science Research Institute, Sociology, Urban and Regional Planning, and Women's Studies.

Academic Affairs and Student Academic Services

Krauss 22
2500 Dole St.
Honolulu, HI 96822
2500 Campus Road
Tel: (808) 956-8844
Fax: (808) 956-2191

Associate Dean:

Academic advising for all arts and sciences students and all matters relating to the granting of baccalaureate degrees in arts and sciences; curricular affairs; administration of Freshman Seminar, Honors and Selected Studies, Interdisciplinary Studies, Academy for Creative Media and Rainbow Advantage Program; and registration ombudsman.

General Information

The Colleges of Arts and Sciences are comprised of four colleges that offer an integrated curriculum leading to baccalaureate and graduate degrees, certificates, and minors in their respective colleges. Each college includes an administrative unit and a number of academic departments and programs.

The four colleges are served by one administrative unit, the Academic Affairs and Student Academic Services office, which is a part of the Colleges of Arts and Sciences.

An excellent education is the primary mission of UH Mānoa, and the Colleges of Arts and Sciences is at the heart of this mission, providing students with a comprehensive learning experience in a vibrant academic climate.

UH Mānoa undergraduates take their first UH courses in the Colleges of Arts and Sciences as they undertake the General Education Core curriculum that is part of all the bachelor degrees offered on the campus. This liberal arts curriculum stresses the integration of knowledge to enhance students' understanding of life, the human condition, and the world in which we live. The core curriculum also entails critical thinking, which enables students to evaluate arguments, ideas, and theories, and to develop creative and meaningful applications of what they learn. The core gives students the tools of inquiry, enabling them first to identify important

questions and then to seek, analyze, and interpret possible answers to issues of their lives, world, and universe. The curriculum also provides opportunities to develop students' artistic and creative imaginations and their oral and written communication skills so that they can effectively present their ideas, thoughts, and feelings. Since values guide human actions, the core curriculum allows students to examine their own values and learn about those of others in order to help the students understand themselves and others around the world.

Students who earn their degrees in one of the Colleges of Arts and Sciences will find that the programs of the colleges are designed with the conviction that, beyond the core curriculum, liberally educated persons should have an intensive knowledge of at least one field of the arts, the humanities, the languages, the natural sciences, or the social sciences. An ideal education, based in the liberal arts, prepares students for productive lives and careers, enlightened citizenship, and lifelong learning. The colleges strive to enhance excellent learning opportunities by promoting active student participation.

Accreditations and Affiliations

All academic programs are reviewed and evaluated regularly by campus and external faculty committees. Some academic programs, because of the nature of the discipline, are accredited or certified also by national organizations. Check with individual academic departments and programs for their accreditation status or affiliation with national or international organizations.

Degrees, Minors and Certificates

For a listing of the degrees, minors, and certificates offered by the Colleges of Arts and Sciences, see table on p. 83.

Bachelor's Degrees: Bachelor of Arts (BA), Bachelor of Fine Arts (BFA), Bachelor of Music (BMus), Bachelor of Science (BS)

Master's Degrees: Master of Arts (MA), Master of Fine Arts (MFA), Master of Library and Information Science (MLISc), Master of Music (MMus), Master of Public Administration (MPA), Master of Science (MS), Master of Urban and Regional Planning (MURP)

Doctoral Degrees: Doctor of Philosophy (PhD) degrees in various disciplines

Certificate Programs

In addition to the major concentrations that are part of every bachelor's degree, students may choose to pursue a certificate in an area of personal interest. Certificates signify that a student has completed a defined body of work in a particular department or program. Certificates can be conferred as soon as the student completes the program's requirements. The right to confer certificates has been granted to certain programs and departments by the Board of Regents; some certificates are only for graduate students. Certificates entail a minimum of 15 credit hours of non-introductory course work (including

all upper division courses and those on the 200 level that have college-level course prerequisites), completed with a grade of C (not C-) or better and an overall GPA of 2.5 or better for those courses. Information on specific certificates can be obtained from the appropriate department or program office. See page 83 for a complete listing of certificate programs offered by the Colleges of Arts and Sciences.

Marine Option Program

The Marine Option Program (MOP) is a unique opportunity for undergraduates with an interest in the ocean. It is open to students in all fields and provides a clearinghouse for marine-oriented experiential education as well as a chance for students with common interests to meet. MOP sponsors a wide variety of marine activities, including field trips, workshops, seminars, symposia, and noncredit courses.

A certificate is awarded to undergraduates who successfully complete at least 12 credit hours of marine-related courses (including OCN 201, ORE 202, ZOOL 200, or an equivalent survey course; one 3-credit interdisciplinary ocean course; 6 credit hours of marine electives). In addition, students must complete the MOP Seminar (IS 100) followed by the MOP skill project. The unique MOP skill project (worth 3 or more credits, e.g. IS 400V) allows students to design and conduct a personal marine or aquatic project related to their educational goals. Past projects have run from scientific research to endeavors in the arts. Classified and unclassified graduate students are also eligible to enroll in MOP and earn a certificate.

Students interested in MOP or in marine careers and curricula should visit the Marine Option Program offices in Dean Hall, room 105A; tel. (808) 956-8433; e-mail mop@hawaii.edu, www.hawaii.edu/mop.

Advising

Student Academic Services Office
Hawaii Hall 108
Honolulu, HI 96822
Tel: (808) 956-8755
Fax: (808) 956-9796

Academic advisors at the colleges' Student Academic Services Office assist students with clarifying academic and career goals, learning about educational options and campus resources, planning a program of study, understanding academic policies and procedures and degree requirements, and assessing their academic progress toward their degrees. Students who are interested in a particular major or who have already declared a major also should meet with an advisor in the appropriate academic department.

From matriculation to graduation, students can take advantage of a range of advising services offered by the Arts and Sciences Student Academic Services Office.

Freshmen

See First Year Advising Center under First Year at Mānoa in the "Undergraduate Education" section of this *Catalog*.

Sophomores

Sophomores who need assistance choosing a major should see an academic advisor or attend a special session designed to help students sort through their options. If they are interested in transferring to another program, they should see an advisor in that office.

Juniors

Juniors can attend a Junior Matriculation Planning (JUMP) session to assess their academic progress, project a graduation date, and plan their remaining semesters at UH Mānoa.

Seniors

Seniors must attend a Graduation Audit (GRAD) session to review their record, plan their remaining semester(s), and do the necessary paperwork for graduation.

Students also can meet individually with advisors for clarification of requirements and for resolution of complex academic issues and individual concerns.

Undergraduate Programs

The Colleges of Arts and Sciences offer the bachelor of arts (BA), the bachelor of fine arts (BFA), the bachelor of music (BMus), and the bachelor of science (BS) degrees in more than 40 different majors. In addition, the Colleges offer over 20 minors. Each degree includes General Education Core courses, a specific field of concentration (the major), and courses in subjects that contribute to that major or are of special interest to the student (electives or minor).

Although UH Mānoa's General Education requirements must be completed by all candidates for baccalaureate degrees, each arts and sciences degree program requires candidates to satisfy a unique combination of core courses and prerequisites. A list of program requirements for each of the arts and sciences bachelor's degrees is available at the Colleges of Arts and Sciences Student Academic Services Office, Hawaii Hall 108.

The field of concentration or major should be declared by the end of the sophomore year by submitting a completed College and Major Transfer Request form to the Student Academic Services Office. Music and dance majors and majors offered under the bachelor of science should be declared within the first year of enrollment.

Information on specific majors and minors is available at the respective academic departments.

Colleges of Arts and Sciences Graduation Requirements

Admission requirements for the Colleges of Arts and Sciences candidates who have no previous college-level work are the same as those for UH.

To earn any bachelor's degree offered by the colleges, students must do the following:

1. Complete basic subjects specified by their degree programs;
2. Only the courses approved to date as listed on page 73 will satisfy the Symbolic Reasoning program requirements for the Colleges of Arts and Sciences (even if the AA degree was earned before transfer to UH Mānoa).
3. Fulfill the requirements of a major field of concentration and present to the Student Academic Services Office the goldenrod form attesting to completion of the major and signed by the major advisor;
4. Earn at least 60 hours of credit in non-introductory courses. These may be upper division courses (courses numbered 300 or above) or 200-level courses that have an explicit college-level course prerequisite;
5. Acquire a minimum total of 124 hours of credit, of which no more than 20 credit hours may be in subjects not offered within the Colleges of Arts and Sciences; no more than 12 may be in practicum courses; no more than 9 may be in directed reading and research (-99) courses; and no more than 8 in KLS activity courses;
6. Earn at least a 2.0 GPA (C average) for all UH Mānoa registered credits;
7. Register for all required courses (core, major, minor, and certificates) for a letter grade;
8. Earn a grade of C (not C-) or better in each course applied to the major, minor and certificate requirements (some majors require higher grades);
9. Arrange for a degree audit at a "GRAD session" at the Student Academic Services Office during the semester preceding the award of the degree;
10. Submit, during the semester preceding the award of the degree, an application for graduation available at Student Academic Services Office;
11. Pay a graduation fee of \$15 to the UH Mānoa Cashier's Office.

Students may apply to the appropriate language departments for exemption by examination in Hawaiian or Second Languages. They may also apply for credit by examination in any course offered by the colleges and required in a particular curriculum and for which a written examination is appropriate and feasible. Such credit carries a corresponding reduction in the 124 credit hours required for graduation. Note the deadlines in the "Calendar."

The associate dean of the Colleges of Arts and Sciences Academic Affairs and Student Academic Services may exercise discretion in modifying some of these requirements in exceptional cases after consultation with the graduation committee.

The next section describes the specific program requirements for students earning a Bachelor of Arts degree (BA), Bachelor of Fine Arts degree (BFA), Bachelor of Music degree (BMus), or a Bachelor of Science degree (BS). The Colleges of Arts and Sciences requirements for these degrees vary; refer to the appropriate section.

Arts and Sciences Program Requirements for Students Who Entered UH Mānoa Fall 2006

BA Degree

Students must complete the Colleges of Arts and Sciences Graduation Requirements as well as the following Arts and Sciences Program Requirements:

Arts and Sciences Foundations Requirements—

Written Communication (FW): One course (as designated by your writing placement exam results)
English (ENG) 100, 100A, 101-101L, or English Language Institute (ELI) 100

Symbolic Reasoning (FS): One course required as part of the College Program Requirements for BA, BFA, and BMus

- No approval or prerequisites needed for: Business (BUS) 250; Math (MATH) 100, 100A, 112; Natural Resources and Environmental Management (NREM) 203; Philosophy (PHIL) 110, 110A, 111, 111A.
- Approval or prerequisites needed for: Economics (ECON) 301; Information and Computer Sciences (ICS) 141, 241; Math (MATH) 140*, 203*, 215*, 215A*, 241*, 241A*, 251A*.
- As part of the College Program requirements, all BA, BFA, and BMus degree candidates must fulfill one of the following courses:
BUS 250, ECON 301, ICS 141, 241, MATH 100, 100A, 112, 140*, 203*, 215*, 215A*, 241*, 241A*, 251A*, NREM 203, PHIL 110, 110A, 111, or 111A

*Math Department's Precalculus Assessment required

Global & Multicultural Perspectives (FG): To satisfy this requirement, students must take a total of two courses; each course must come from a different group.

- Example: History 151 is from Group A and Anthropology 152 is from Group B

- Note: Foundations Global and Multicultural Perspective (FG) courses must be from different departments than the courses used to satisfy the Diversification requirement.

Group A: Anthropology (ANTH) 151; Art (ART) 175; History (HIST) 151, 161A

Group B: American Studies (AMST) 150; Anthropology (ANTH) 152; Art (ART) 176; Geography (GEOG) 102; History (HIST) 152, 155, 162A

Group C: Geography (GEOG) 151, 151A; Languages, Linguistics & Literature (LLL) 150; Music (MUS) 107; Religion (REL) 150

Arts and Sciences Diversification Requirements—

Diversification courses must come from different departments than the courses used to satisfy the Foundations Global & Multicultural Perspectives (FG) requirement.

(For example, if HIST 151 is used for GMP (FG), then courses from the History Department cannot be used to satisfy a Diversification requirement.)

Arts and Humanities

Two semester courses, each selected from a different group: Arts (DA), Humanities (DH), Literature (DL).

Natural Sciences

Two semester courses, one in the Biological Sciences (DB), one in the Physical Sciences (DP), and one Natural Science Lab (DY)

Social Sciences

Two semester courses (DS), each from a different department.

Arts and Sciences Breadth or Depth Requirement—

All BA degree candidates are required to complete **one** of the following two options:

- (1) Breadth or (2) Depth.

Option 1: Breadth

Students who choose this option must complete 12 additional credits, 3 credits from subject areas in each of the following Colleges: Arts and Humanities (AH); Languages, Linguistics, and Literature (LLL); Natural Sciences (NS); Social Sciences (SS) (see table on page 88). Any course at any level for which the student has prerequisites or permission can be used to fulfill the BA program requirements in the Breadth Option. Breadth requirements must be fulfilled with a grade of D (not D-) or higher.

You may **not** use any of the 12 credits to fulfill your Arts and Sciences Foundations, Diversification, or Hawaiian/Second Language requirements. However, you may use any of the 12 credits to fulfill Focus requirements. You may count up to 3 of the 12 credits toward your major requirements. *MATH 103, 104, and 135 do not satisfy the College of Natural Sciences Breadth requirement, although they will count towards the minimum 124 credits required for graduation.*

Option 2: Depth (Minor/Certificate)

Students who choose this option must complete a Minor or a Certificate at UH Mānoa within the Colleges of Arts and Sciences in a subject other than their major. Certificates require a minimum of 15 credit hours of specified courses and a 2.5 GPA in those courses. Students also may use a second major within the Colleges of Arts and Sciences to satisfy the Depth requirement.

You may **not** count any of the Minor/Certificate credits towards your Arts and Sciences Foundations, Diversification, Hawaiian/Second Language, or major requirements. However, the Minor/Certificate credits may be counted toward your Arts and Sciences Focus requirements. Your Minor/Certificate forms must be received by the A&S Student Academic Services Office prior to the GRAD Session.

Option 1: Breadth			
College of Arts & Humanities (AH)	College of Languages, Linguistics, and Literature (LLL)	College of Natural Sciences (NS)	College of Social Sciences (SS)
3 credits, taken from any of the areas listed below	3 credits, taken from any of the areas listed below	3 credits, taken from any of the areas listed below	3 credits, taken from any of the areas listed below
American Studies (AMST) Art and Art History (ART) Dance (DNCE) History (HIST) Music (MUS) Philosophy (PHIL) Religion (REL) Speech (SP) Theater (THEA)	<i>East Asian Languages & Literatures</i> Chinese (CHN)* East Asian Languages & Literatures (EALL)** Japanese (JPN)* Korean (KOR)* English (ENG) <i>Hawaiian & Indo-Pacific Languages & Literatures</i> Arabic (ARAB)* Burmese (BURM)* Cambodian (CAM)* Chamorro (CHAM)* Filipino (FIL)* Hawaiian (HAW)* Hawaiian & Indo-Pacific Languages & Literatures (IP)** Hindi (HINDI)* Ilokano (ILO)* Indonesian (IND)* Maori (MAO) Pali (PALI) Prakrit (PRAK) Samoan (SAM)* Sanskrit (SNSK)* Tahitian (TAHT)* Thai (THAI)* Tibetan (TIB)* Tongan (TONG) Vietnamese (VIET)* Interpretation & Translation Studies (TI) <i>Languages & Literatures of Europe and the Americas</i> French (FR)* German (GER)* Greek (GRK)* Hebrew (HEB)* Italian (ITAL)* Languages & Literatures of Europe and the Americas (LEA)** Latin (LATN)* Portuguese (PORT)* Russian (RUS)* Spanish (SPAN)* Linguistics (LING) Second Language Studies (SLS)	Astronomy (ASTR) Biology (BIOL) Botany (BOT) Chemistry (CHEM) Information & Computer Sciences (ICS) Mathematics (MATH) Microbiology (MICR) Physics (PHYS) Zoology (ZOOL) Note: MATH 103, 104 and 135 do not satisfy the College of Natural Sciences Breadth requirement, although they will count towards the minimum 124 credits required for graduation.	Anthropology (ANTH) Communication (COM) Economics (ECON) Ethnic Studies (ES) Geography (GEOG) Journalism (JOUR) Peace Studies (PACE) Political Science (POLS) Population Studies (PPST) Psychology (PSY) Public Administration (PUBA) Sociology (SOC) Urban & Regional Planning (PLAN) Women's Studies (WS)

* Language courses taken to fulfill the Hawaiian/second language requirement may not be used to satisfy Option 1 requirement of 12 credits, 3 credits from each Arts & Sciences College.

** Courses offered in English

Minors

- American Studies
- Anthropology
- Art & Art History
- Biology
- Botany
- Chemistry
- Chinese
- Computer Sciences
- Dance
- Economics
- English
- Filipino Language & Culture
- Geography
- Hawaiian Language Immersion Education
- History
- Ilokano Language & Culture

- Japanese
- Korean
- Mathematics
- Microbiology
- Music
- Philosophy
- Physics
- Political Science
- Religion
- Sociology
- Speech
- Theatre
- Zoology

Undergraduate Certificates

- East Asian Languages
 - Chinese
 - Japanese
 - Korean
- Environmental Studies
- Ethnic Studies
- Languages and Literatures of Europe and the Americas
 - Classics
 - French
 - German
 - Latin America and Iberian Studies
 - Russian
 - Russian Area Studies
 - Spanish
- Hawaiian and Indo-Pacific Languages
 - Filipino
 - Hawai'i & the Pacific
 - Hawaiian
 - Hindi
 - Ilokano
 - Indo-Pacific
 - Indonesian
 - Samoan
 - Sanskrit
 - Tahitian
 - Thai
 - Vietnamese
- Human Language and Computers
- Human Resources/Organizational Management
- Language Acquisition
- Language and Cognition
- Linguistics
- Marine Option Program
- Music
- Peace Studies
- Pidgin and Creole Studies: Second Language Studies
- Political Economy
- Professional Writing
- Social Science and Health
- Women's Studies

BA Major Requirements

All BA degree candidates should consult the appropriate departmental advisor for a list of major requirements.

BFA Degree

Students must complete the Arts and Sciences Graduation Requirements (see p. 86) as well as the Arts and Sciences Foundations and Diversification Program Requirements (see p. 87). All BFA degree candidates should consult the appropriate departmental advisor before registering.

BMus Degree

Students must complete the Arts and Sciences Graduation Requirements (see p. 86) as well as the Arts and Sciences

Foundations and Diversification Program Requirements (see page 87).

For students concentrating in voice, completion of first-level study of two languages may be substituted for completion of second-level study of a single language with prior approval of the department chair.

All BMus degree candidates should consult the appropriate departmental advisor before registering.

BS Degree

Students must complete the Arts and Sciences Graduation Requirements (see p. 86) as well as the Arts and Sciences Foundations and Diversification Program Requirements (see page 87).

In addition, all BS candidates are required to complete the following science courses as part of the A&S Foundations Symbolic Reasoning (FS) and Diversification Natural Sciences (DP) and (DY) Program Requirements—either as part of the program or major requirements.

Any Math department Calculus I and II courses; CHEM 161/161L and 162/162L or 171/171L or 181A/181L; and PHYS 170/170L and 272/272L, or PHYS 151/151L and 152/152L.

Introductory mathematics courses and CHEM 161 have assessment tests. Dates and times of assessment tests appear in each semester *Schedule of Classes*/UH Mānoa Registration Homepage.

It is recommended that all entering students who have had high school courses in mathematics through pre-calculus take the following courses during their freshman year: CHEM 151/151L or CHEM 171/171L, any Math department Calculus I and II courses, and perhaps PHYS 151/151L or PHY 170/170L. It also is recommended that students who do not have a high school course equivalent to pre-calculus should take MATH 140 at UH Mānoa during the summer session prior to their first semester.

All BS degree candidates should consult the appropriate departmental advisor before registering.

Second or Multiple Majors and Minors

Arts and sciences students are encouraged to consider applying for a second major or a minor or a combination of both. Pursuing additional academic fields of study in the form of a second major, or with the addition of a minor, can benefit students in several ways, including the opportunity to discover relationships across disciplines, develop diverse perspectives, strengthen one's appreciation for the acquisition of knowledge in more than one academic field and enhance one's ability to problem-solve and communicate in a variety of settings. Applicants for multiple majors/minors need to:

- be enrolled as classified arts and sciences students,
- be in good academic standing,
- be seeking majors under one degree program (i.e., BA/psychology and speech, or BS/physics and mathematics),
- be able to complete degree requirements within the maximum total credits as specified by the UH's excess credit policy (see "Undergraduate Education"),

- submit a statement with the application that describes the reason for adding the second major and the educational benefits expected from the addition,
- submit an academic plan that identifies the sequence of courses needed for graduation,
- keep in mind that no Diversification course may be used to satisfy more than one requirement (General Education Core, college, major and minor requirements).

The Colleges offer minors in over 29 disciplines. Most minors require a minimum of 15 credits of non-introductory and upper division level course work, completed with a grade of C (not C-) or better.

Academic advisors are available to discuss with students the way that a second major or minor can complement the first major to help students formulate an academic plan so that adding a second major or a minor does not delay graduation unnecessarily.

Holders of a first baccalaureate degree who wish to pursue a second major rather than a complete second baccalaureate degree should pursue their academic major as an unclassified post-baccalaureate candidate. Students interested in pursuing the post baccalaureate second major option should meet with the undergraduate advisor in the second major in order to request permission to pursue a post baccalaureate second major and to identify the major requirements they need to fulfill. During a student's last semester, a "Colleges of Arts and Sciences Graduation Worksheet Major Requirements" (goldenrod) form must be submitted to the Colleges of Arts and Sciences Student Academic Services.

Second Baccalaureate Degree

Priority for admission into any arts and sciences baccalaureate program is given to students seeking their first undergraduate degree. Fall applications must be received by Admissions and Records no later than **May 1st**, and spring applications must be received no later than **October 1st**. Incomplete or late applications will not be considered.

Complete applications contain all the materials required by Admissions and Records in addition to the following materials required by Arts and Sciences:

1. A **typewritten or computer printed, signed statement** explaining how the second degree will help the applicant attain his or her personal, academic and professional goals.
2. Following initial review of the application by Arts and Sciences, applicants will be informed of their remaining program requirements and referred to the major departments in order to complete an **academic plan** demonstrating concrete knowledge of the second degree program for which they are applying.

Applicants will be given a separate deadline to submit the academic plan in order to continue the admissions process.

Applications for a second baccalaureate degree will be considered only if there is a demonstrable difference in curricula and objectives between the two degrees and majors and if the applicant has a superior grade point average and shows strong promise of success in the proposed second degree. Second degree students must earn a minimum of 30 credits in courses

taken at UH Mānoa upon admission as a second baccalaureate degree candidate while continuously enrolled in the colleges, and must satisfy all program requirements current at the time of official admission into the program. For more information, see the "Second Bachelor's Degree" section of this *Catalog* or the Arts and Sciences Student Academic Services website, www.advising.hawaii.edu/artsci.

The colleges may approve concurrent multiple baccalaureate degrees for exceptional students. Students should speak with an advisor in the Arts and Sciences Student Academic Services Office for further information.

Professional Programs

Students who wish to prepare themselves for admission to professional schools should follow the recommendations of the appropriate national professional organization. In addition, they should elect courses fulfilling specific requirements of the schools they hope to enter.

The Professions Advising Center (PAC) in the Arts and Sciences Student Academic Services Office can give specific aid to students preparing for admission to schools of dentistry, law, medicine, optometry, pharmacy, and allied health fields. Information on scholastic requirements of other professions is also available from the following resources:

- *Medical School Admission Requirements, United States and Canada*
- *Pre-law Handbook*
- *Admission Requirements of U.S. and Canadian Dental Schools*
- *Pharmacy School Admission Requirements*

Catalogs of individual schools with more specific admission requirements may be found in the Professions Advising Center in Hawaii Hall 108, or at Hamilton Library, or on the web.

Graduate Programs

Information regarding graduate programs and admission is in the "Graduate Education" section of the *Catalog*. Each department also includes information in its description about their specific program(s). Check specific departments for program requirements.

Student Organizations

Societies and clubs associated with many departments within the Colleges of Arts and Sciences give students opportunities to explore a field from an informal perspective, get acquainted with other students with similar interests, and learn of the options available upon graduation. The Colleges of Arts and Sciences highly recommend active student involvement in these associations for the academic and professional enhancements they provide. Check with your departmental advisor for information.

Honors and Awards

Scholarships and Awards

The Colleges of Arts and Sciences and their departments provide scholarships and awards to exceptional students. For a selective list of scholarships, see "Tuition, Fees, and Financial Aid." If you wish specific information on prizes or scholarships offered through the Colleges of Arts and Sciences, contact the appropriate department or check CA\$H (Computer-Assisted Scholarship Help), a source of more than a thousand scholarships, accessible on the web at dbserver.its.hawaii.edu/cash/.

Honor Societies

Honor societies at UH Mānoa in the Colleges of Arts and Sciences include Alpha Kappa Delta (sociology), Beta Phi Mu (library science), Delta Phi Alpha (German), Golden Key National Honor Society (undergraduate), Kappa Tau Alpha (journalism), Lambda Delta (freshmen), Mortar Board (seniors), Omicron Delta Epsilon (economics), Phi Alpha Theta (history), Phi Beta Kappa (liberal arts and sciences), Phi Eta Sigma (freshmen), Phi Kappa Phi (general scholarship), Pi Delta Phi (French), Pi Kappa Lambda (music), Pi Sigma Alpha (political science), Psi Chi (psychology), Sigma Delta Pi (Spanish), Sigma Pi Sigma (physics), and Sigma Xi The Scientific Research Society (sciences).

Instructional and Research Facilities

Center for Biographical Research

The Center for Biographical Research (CBR) is dedicated to the interdisciplinary and multicultural study of life writing. CBR programs include teaching, publication, and outreach activities.

In conjunction with the Department of English, CBR offers thesis advising for PhD and MA projects. The Department of English also offers a number of graduate and undergraduate courses in life writing. A BA program in biography is offered through the Interdisciplinary Studies Program, and the Biography Prize is offered annually for the best work on any aspect of life writing by a PhD candidate at UH.

CBR publishes *Biography: An Interdisciplinary Quarterly*, the premier scholarly journal in the field. Appearing continuously since 1978, *Biography* explores the theoretical, historical, generic, and cultural dimensions of life writing. CBR also sponsors the Biography Monograph series, designed to further the study and practice of life writing in all its forms.

CBR maintains a library and resource collection and has hosted, since 1988, the public lecture series Brown Bag Biography, part of the center's commitment to supporting and publicizing contributions to life writing. CBR is a founding partner of *Biography Hawai'i*, a television documentary series that focuses on residents whose lives have had a lasting impact on these islands. The center also hosts iaba-l@hawaii.edu,

the listserv and discussion forum for the International Auto/Biography Association.

Language Learning Center

The Language Learning Center (LLC) located in Moore Hall provides technical support services to enhance language teaching and learning in the College of Languages, Linguistics, and Literature. The Center facilitates research and development projects and the implementation of innovative language teaching methods and approaches.

LLC's Multimedia Computer Labs consist of a Macintosh Lab, a PC Lab, and a Digital Language Lab. The PC Lab consists of 23 Windows XP PCs and the Macintosh Lab consists of 15 OS X G4s and an additional 6 Windows XP PCs. All the computers have high speed access to the internet and are networked to a central file server for file serving across both labs. They are also configured with software for a host of languages, including non-Roman script Asian languages. Both labs are equipped with a high speed printer, a scanner, and an LCD projection system. The two labs are available for drop-in use by students, for class sessions, and for professional development workshops for faculty and staff. The Digital Language Lab, consisting of 12 Windows XP PCs, is available for drop-in use by students specifically for language audio listening and voice recording. In addition to the Digital Language Lab, the LLC distributes audio course materials to students on CD.

A Faculty Development Lab facilitates faculty projects to integrate technology into teaching. Through consultation, training, and support, LLC staff enables faculty to enrich their course delivery through technology-enhanced instruction. This lab is equipped with 12 Windows XP PCs and 2 Mac OS X G4 computers that are specifically configured for multimedia development and desktop publishing and has a high speed color laser printer with auto duplexing for double-sided printing.

The Center's facilities also include broadcast-standard video and audio production studios and a satellite station consisting of C and Ku-band tracking dishes for uplinks, downlinks, and videoconferencing. The LLC subscribes to several language channels via satellite. Additional facilities include language laboratories, viewing rooms and a multi-purpose media room. A variety of audio-visual equipment is available for check out. The LLC also regularly hosts national and international events sponsored by various units in the College.

Mānoa Writing Program

The Mānoa Writing Program was created by the UH Board of Regents in 1987 to administer General Education writing requirements. Its efforts are guided by a board of seven professors, each from a different department. The faculty board reviews requests to give classes writing-intensive (W) Focus designations, offers faculty workshops on teaching with writing, and surveys students in W Focus classes. The program publishes material on teaching with writing. It also administers the Mānoa Writing Placement Examination to undergraduates who need placement in order to meet UH's entry-level writing course requirement. The program's ultimate goal is to prepare all UH Mānoa graduates for the different writing tasks that society and their professions will present to them.

Second Language Teaching and Curriculum Center

The Second Language Teaching and Curriculum Center was established in 1988 with the broad mission of improving language instruction in the College of Languages, Linguistics and Literature and facilitating cooperative efforts among departments. The center coordinates professional development programs; provides curriculum and materials development services to departments; supports faculty research and development projects, especially in obtaining grants and contracts; and conducts outreach activities to support Hawai'i's language-teaching community.

National Foreign Language Resource Center

Under the Language Resource Centers program, the U.S. Department of Education awards grants to a small number of institutions of higher education for the purpose of establishing, strengthening, and operating centers that serve as resources to improve the nation's capacity to teach and learn foreign languages effectively. In 1989, UH was first granted funds to develop a National Foreign Language Resource Center (NFLRC), one of three such centers at the time—the number since has grown to fourteen.

NFLRC engages in research and materials development projects, conducts summer institutes for language professionals, and makes available a wide variety of publications on center projects and programs. Drawing on the abundance of Asian and Pacific resources afforded by its locale, NFLRC focuses its efforts on the less commonly taught languages, particularly those of Asia and the Pacific, recognizing that competence in these languages is increasingly vital to the nation's future. The projects and educational programs that the center undertakes have broader implications for the teaching of all languages.



ACM students in action.

Academy for Creative Media

Colleges of Arts and Sciences
Crawford 210
2550 Campus Road
Honolulu, HI 96822
Tel: (808) 956-7736
Fax (808) 956-6662
E-mail: acm@hawaii.edu
Web: www.hawaii.edu/acm/

Faculty:

C. Lee (Chair)
T. Brislin, PhD (Assoc. Chair)—media ethics; critical studies
K. Kardan, BS—animation and computer games
A. Misawa, MFA—cinematic and digital production
M. Mita—indigenous film, aesthetics, writing
J. Moffett, MFA—screenwriting, cinematic & digital production

Degree and Certificates Offered: BA in creative media (through Interdisciplinary Studies)

The Academic Program

The Academy for Creative Media (ACM) emphasizes narrative, or story telling, theories, skills and application across multiple platforms of digital media and within a context of cultural and aesthetic values. More than just a “film school,” ACM seeks to empower students to tell their own stories of Hawai'i, the Pacific and Asia, rather than have those stories told for them through a different cultural lens that is distant and often distorted. It is one of the few programs developing a unique program in Indigenous Filmmaking.

ACM offers a core curriculum in three tracks: Cinematic and Digital Production, Computer Animation and Game Design, and Critical Studies. A catalog of courses, academic planning guidelines, and program information can be found on the Academy's website at: www.hawaii.edu/acm.

Undergraduate Study

Bachelor's Degree

Linked with the Interdisciplinary Studies program, students have the flexibility to design an individual academic program around a core of ACM courses and electives from a variety of UH Mānoa departments offering courses in film studies, digital design and technology. Students work in close consultation with faculty to develop an interdisciplinary program that reflects the development of academic, technical, creative and critical thinking skills.

Requirements

To declare a major in Creative Media, students must:

- Have completed with at least a B (3.0) Cinema and Digital Media (ACM 255), and have completed 12 or more credit hours with a 2.5 GPA.

- Be enrolled in the Colleges of Arts and Sciences.
- Be accepted into the Interdisciplinary Studies Program.

To complete the Creative Studies major, students must design a detailed and acceptable academic proposal with adequate ACM faculty counseling, that emphasizes one of the three ACM tracks, includes the required core of ACM courses, and is supplemented with elective courses from at least two other departments. Students must also ensure that their academic proposal satisfies the Interdisciplinary Studies program guidelines for self-designed majors, and that all required advising sessions with Interdisciplinary Studies are met.

Required Courses

ACM 255; 310, 315 or 320; 350 or 355; and 9 credits from among: ACM 360, 385, 460, 480, 485, 490

Advising

Introductory information on the Academy, including guidelines for academic planning, can be found at www.hawaii.edu/acm. All students accepted for the major are assigned a faculty advisor. The Interdisciplinary Studies section within the Colleges of Arts and Sciences listings in this *Catalog* contains useful and important information. They can be found in Krauss 116, or call 808-956-7297.

Undergraduate Certificates

Undergraduate Certificates in Creative Media can be developed in several areas. Like the major, they are comprised of core ACM courses and electives from relevant and related departments. Students in other majors are eligible to undertake an undergraduate certificate program.

American Studies

College of Arts and Humanities
Moore 324
1890 East-West Road
Honolulu, HI 96822
Tel: (808) 956-8570
Fax: (808) 956-4733
E-mail: amstuh@hawaii.edu
Web: www.hawaii.edu/amst/

Faculty

- *D. Ogawa, PhD (Chair)—intercultural and Japanese American studies
- *W. Chapman, PhD—historic preservation
- *T. Gonzalves, PhD—Asian American culture, history, and politics, ethnic and cultural studies, performing arts
- *M. Helbling, PhD—literature, African American studies, and cultural theory
- *J. Hughes, PhD—politics and women's studies
- *K. Kosasa, PhD—visual and cultural studies, museum studies, critical pedagogy
- *F. Matson, PhD—social thought, film and popular culture
- *R. Perkinson, PhD—southern and western history, race and class, crime and punishment, American empire

- *D. Stannard, PhD—social and cultural history, race and racism, theory and method
- *M. Yoshihara, PhD—Asia relations, colonialism and orientalism, women's and gender studies, literary and cultural studies

Cooperating Graduate Faculty

J. Stanton, PhD—culture and arts

Affiliate Graduate Faculty

- A. Kikumura-Yano, PhD—Japanese-American studies, Asian American studies, museum studies
- W. Murtagh, PhD—historic preservation
- P. Spickard, PhD—multicultural studies
- K. Yamazato, PhD—American literature and culture

Degrees and Certificates Offered: BA (including minor) in American studies, MA in American studies (including dual AMST/MLISc MA), PhD in American studies, Graduate Certificate in Historic Preservation, Graduate Certificate in Museum Studies

The Academic Program

Since its inception in the 1930s, American Studies (AMST) has offered an integrated multidisciplinary exploration of the historical and contemporary American experience. This involves the study of American popular and high culture; environmental issues; institutional structures, including political and economic institutions; systems of thought and belief; and gender, ethnic, racial, and cross-cultural relationships. A combination of historical, literary, social-scientific, and other methodological approaches is used. In addition to such traditional aims, American Studies at UH Mānoa also explores the role of Hawai'i, the Pacific, Asia, and, to a lesser extent, other parts of the world within the American experience, an objective that imparts a cross-cultural dimension to its program and differentiates it significantly from most other programs in the field.

At the undergraduate level, American Studies offers a balanced general education experience, as well as excellent preparation for both advanced study in the field and professional studies ranging from law to travel industry management. Advanced degrees are intended primarily as preparation for college and university-level teaching, but recipients are also engaged in such activities as journalism, library management, business administration, and government service. A dual MA can be taken in cooperation with the Library and Information Science Program. In addition to regular degrees, graduate certificates are offered in Historic Preservation and Museum Studies.

Affiliations

The department is affiliated with the American Studies Association, National Council of Preservation Education, and National Trust for Historic Preservation.

Advising

The undergraduate advisor advises all undergraduate majors, and the graduate chair advises all graduate students.

Undergraduate Study

Bachelor's Degree

Requirements

Students must complete 30 credit hours, including:

- 21 credit hours of upper division courses, including AMST 381, 382, and 481
- 9 remaining credit hours may include allied humanities and social sciences courses (no more than 3 credit hours of 499 may be counted). These courses must be approved by the undergraduate advisor.

Minor Requirements

Students must complete 15 credit hours, including:

- AMST 381 and 382
- 9 credit hours of 300- or 400-level American Studies electives

Graduate Study

Application Requirements

Applicants for graduate programs should present an academic record indicating a broad range of study in the humanities and the social sciences with an emphasis on American culture. In addition to the admission requirements of the Graduate Division, the applicant should have a copy of his/her latest GRE scores, Graduate Program Supplemental Information form, Statement of Objectives, and at least two letters of recommendation sent directly to the Department. Each letter of recommendation should have the "Waiver of Access to Confidential Letters/Statements" form attached to it. PhD applicants are also required to submit a writing sample, preferably a paper that was written for a graduate course. Applications for graduate admission are considered for either fall (September-December) or spring (January-May) semester. Application deadlines for local and mainland applicants are: **March 1** for fall; **September 1** for spring. Application deadlines for foreign applicants are: **January 15** for fall; **August 1** for spring. There is no summer admission to advanced degree programs in the Graduate Division. There is an application fee.

Proficiency in a foreign language is not required unless it is necessary for dissertation research. Students having a special career interest in Asia may select courses offered in the Asian studies program to satisfy some degree requirements in American studies.

Courses for the graduate program are to be selected from among the courses listed in the back of the *Catalog*, from appropriate American Studies graduate courses and upper division and graduate courses in related fields. Consent of the departmental graduate chair is required for enrollment in all undergraduate courses and all graduate courses in other fields. The courses listed in the back of the *Catalog* are numbered and grouped as follows: 500, Master's Plan B/C Studies; 600–609, introductory courses; 610–689, fields of study courses; 690–699, special topics courses; and 700–800, thesis and dissertation research. AMST 500V, 699V, 700V, and 800V are offered each semester; AMST 600, 601 and 602 are offered

annually, and most other 600-level courses are offered once every three years.

Master's Degree

MA candidates are expected to possess the BA degree and have a background knowledge of American culture.

Requirements

MA students may select either the Plan A or Plan B program. Students must complete 33 credit hours as follows:

Plan A (Thesis)

- 6 credit hours of AMST 700
- 18 credit hours in courses numbered 600 and above, including AMST 600, 601, 602 and a graduate seminar course
- 9 credit hours in a chosen field of specialization
- oral examination

Plan B (Non-thesis)

- 18 credit hours in courses numbered 600 and above, including AMST 600, 601, 602 and a graduate seminar course
- 15 credit hours in a chosen field of specialization
- written and oral examinations

More specific requirements are detailed on the American Studies website at: www.hawaii.edu/amst.

Doctoral Degree

PhD candidates are expected to possess the MA degree in American Studies or its equivalent and should have a scholarly attainment of a high order and widespread intellectual interests. In most instances, admission to the PhD program requires applicants to possess an MA degree. However, occasionally an applicant with a BA and exceptionally strong credentials may be admitted directly into the doctoral program.

Requirements

Students must complete 48 credit hours including:

- 18 credit hours in courses numbered 600 and above, including AMST 600, 601 and 602 and a graduate seminar course
- 30 credit hours in a chosen field of specialization

Students must also complete:

- A qualifying examination consisting of two written parts covering the two areas of specialized fields of student's choice and an advanced graduate syllabus followed by an oral examination dealing with all three areas
- An oral comprehensive examination administered by the dissertation committee
- A dissertation of high quality and its successful oral defense

Certificate

Graduate Certificate in Historic Preservation

Candidates for the Certificate in Historic Preservation must possess a BA degree. The Certificate in Historic Preservation combines course work and applied experience.

Requirements

Students must complete 15 credit hours of graduate course work:

- 3 credit hours of AMST 675, Preservation: Theory and Practice
- 3 credit hours of AMST 695, Historic Preservation Practicum
- 3 credit hours of ANTH 645, Historic Preservation
- 6 credit hours in field of specialization

A maximum of 6 credit hours may be applied simultaneously to the historic preservation certificate and to another degree. Internships are usually undertaken with local firms and organizations that have a preservation interest or with individuals who are qualified to direct independent work in preservation. The program concludes with a formal colloquium presentation. More information is available on the Historic Preservation Program's website at www.hawaii.edu/amst/historic.htm.

Graduate Certificate in Museum Studies

Candidates for the Certificate in Museum Studies must possess a BA degree. The Museum Studies Graduate Certificate Program provides an opportunity to learn about museums, acquire professional experience, and develop research skills.

Requirements

Students must complete 18 credit hours of graduate course work:

- 3 credit hours of AMST 683, Museums: Theory, History Practice
- 3 credit hours of AMST 684, Museums and Collections
- 3 credit hours of AMST 685, Museums and Communities
- 3 credit hours of AMST 686, Museum Studies Practicum
- 6 credit hours of electives

A maximum of 6 credit hours may be applied simultaneously to the Museum Studies Certificate and to another degree. Internships are usually undertaken with local museums and related institutions or organizations and under the direction of a supervisor qualified to direct independent work in a museum related project. The program concludes with a formal colloquium presentation. For more information, see www.hawaii.edu/amst/MS_home.htm.

Anthropology

College of Social Sciences

Saunders Hall 346

2424 Maile Way

Honolulu, HI 96822

Tel: (808) 956-8415

Fax: (808) 956-4893

E-mail: anthprog@hawaii.edu

Web: www.anthropology.hawaii.edu

Faculty

- *M. W. Graves, PhD (Chair)—archaeology, ethnoarchaeology, evolution of social complexity, quantitative analysis; U.S. Southwest, Oceania
- *A. R. Arno, PhD—legal anthropology, ethnography of communication, kinship and social organization; Pacific
- *J. M. Bayman, PhD—archaeology, craft economies; North America; U.S. Southwest; Hawai'i
- *J. M. Bilmes, PhD—linguistic anthropology, social interaction, discourse; Thailand
- *C. F. Blake, PhD—critical and interpretive theory, ethnography and biography, popular ideologies, social movements and entrepreneurship in the modern world economy; China, U.S.
- *D. Brown, PhD—physical anthropology, medical anthropology; Polynesia
- *N. L. Etkin, PhD—biological and medical anthropology, ethnobotany, diet, ethnopharmacology, CAM; West Africa; Pacific; Indonesia
- *T. Hunt, PhD—archaeology, paleoenvironmental reconstruction, evolutionary theory, archaeometry, ceramics; Oceania
- *M. Pietruszewsky, PhD—physical anthropology, skeletal biology, forensic anth; Oceania; SE and East Asia; Australia
- *B. V. Rolett, PhD—archaeology; Pacific Islands, Southeast China
- A. M. Sakaguchi, PhD—medical anthropology, public health, medical malpractice, globalization and its impact on emerging and re-emerging diseases, health disparities, health care disparities, Japanese literature and history
- *L. E. Sponsel, PhD—ecology (cultural, historical, political, spiritual, Buddhist); sacred places and biodiversity; peace, human rights, ethics; SE Asia (Thailand), Amazon
- *M. Stark, PhD—archaeology ecology, early village economics, ceramics, ethnoarchaeology; Southeast Asia, U.S. Southwest
- *T. P. K. Tengan, PhD—archaeology, culture contact, lithic analysis, ethnohistory, Polynesia, North Pacific, North America
- *G. M. White, PhD—cultural anthropology, history and memory, self and emotion, ethnographic methods; Pacific Islands; America
- *C. Yano, PhD—cultural anthropology, popular culture, ethnomusicology, cultural nationalism, emotions; Japan, Japanese Americans
- *H. Young Leslie, PhD—medical and feminist anthropology, culture and health, medicine and modernity, health professionals; Tonga, Oceania

Cooperating Graduate Faculty

- R. Cann, PhD—physical anthropology, anthropological genetics, human populations
- W. Chapman, PhD—historic preservation, historic archaeology, architecture; Asia, Pacific

- E. Drechsel, PhD—historical sociolinguistics, ethnohistory, North American Indians; North America
- S. Falgout, PhD—cultural and historic anthropology; Micronesia
- D. Gladney, PhD—ethnicity, nationalism, public culture, religious ideology; China, Central Asia, Turkey
- G. G. Maskarinec, PhD—anthropology of language (Nepalese oral texts), western biomedical clinical medicine, medical education and indigenous medical systems of S. Asia; religions (belief systems, ritual and performance)
- P. Mills, PhD—archaeology, culture contact, lithic analysis, ethnohistory; Polynesia, North Pacific, North America
- J. Y. Okamura, PhD—ethnicity and ethnic relations, Asian American studies; Philippines; Hawai'i

Affiliate Graduate Faculty

- M. W. Allen, PhD—archaeology, cultural resource management, cultural complexity, chiefdoms, archaeology of warfare, hunter-gatherers; California, New Zealand
- M. S. Allen, PhD—archaeology, method and theory, paleobotany, faunal analysis, geoarchaeology; Oceania
- R. A. Bentley, PhD—complexity theory, the prehistoric spread of agriculture into Europe and the effects of human interaction on cultural evolution
- R. Borofsky, PhD—the anthropology of anthropology, public anthropology, Pacific history; Oceania
- C. K. Cachola-Abad, PhD—archaeology, oral traditions, historic preservation, evolution; Hawai'i and Polynesia
- M. T. Douglas, PhD—physical anthropology, skeletal biology, bioarchaeology, paleopathology; Oceania, Southeast Asia
- J. Fox, PhD—land use, forest resources and management GIS and spatial information technology; South Asia; SE Asia
- T. D. Holland, PhD—physical and forensic anthropology, skeletal biology; U.S. Midwest, Southeast Asia
- T. Ladefoged, PhD—archaeology, evolution, landscape, social complexity, agricultural development, remote sensing, GIS; Polynesia
- D. Yen, PhD—ethnobotany; Oceania, Southeast Asia

Degrees Offered: BA (including Minor) in anthropology, MA in anthropology, PhD in anthropology

The Academic Program

Anthropology (ANTH) is the study of humankind, of the origin and evolution of our species, and of the ways of life of ancient and modern people. It is divided into four main subdisciplines: physical anthropology, archaeology, anthropological linguistics, and cultural anthropology. While physical anthropologists focus upon our biological nature, cultural anthropologists deal with the ways of life of past and present ages. Anthropological linguists look at language as a part of human behavior, while archaeologists study the remains of past cultures to reconstruct former lifestyles.

Students of anthropology gain a basic understanding of the origin and development of humanity useful both for understanding the human condition and as a preparation for work in many fields, not just in anthropology. For example, the department offers a uniquely broad range of courses on the cultures of Asia and the Pacific, as well as on aspects of American society, that provide students with a fund of

cultural knowledge and insights upon which to build a career in law, medicine, public health, teaching, business, and other professions. While some BA graduates in anthropology do find employment in anthropology, normally an MA or PhD is required to work as an anthropologist in a university, museum, or other institution. The department has a long-standing graduate program, which trains students in all aspects of anthropology, focusing especially on Asia and the Pacific region. The training emphasizes field research; in any one year students are engaged in such projects as excavating an ancient religious temple on Tahiti, recording ritual life in rural Java, or analyzing the social system of a Japanese factory.

Undergraduate Study

Bachelor's Degree

Requirements

Students must complete 31 credit hours, including these required courses:

- ANTH 200, 210, 215, 215L and 305
- Six 300- and 400-level courses

Three of the 300- and 400-level courses may be from related disciplines with prior approval of the student's advisor.

Minor

Requirements

Students must complete 15 credits of upper division Anthropology courses which include one Theory course and one Methods course. It is highly recommended that students take ANTH 300 (Contemporary Problems) to complete the Theory requirement. Alternatively, they may take any 400 level course designated as a Theory course by the Department of Anthropology. Students must also take one upper division course designated as a Methods course by the Department of Anthropology. Courses will be chosen by the student, in consultation with the undergraduate advisor, to suit the student's needs and interests. Courses must be completed with a grade of C (not C-) or better.

Graduate Study

Intended candidates for the MA or PhD need not have an undergraduate background in anthropology. All applicants must submit to the department GRE General Test scores and three letters of recommendation at the time of application. Lack of previous training in anthropology may result, however, in study to fill gaps in knowledge. Before being considered for an advanced degree, a student must present evidence of having passed with a B (not B-) or better at least one undergraduate course in archaeology, physical anthropology, social or cultural anthropology, and linguistics. All incoming students are required to enroll in a one-unit Anthropology Colloquium Series Proseminar in the first two semesters. Applications for admission will be considered for the fall semester only. The deadline for submission of applications, including international students, is **January 15**.

The MA program ensures that graduates grasp fundamentals in their elected subfields, while the PhD program provides an opportunity for further specialization.

Master's Degree

Admission to MA candidacy is based upon a candidacy conference with the student and his or her three-person committee held sometime prior to the end of the student's second semester in residence. At that time the student submits in writing, a proposed program of study that the committee must accept before the student is admitted to candidacy.

Requirements

A candidate for the MA must take two out of four core courses (archaeology, linguistic anthropology, physical anthropology, and cultural anthropology) and one upper division or graduate level course in a third subfield. A core course may be repeated once. A student may take additional core courses to fulfill other course requirements.

An MA candidate must also pass two courses in each of the following categories: method or technique, theory or topic, and culture area. If a candidate needs a course from one of the three categories in his or her program of study and that course is not offered by the department on a timely basis, he or she may petition the graduate chair to substitute a course from outside the department, provided petition is made prior to registration for the course in question. A candidate is required to earn 32 credit hours. Normally, at least 18 credit hours must be taken in the department. In special cases, a candidate may petition the graduate chair to waive this latter requirement. Of the required course work, both plans require at least 20 credit hours in courses numbered 600 or above and approved by the candidate's committee.

Plan A

- 26 credit hours of course work
- Thesis (6 credit hours)

Plan B

- 32 credit hours
- Three papers on anthropological topics, one of which shall be a research proposal to the committee as evidence of scholarly ability

Doctoral Degree

A student completing the requirements for an MA may request admission to the PhD program. In such case, the committee will evaluate the MA thesis or three papers and will review the quality of previous graduate work. This evaluation will be made at a meeting of the student's committee, which may make a recommendation to the graduate chair concerning admission. In addition to the recommendation of each of the committee members, the graduate chair will require written assessments of the student's course work from each regular faculty member in whose course the student has been enrolled (including 699). The assessment shall include a specific recommendation (or abstention from recommending) to admit or deny admission to the PhD program. Admission to the PhD program requires a two-thirds majority of favorable versus unfavorable recommendations. This final evaluation and

decision are made after the meeting to evaluate the MA work. The student receives written notification from the Graduate Dean.

Requirements

PhD candidates must fulfill the requirements for an MA degree in anthropology as a prerequisite. Requirements for obtaining a PhD include submitting an acceptable program plan at a candidacy conference, passing a comprehensive examination, formulating an acceptable dissertation proposal, writing an acceptable dissertation, and successfully defending this dissertation.

A student entering the PhD program with an MA degree from another department of anthropology must pass the core course in his or her area of specialization with a grade of B (GPA of 3.0) or better. This course may be challenged by examination in lieu of taking it for credit. All students are required to take graduate courses (other than reading courses) from at least four different members of the anthropology department.

After admission to the PhD program, the student's MA committee will be dissolved and the student will form a five-member PhD committee. More members may be added if deemed desirable and consistent with a candidate's interest. At least one person must be a graduate faculty member of another department, but the majority of members must be from the Department of Anthropology. Substitutions may be made at any time if a member of the committee is unavailable.

All students entering the PhD program, including those obtaining an MA from the department, are strongly advised to hold a candidacy conference and gain written approval of their five-member committee for the projected program of study by the second semester.

Approximately one semester prior to the comprehensive examination, the student shall submit a detailed description of the areas to be covered, complete with bibliography. The candidate is expected to have read the items contained in the bibliography and be prepared to discuss them in some depth. It is the responsibility of each committee member to suggest additional readings for the bibliography and to suggest any other changes in the proposed agreement. After all committee members have been duly consulted, the student will prepare a final description to be signed by all concerned, including the student, and to be filed with the graduate chair.

The comprehensive examination shall be administered in two parts: (a) a written examination and (b) an oral exam, at which the student will be given the opportunity to clarify and amplify answers to the written component. The written exam will consist of one essay question submitted by each member of the student's committee. It will be closed-book; students will not be permitted to use notes or other aids. An allotment of three hours per question will be given. Scheduling will be flexible, but the total exam must be taken within a two week period.

The oral examination is expected to be scheduled not less than one week and no more than two weeks after the written examination. All members of the committee must be present at the examination. At the oral exam the student will be asked to explain and/or defend answers to the written component. Two hours are to be allotted for this exercise.

If a student fails the comprehensive examination, he or she may be allowed to repeat it. If this examination is failed a second time, the student will be dropped from the graduate program. The committee will provide each student with a written statement detailing the reasons for a negative decision.

After successfully completing the comprehensive examination, the student is required to submit a research proposal for review by the degree committee. A meeting of the committee will be scheduled within two weeks of submission of a final draft of the proposal; the committee will determine whether or not the student is adequately prepared for the fieldwork proposed. A candidate whose field research proposal is approved and who has completed all other requirements is eligible to receive a University ABD certificate.

A student conducting dissertation research among people who do not speak the student's native language will be required, before leaving for the field, to show evidence of oral competence in the most useful field language or of training in linguistic field techniques.

Following the student's submission of a final draft of the dissertation, an oral defense will be scheduled. It is the student's responsibility to see that each member of the committee has a copy of the complete final draft of the dissertation at least four weeks before the scheduled date of the oral defense. The dissertation must be read by no less than three members of the committee, and all members must be present at the oral defense. Procedures for determining final acceptance of the dissertation and awarding the PhD degree are set forth by the Graduate Division. A candidate must complete all the requirements within seven years after admission to the doctoral program. A student unable to meet this deadline may request an extension by written petition to the graduate chair describing reasons for the delay. If approved, the request will be sent to the Graduate Dean for a final decision.

Art and Art History

College of Arts and Humanities

Art 142

2535 McCarthy Mall

Honolulu, HI 96822

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Faculty

*W. Tanabe, PhD (Chair)—Japanese art history

*R. Bigus, MFA (Associate Chair)—design

*L. Andrews, PhD—Western art history

*F. Beaver II, MA—ceramics

*A. Bush, MFA—design

*P. Chamberlain, MFA—sculpture, multimedia

*G. Chan, MFA—photography

*C. Cohan, MFA—printmaking

*N. Dowling, PhD—Southeast Asian art history

*D. Drexler, MFA—painting

*P. Hickman, MA—fiber

*T. Klobe, MFA—design

*K. Lingley, PhD—Chinese art history

*R. Mills, MFA—glass, sculpture

*R. Rodeck, MFA—photography

*F. Roster, MFA—sculpture

*M. Sato, MFA—sculpture

*D. Waite, PhD—Pacific art history

*Y. Wang, MFA—painting

*S. Wolfe, MFA—ceramics

Affiliate Graduate Faculty

J. Feldman, PhD—Pacific art history

Degrees Offered: BA in art with either a studio or Art History focus (including minor), BFA in art, MA in art history, MFA in art

The Academic Program

The Department of Art and Art History (ART) offers two separate but interrelated programs. Art history, leading to the BA, affords the opportunity to study the arts of Asia, Pacific, and the West in a historical and cultural context. The art studio programs provide students either with a broad-based, liberal arts approach via the BA or with a more focused studio specialization leading to the BFA. The latter is considered more appropriate for students intending to pursue the MFA at the graduate level.

The department is housed in an excellent three-story facility with painting studios, photography and computer labs (Macintosh equipped for graphic design, network Windows graphics workstations for animation and PCs for expanded arts), and fully equipped printmaking, sculpture, ceramics, fiber, and glass facilities. The UH Art Gallery is a prominent feature of the department's programs. Six or seven major exhibitions are presented each year, many of which have received national recognition. Visiting artist programs supplement the regular course offerings.

Advising

Advising is mandatory for all art and art history majors. For advising see the associate chair, Richard Bigus, in Art 142A, e-mail: bigus@hawaii.edu.

Undergraduate Study

BA Degree

This broad-based art degree provides students with a choice of a studio focus, where a wide range of visual arts media can be explored, or an art history focus, where the visual arts are studied in a historical context.

Requirements

Studio Focus

Students must complete 48 credit hours, including:

- 9 credits of art studio core, three from the following: ART 113, 115, 116, 201

- 12 credits of art history: ART 175, 176, and 6 credits at the upper division level
- 27 credits of art studio: 18 credits must be upper division

Art History Focus

Students must complete 42 credit hours, including:

- 11 art history courses (33 credit hours), including ART 175 and 176
- Three studio classes (9 credit hours), selected in consultation with advisor

BFA Degree

The BFA degree in art is designed for those students who desire a focused preparation in the visual arts or who intend to pursue an advanced degree or career in art. Areas of specialization include: animation, ceramics, fiber, glass, graphic design, photography, painting, printmaking, and sculpture. Students are encouraged to cross media boundaries, and qualified students may opt to construct an individualized inter-media plan of study with faculty guidance and approval.

Students seeking admission to candidacy for the BFA must be a BA Art major and pass a portfolio review, which can take place only after the following requirements have been met.

1. Completion of art studio core through 201.
2. Completion of art history core requirements: ART 175 and 176.
3. Completion of one 200-level studio elective not in student's chosen area.
4. Completion of a minimum of 9 credit hours in chosen area with an average of B (not B-) or better.
5. Completion of 18 credits in UH core requirements exclusive of art department courses.

Applications for review are due by the end of the third week of the semester.

Requirements

Students must complete 75 credit hours, including:

- Eight media concentration courses (24 credit hours), as indicated by the program area at the time of declaration (last 9 credit hours must be completed at UH Mānoa)
- Four art studio core courses (12 credit hours): ART 113, 115, 116, 201
- Three art history core courses (9 credit hours): ART 175, 176, 302
- Four art history elective courses (12 credit hours)
- Six art elective courses (18 credit hours)

Minor

Requirements

- 21 credits in art, 15 of which must be from non-introductory courses

Courses used to meet General Education Core requirements cannot be credited toward the minor.

Students interested in pursuing a teaching career in elementary and secondary art education should seek advisement from the College of Education.

Graduate Study

The Department of Art and Art History offers two master's degrees, the MA in art history—Plan A (thesis) or Plan B (non-thesis)—and the MFA in studio—Plan A only.

MA in Art History

The MA in art history emphasizes the arts of Asia and the Pacific. Applicants for the degree must hold a bachelor's degree from an accredited U.S. college or university or its equivalent from a recognized foreign institution. An undergraduate major in art history is desirable, but not necessary. In support of the application for admission, all applicants are required to send directly to the art department prior to the application deadline: three original letters of recommendation, a sample of written work, preferably an art history seminar or term paper, and General Test scores from the GRE.

Plan A Requirements:

Students must complete 36 credit hours, including:

- ART 670 Art Historical Methodology
- 9 credit hours of seminars in Asian and Pacific art history
- 6 credit hours of ART 700 or thesis

Students intending to engage in studies leading to the PhD are strongly encouraged to complete course work beyond the minimum MA Plan A requirements.

Plan B Requirements:

The non-thesis program is for students wishing to teach in community colleges or at the high school level. Required are 36 credit hours of which 18 must be taken in courses numbered above 600 including:

- ART 670 Art Historical Methodology
- 9 credit hours of seminars in Asian and Pacific art history

Students opting for Plan B must take a minimum of 18 credits in courses numbered above 600 (including ART 670).

In either plan up to 9 credits, with advisor's approval, may be earned in appropriate advanced courses in other UH Mānoa departments.

The more suitable plan will be mutually determined by the faculty and the student.

The program expects students to pass a comprehensive exam in the third semester of residency. Its purpose is to demonstrate a broad knowledge of Asian and Pacific art history. Those failing must pass successfully on a second attempt or they will be dismissed from the program. Students must also demonstrate a reading knowledge in a foreign language appropriate to their field of specialization, chosen in consultation with the area advisor. For more information on the MA in Art History, contact Deborah Waite, PhD, e-mail: waite@hawaii.edu.

MFA Degree

The MFA is the terminal degree in studio art. The normal period of study is three years in residence. Areas of specialization include ceramics, electronic media, fiber, glass, graphic design, painting, photography, printmaking, and sculpture. Although most MFA applicants apply to one of the

above media specializations for admission, students may take electives in more than one medium and are encouraged to investigate new genres.

Applicants for the MFA must present evidence of a BFA or a BA with a strong studio art and art history background. The Department of Art and Art History acknowledges that some MFA applicants may not fit traditional criteria and will thus consider exceptional bachelor's degree recipients that exhibit relevant backgrounds, strong commitment, and distinct potential in the visual arts. An applicant with a nontraditionally graded undergraduate or graduate transcript must submit GRE scores and course performance report forms if the transcript contains 25 percent or more of the applicant's credit hours.

Supporting materials must include 20 slides of original work that illustrate abilities in an area of specialization, as well as potential for development within the scope of the department's facilities and personnel. If you wish to submit a digital media portfolio, please consult with the department for information on preferred file formats. This visual material and three letters of recommendation should be sent to the Department of Art and Art History. The application form for graduate admission should be sent under separate cover to the Graduate Division.

Deficient or incompatible undergraduate preparation may result in admission on a conditional basis and will require, at the discretion of the graduate faculty, additional course work.

After acceptance into the graduate program, admission to candidacy for the MFA degree will be based upon results of the graduate evaluation and a positive review of course work. The graduate evaluation is administered in the fall to all classified students who have completed at least one semester of study. Those failing must successfully pass on their second attempt or they will be dismissed from the program.

Failure to meet the requirements for continued registration or to show progress in course work will lead to probation and/or dismissal from the graduate program.

Requirements

Students must complete 60 credit hours, including:

- 24 credit hours in 600-level courses within the area of specialization, with a minimum of 6 credit hours at each of three graduate studio levels. (These courses are repeatable and must be taken in units of 3 or 6 credits per semester. Conditional or unclassified graduate students may enroll only at level 1 for a maximum of 6 credits. Consent of instructor is required.)
- 15 credits of electives, including ART 699 (not more than 9 credits)
- 6 credits of two art history courses (numbered 300 or above)
- 3 credits of ART 690
- 12 credits of ART 700 thesis, including an exhibition and written documentation

As part of the 60-credit degree requirement, ART 699 Directed Work may be taken for a maximum of 9 credits. Art courses numbered 300 and above and not required at the undergraduate level in the area of specialization are acceptable for graduate credit. Elective courses also may be selected from any other UH department, provided such study is deemed useful and pertinent to the student's degree plan. All elective

courses require appropriate preparation and the consent of the instructor and graduate student's advisor. For more information on the MFA Art Studio, contact Rick Mills, e-mail: rlmills@hawaii.edu.

Astronomy

College of Natural Sciences

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Faculty

- *J. Barnes, PhD (Graduate Chair)—astrophysical theory
- *A. M. Boesgaard, PhD—stellar spectroscopy
- *F. Bresolin, PhD—stellar astronomy
- *S. J. Bus, PhD—IRTF support
- *K. Chambers, PhD—extragalactic astronomy
- *M. R. Chun, PhD—adaptive optics
- *P. Coleman, PhD—cosmology
- *A. S. Cowie, PhD—interstellar matter
- *L. L. Cowie, PhD—extragalactic astronomy
- *H. Ebeling, PhD—cosmology
- *C. Ftaclas, PhD—instrumentation
- *D. N. B. Hall, PhD—infrared astronomy
- *J. N. Heasley, PhD—stellar photometry
- *J. P. Henry, PhD—galaxy clusters
- *K. Hodapp, PhD—infrared astronomy
- *E. M. Hu, PhD—extragalactic astronomy
- *R. Jedicke, PhD—asteroids
- *D. C. Jewitt, PhD—planetary astronomy
- *R. Joseph, PhD—infrared astronomy
- *N. Kaiser, PhD—theoretical astronomy
- *R-P. Kudritzki, PhD—stellar astronomy
- *J. R. Kuhn, PhD—solar astrophysics
- *J. Li, PhD—solar physics
- *H. Lin, PhD—solar physics
- *M. Liu, PhD—stellar astronomy
- *G. Luppino, PhD—extragalactic astronomy
- *E. A. Magnier, PhD—star formation
- *R. McLaren, PhD—infrared astronomy
- *K. Meech, PhD—planetary astronomy
- *R. Mendez, PhD—star formation
- *D. Mickey, PhD—solar physics
- *T. Owen, PhD—solar system astronomy
- *J. T. Rayner, PhD—infrared astronomy
- *B. Reipurth-Jensen, PhD—star formation
- *D. B. Sanders, PhD—infrared and millimeter astronomy
- *T. Simon, PhD—stellar spectroscopy
- *A. N. Stockton, PhD—extragalactic spectroscopy
- *I. Szapudi, PhD—cosmology
- *D. Tholen, PhD—planetary science
- *A. T. Tokunaga, PhD—infrared astronomy
- *E. V. Tollestrup, PhD—instrumentation

- *J. Tonry, PhD—extragalactic astronomy
- *R. B. Tully, PhD—galaxies and cosmology
- *R. Wainscoat, PhD—extragalactic astronomy
- *J. Williams, PhD—submillimeter astronomy
- *C. G. Wynn-Williams, PhD—infrared astronomy

Degrees Offered: MS in astronomy, PhD in astronomy

The Academic Program

Astronomy (ASTR) is the branch of science that studies the structure and development of the physical world beyond Earth. It includes the study of planets and other objects of the solar system; the sun and stars and their evolution; the interstellar medium; the nature and dynamics of star clusters, galaxies, and clusters of galaxies; and the study of the nature and history of the universe itself—of the physical world taken in its largest extent in space and time.

Incomparable facilities for ground-based observational astronomy in the optical, infrared, and submillimeter regions of the spectrum reside in Hawai‘i. The UH’s facilities are located on Haleakalā on the island of Maui at an elevation of 3,000 meters and on Mauna Kea on the Big Island of Hawai‘i at an elevation of 4,200 meters. The summit of Mauna Kea is internationally recognized as the best observing site in the world. As a consequence, the major telescopes of 11 nations are located there, and the UH is guaranteed access to them. The Institute for Astronomy of the UH has major programs in the study of galaxies and cosmology, stellar and interstellar astronomy, solar astronomy, infrared and submillimeter astronomy, and planetary astronomy.

Graduate Study

Most students entering the astronomy graduate program do so with the goal of achieving the PhD degree, but they must first obtain an MS degree unless they already have a closely-related master’s degree from another university.

Applicants to the Astronomy Graduate Program should normally have a bachelor’s degree in physics, astronomy, or a related field. Requirements for admission include a minimum of 35 undergraduate credit hours in physics or astronomy, some of which must be in atomic and nuclear physics, electromagnetism, mechanics, optics, and thermodynamics. We require the GRE general test, and the subject test in physics.

In selecting applications for entry to the astronomy program, we pay particular attention to high academic achievement, especially in physics, and to the letters of recommendation. Research experience at the undergraduate level is valuable, though not essential.

Master’s Degree

The program offers both the Plan A (thesis) and Plan B (non-thesis) MS degrees, but almost all students opt for the Plan B program as it dovetails better with the requirements of qualification for PhD candidacy. The only real advantage of the Plan A masters is that it can be completed within four semesters; it is therefore of interest only to those students who want to get a terminal masters degree in the minimum time.

Requirements

All MS students must take 30 credits of graduate level astronomy courses unless substitution is approved by the graduate chair. They must include ASTR 633 (Astrophysical Techniques) and at least three credits of ASTR 734-736. Plan A students must complete a thesis in accordance with UH Mānoa regulations, while Plan B students must pass the final examination (which is also the PhD qualifying examination) and satisfactorily complete at least one directed research project as judged by the qualifying exam committee.

Doctoral Degree

Besides the course work required for the MS degree, PhD students are expected to undertake two directed research projects during their first two years, and present the results to the faculty both as a written report and an oral presentation. Students must pass the Qualifying Exam Assessment (which also serves as the Plan B MS degree final exam) by the end of their 5th semester in the astronomy graduate program. The qualifying exam committee considers the student’s record in astronomy coursework and in directed research projects as well as the results of a written and an oral exam taken by the candidate.

Requirements

Students who by-pass the MS degree (because they already have an MS degree) must register for at least 3 credits of astronomy coursework in each semester prior to the semester in which they will take the qualifying exam assessment; they must also take at least three credits of ASTR 734-736.

Students must pass the comprehensive exam, which takes the form of an in-depth review of the dissertation proposal, and achieve PhD candidacy by the end of their 6th semester in the astronomy graduate program. Finally, students must research, write, and defend a dissertation on a subject approved by their committee.

Biology

College of Natural Sciences

Dean 2

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Faculty

S. D. Maynard, PhD (Director)—marine education, experiential education, biological oceanography, aquaculture, fisheries, ocean policy, maritime archaeology and history, marine bioproducts engineering, scientific diving

H. Ako, PhD—aquaculture, environmental biochemistry and biotechnology

M. Alam, PhD—microbial physiology and biotechnology

W. W. L. Au, PhD—marine bioacoustics and echolocation

J. H. Bailey-Brock, PhD—invertebrate zoology, reef ecology,

Polychaetes

C. Birkeland, PhD—coral reef biology, fisheries

D. Borthakur, PhD—plant-microbe interaction, plant biotechnology

K. W. Bridges, PhD—systems ecology

J. H. Brock, PhD—invertebrate zoology, reef ecology, polychaetes

S. M. Callahan, PhD—bacterial genetics

R. L. Cann, PhD—evolutionary genetics, MtDNA, molecular phylogenetics

D. Carlon, PhD—evolution, population biology, invertebrate biology

G. D. Carr, PhD—biosystematics, cytotaxonomy, chromosome evolution

D. A. Christopher, PhD—photosynthesis, photosensory signal transduction, gene regulation, genomics

S. Conant, PhD—ornithology, ecology, behavior, conservation biology

K. Cole, PhD—ichthyology, behavioral ecology, reproductive biology, morphology and morphogenesis, space biology

I. M. Cooke, PhD—cellular neurophysiology, neurosecretion

C. C. Daehler, PhD—population biology, invasive plants, plant herbivore interactions

H. G. de Couet, PhD—molecular genetics and cytoskeleton

S. P. Donachie, PhD—marine microbiology and microbial diversity

D. C. Duffy, PhD—conservation, restoration ecology

A. K. Fok, PhD—cell biology

L. A. Freed, PhD—evolutionary and behavioral ecology, ornithology, conservation biology

E. G. Grau, PhD—comparative endocrinology, environmental physiology

M. G. Hadfield, PhD—reproduction and development of invertebrates

D. S. Haymer, PhD—molecular genetics of Diptera

K. N. Holland, PhD—physiology, behavior, ecology of aquatic organisms

C. L. Hunter, PhD—marine biology, coral reef ecology

P. J. Jokiel, PhD—coral reef biology, biogeography and ecology

S. C. Keeley, PhD—molecular systematics, evolution in island systems

C. M. Kinoshita, PhD—process engineering, bioenergy, bioremediation

R. A. Kinzie III, PhD—coral reef biology, marine ecology, limnology

T. W. Lyttle, PhD—structure of *Drosophila* heterochromatin, evolution of chromosomal rearrangements

W. C. McClatchey, PhD—Pacific ethnobotany, ethnopharmacology

M. Merlin, PhD—biogeography, natural history of the Pacific

C. W. Morden, PhD—molecular systematics and evolution of plants and algae

P. E. Nachtigal, PhD—behavior and sensory processes of marine mammals

J. D. Parrish, PhD—community ecology, fishery biology

P. Q. Patek, PhD—cellular immunology

G. Presting, PhD—molecular biosciences and bioengineering

F. M. Robert, PhD—microbial ecology and bioremediation

S. Robinow, PhD—neurogenetics

J. Seifert, PhD—biochemical toxicology

A. R. Sherwood, PhD—algal biology

C. M. Smith, PhD—physiological ecology of marine macrophytes, marine ecology, cell biology

J. Stillman, PhD—ecological and evolutionary physiology, marine invertebrate biology, adaptation to environmental stress

J. S. Stimson, PhD—population ecology, marine ecology

T. Tricas, PhD—marine animal behavior

A. Wikramanayake, PhD—developmental biology

C. Womersley, PhD—environmental physiology, biochemical adaptation, parasitology

G. J. Wong, PhD—mating systems and biosystematics of basidiomycetes

Degrees Offered: BA (including minor) in biology, BS in biology, BS in marine biology

The Academic Program

The Biology Program (BIOL) is a cooperative program whose faculty members are from the Biology Program and the Departments of Botany; Cell and Molecular Biology; Microbiology, Molecular Biosciences and Biosystems; Engineering; and Zoology. It provides an academic home to students who wish to pursue a broad training in the biological sciences. It offers a BA degree for pre-professional students, a BS degree with five specializations: cell and molecular biology, ecology/evolution/conservation biology, marine/aquatic biology, organismic biology and general biology, a BS degree in marine biology, and a minor in biology.

Biology is of fundamental importance in a science or liberal arts education, as it provides students with a keener insight into and a deeper appreciation of the many facets of living systems. Most students plan to use their training as preparation for professional work, such as aquaculture, biotechnology, biological research, dentistry, marine biology, medicine, optometry, park services, pharmacy, and teaching. Our graduates have an outstanding record of acceptance in advanced degree programs at dental, medical, pharmacy, and graduate schools. Many of our graduates also become teachers after obtaining a post-baccalaureate teaching certificate at the College of Education.

The biology curricula are designed to provide students with a strong background in the principles of biology and with rigorous upper-division instruction in a number of basic areas. This combination of breadth and in-depth instruction allows students to develop the intellectual foundations and the skills necessary to deal with the specific biological concerns of today and the flexibility to meet the needs of the various professions. From this base, our graduates can pursue future specialization with confidence.

Advising

Student advising is mandatory. Prospective majors should come to Dean 2 for advising immediately, to design a curriculum that satisfies program requirements.

Undergraduate Study

BA Degree in Biology

Requirements (C [not C-] grade minimum)

- BIOL 172, 265, 275, and 375 plus laboratories
- 20 credit hours in approved courses, including one each from botany, microbiology, physiology, and zoology, and one or more laboratory courses at the 300 level or above

Related Requirements (D [not D-] grade minimum)

- CHEM 161, 162, 272 plus laboratories and 273
- PHYS 151 and 152 or 170 and 272 plus laboratories
- MATH 215 or 241

BS Degree in Biology**Requirements (C [not C-] grade minimum)**

- BIOL 172, 265, 275, and 375 plus laboratories
- One course each from morphology/systematics and physiology
- BIOC 441 or BIOL 402 or BIOL 405
- 15 credit hours in approved courses in one of the following tracks or concentrations:
 - cell/molecular biology
 - ecology, evolution and conservation biology
 - general biology
 - marine/aquatic biology
 - organismic biology
- 1 or 2 credits of directed research in approved disciplines
- One or more laboratory courses at the 300 level or above
- The above courses to include one or more courses at the 300 level or above each from botany, microbiology, and zoology

Related Requirements (D [not D-] grade minimum)

- CHEM 161, 162, 272 plus laboratories and 273
- PHYS 151 and 152 or 170 and 272 plus laboratories
- MATH 215 and 216 or 241 and 242
- ECON 321 or MATH 243

BS Degree in Marine Biology**Requirements (C [not C-] grade minimum)**

- BIOL 172, 265, 275, and 375 plus laboratories
- OCN 201
- BIOL 301 plus laboratory
- ZOOL 439
- BOT 480
- ZOOL 475 plus laboratory
- BIOL 402 or 405 or BIOC 441
- MICR 401 plus laboratory
- BIOL 403 or 4 credits of directed research in approved disciplines
- BIOL 404
- 2 credits of directed research in approved discipline
- 6 credit hours in approved courses

Related Requirements (C [not C-] grade minimum)

- CHEM 161, 162, 272 plus laboratories and 273
- PHYS 151 and 152 plus laboratories
- MATH 215 and 216
- ECON 321

Minor in Biology**Requirements (C [not C-] grade minimum)**

Students must complete BIOL 172, 265, 275, and 375 plus related laboratories; and a minimum of 3 credits from the following:

- BIOL 363, 399, 401, 402, 405, 406/406L, 407/407L, 409, 425, 441, and 499
- Approved upper level botany, biochemistry, microbiology, physiology, and zoology courses

Botany

College of Natural Sciences

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Faculty

- *A. H. Teramura, PhD (Chair)—global climate change, ozone depletion, physiological ecology
- *C. W. Morden, PhD (Graduate Chair)—molecular systematics and evolution of plants and algae
- *K. W. Bridges, PhD—systems ecology
- *G. D. Carr, PhD—biosystematics, cytotaxonomy, chromosome evolution
- *C. C. Daehler, PhD—population biology, invasive plants, plant-herbivore interactions
- *D. R. Drake, PhD—seed ecology and conservation of Polynesian plants
- *T. K. Duarte III, PhD—hydrology, natural resources management/optimization
- *D. C. Duffy, PhD—conservation, restoration ecology
- *J. M. Fragoso, PhD—ecology, tropical forests
- *S. C. Keeley, PhD—molecular systematics, evolution in island systems
- *W. C. McClatchey, PhD—Pacific ethnobotany, ethnopharmacology
- *M. Merlin, PhD—biogeography, natural history of the Pacific
- *L. Sack, PhD—physiology and ecology of species co-existence; structure/function; hydraulics
- *A. R. Sherwood, PhD—systematics, evolution and biogeography of algae
- *C. M. Smith, PhD—physiological ecology of marine macrophytes, marine ecology, cell biology
- *T. B. Ticktin, PhD—ethnobotany, conservation
- *D. T. Webb, PhD—plant anatomy, electron microscopy, morphogenesis, symbiosis
- *G. J. Wong, PhD—mating systems and biosystematics of basidiomycetes

Cooperating Graduate Faculty

- D. Borthakur, PhD—plant molecular genetics
- D. A. Christopher, PhD—gene regulation of photosynthesis, uv effects
- D. E. Hemmes, PhD—plant ultrastructure (UH-Hilo)
- C. Hunter, PhD—reef ecology
- Y. Sagawa, PhD—cytogenetics, tissue culture
- W. S. Sakai, PhD—ultrastructure, physiological anatomy (UH-Hilo)

Affiliate Graduate Faculty

- K. C. Ewel, PhD—ecology, management practices, wetland and terrestrial ecosystems
- D. E. Gardner, PhD—biocontrol, taxonomy of rust fungi

D. R. Herbst, PhD—endangered and threatened Pacific flora, plant morphology
 L. L. Loope, PhD—ecology, conservation of rare and endangered species (Maui)
 W. A. Whistler, PhD—systematics, Pacific ethnobotany

Adjunct Faculty

A. K. Chock, MS—Hawaiian ethnobotany
 R. Gay, MS—plant ecology
 D. H. Lorence, PhD—systematics of flowering plants (Kaua'i)

Degrees Offered: BA (including minor) in botany, BS in botany, BS in Ethnobotany, MS in botany, PhD in botany

The Academic Program

UH Mānoa has the only botany department (BOT) located in a tropical environment in the U.S. Both aquatic and terrestrial tropical ecosystems provide the subjects of research and teaching. The department is committed to broad-based botanical training that focuses on developing an understanding of Hawai'i's unique island environment. While it maintains traditional areas of botanical study, the department also uses new approaches and current technologies. It has faculty in anatomy, ecology, systematics, ethnobotany, physiology, and population and evolutionary biology. Research programs focus on ecology, evolution and conservation of Hawai'i's ecosystem and unique endemic flora; the ecology and physiology of marine macroalgae; invasion biology by alien weeds; and the uses of plants by the human cultures of the Pacific Basin. Participation in the interdepartmental undergraduate biology program and the graduate program in ecology, evolution and conservation biology provides interactions with other departments and expands opportunities for breadth in research and instruction. All botany faculty members, regardless of rank, teach courses in the undergraduate curriculum as well as at advanced levels.

The department offers bachelor of arts, bachelor of science, and minor degrees in botany at the undergraduate level; the MS and PhD degrees at the graduate level. Undergraduate majors follow a number of career paths leading to employment as naturalists, environmental planners, policy makers, conservation biologists, teachers, researchers, and museum or organizational directors. A number of graduates have assumed important positions in public and private institutions at the national and international levels. Support at the undergraduate and graduate levels is available via competitive tuition waivers and scholarships. Teaching and research assistantships are available at the graduate level.

The botany programs strongly emphasize field experience and hands-on laboratory training with locally important plants, their environment, historical and present uses, as well as the unique aspects of plant evolution and ecology in Hawai'i and the Pacific. The department's website at www.botany.hawaii.edu allows glimpses into the many environments and special plants in Hawai'i, and provides further information about faculty interests and research.

Over half of all the endangered plant species in the U.S. are endemic to Hawai'i. Botanical knowledge and understanding are essential to the continued preservation of these unique

plants. The botany department cooperates with government and private agencies (see "Affiliations" below) in conservation efforts for these species. The department also provides identifications and fundamental knowledge about Hawai'i's unique plants to local citizens, schools, and state and federal agencies.

Hawai'i's location provides botany students with the best opportunity for exploration of tropical marine or terrestrial ecosystems available anywhere in the U.S. The varied environments and climates present in the islands allow work from oceanic reefs to the tops of snow-covered volcanoes. The isolation and geology of the islands have produced a unique flora, unmatched in its potential for effective study of systematic, evolutionary, ecological, and ethnobotanical questions.

Affiliations

Botanical studies are enhanced by cooperative working relationships between the department and Hawai'i Institute of Marine Biology, Harold L. Lyon Arboretum, Kewalo Marine Laboratory of the Pacific Biomedical Research Center, Pacific Cooperative Studies Unit of the National Park Service, The Nature Conservancy, State of Hawai'i Department of Land and Natural Resources, U.S. Fish and Wildlife Service, National Tropical Botanical Garden, Honolulu Botanical Garden, Herbarium Pacificum and the Department of Botany of the B.P. Bishop Museum, Hawai'i Agriculture Research Center (formerly Hawaiian Sugar Planters' Association), and Waikiki Aquarium.

Advising

Student advising is coordinated by the undergraduate advisor who is available to talk with prospective majors about their interests. An information sheet is available in the department office. Graduate students entering the department are assigned an interim committee of three faculty members who provide general advice. The students committee and the Chair of Botanical Sciences oversee requirements and provide a link between the Graduate Division and the student. Graduate students are encouraged to interact with each faculty to become acquainted with various research approaches and areas of expertise. Once a research topic has been identified, a permanent committee will be established to provide specific assistance.

Undergraduate Study

BA Degree

The BA degree provides students flexibility to pursue a broad liberal arts education and still gain a sound foundation in botany with an area of particular interest. Courses are available in conservation, ecology, ethnobotany, evolution, physiology, structural botany, systematics, and selected faculty research specialties. The courses applied toward the botany major may be selected with the student's interest area in mind.

Requirements

- 28 semester hours in approved biological courses beyond BOT 101 and 101L or equivalent

- BOT 201/201L and 351/351L
- 2 credit hours of BOT 399
- One option from each area:
 - ecology and conservation: BOT 350, 450, 453, 454, 456, or 482/482L
 - form and function: BOT 311, 410/410L, 446, 470/470L
 - genetics and evolution: BIOL 275/275L, 375/375L, BOT 450, 462, CMB 351
 - organisms: BOT 430, 461, 480
- CHEM 151/151L, 152/152L, or higher
- ICS 101
- PHYS 100/100L or higher

Prospective majors should consult the department promptly to design a curriculum that satisfies these requirements.

BS Degree

The BS degree is designed for those students who plan a career in science with an emphasis on plants, especially those intending to do graduate studies. A full complement of basic courses in biology, chemistry, math, and physics is required in addition to botany courses. As with the BA degree, students may choose among a variety of courses to fulfill requirements for the major.

Requirements

- BIOL 171/171L, 172/172L and the specific requirements in the following areas:
 - cell and molecular biology: BIOL 275/275L, BOT 470/470L
 - ecology and conservation: BIOL 265/265L or BOT 351/351L and one of BOT 350, 450, 453, 454, 456, 482/482L
 - organismal and structural botany: BOT 201/201L, 461, 311 or 410/410L, and 430 or 480
 - genetics and evolution: BIOL 375/375L, BOT 462
- CHEM 161/161L, 162/162L, 272/272L
- ICS 101
- MATH 215, 216 or higher
- PHYS 151/151L, 152/152L

Prospective majors should consult the department promptly to design a curriculum that satisfies these requirements. BOT 101 to BOT 160 do not fulfill major requirements.

BS in Ethnobotany

Minor

Requirements

Students must complete 15 credit hours in non-introductory courses with a grade of C (not C-) or higher.

For evolutionary botany:

- BOT 201/201L, and 462
- Electives: BOT 410/410L, 430, 450, 461, 470/470L, 480, 662, or 663

For tropical field botany:

- BOT 453
- Electives: BOT 201/201L, 350, 450, 454, and 461

Individual programs may be designed by the student and advisor for approval by the faculty.

Graduate Study

The department offers programs leading to MS and PhD degrees. Hawai'i's location offers unique opportunities to study the patterns and processes of evolution, adaptation, and morphological and physiological variations within a geographically variable and isolated setting. Faculty expertise spans from the molecular to the whole organism in marine and terrestrial environments, with emphasis on evolutionary biology, ecology, ethnobotany, molecular evolution, physiology, structural botany, and systematics. The faculty includes a number of nationally and internationally recognized scientists in ecology, ethnobotany, physiological ecology, and systematics.

In addition to the previously listed affiliations, botany is closely affiliated with the program in ecology, evolution, and conservation biology, providing a variety of opportunities for graduate student education, research, and support.

Recipients of the MS degree often teach at the high school level, pursue careers with government agencies such as the U.S. Fish and Wildlife Service or National Park Service, or work with environmental organizations like the Nature Conservancy or the Sierra Club. Those with a PhD may teach and/or conduct research in private industry or in colleges and universities or work with environmental organizations or the government.

A brochure listing faculty members and their research areas and publications is available from the botany office and on the website: www.botany.hawaii.edu. Applications for admission and opportunities for financial aid and support are available upon request.

At the time of application, an official record of the student's performance on the GRE General Test must be submitted to the department. The subject test in biology is also recommended. Three letters of recommendation from persons who can appraise the student's aptitude for advanced work are required. In their statement of objectives; applicants should identify a specific area of study within botany: Conservation, Ecology, Ethnobotany, General Botany, Marine Botany, Systematics/Evolution or Whole Plant Biology. Minimum curriculum requirements for each track are available at the department website. Applicants will be evaluated for their level of preparation and potential to successfully complete their proposed plan of study. Application deadlines are **February 1** for fall semester and **September 1** for spring semester. Normally, teaching assistantships are available for the beginning of fall semester, but openings may occur mid-year.

MS and PhD students are admitted to candidacy when they have successfully completed any requirements and pre-program deficiencies identified by their committee and after they have demonstrated the ability to collect, analyze, integrate, and communicate scientific information effectively in the English language. This requirement may be satisfied by a class paper, publication, or other written evidence deemed acceptable by the committee.

Because scientific findings are typically presented orally, as well as in writing, all students must gain and demonstrate proficiency in the presentation of seminars. Students must complete at least two BOT 610 seminars to satisfy this requirement. In addition, MS Plan A and PhD students must present two public seminars: first, outlining the background of a research problem and the student's proposed research program; and second, at the conclusion of their program, describing the research results and conclusions. The latter seminar also includes a final examination by the thesis or dissertation committee. The final examination for the MS Plan B students includes the presentation of a public seminar summarizing the results of one of their directed research studies.

Master's Degree

Plan A (thesis) and Plan B (non-thesis) are separate MS programs with distinct purposes. Before admission to candidacy, the plan that a candidate intends to follow must be declared and approved. Plan A is the usual program to be taken by candidates. Plan B is for students who do not intend to make research in botanical sciences their profession. Plan B programs emphasize the methodological aspects of botanical sciences.

Plan A (Thesis) Requirements

For Plan A, a minimum of 30 credit hours is required. Of that, a total of 12 credit hours shall be for thesis and a minimum of 18 additional credit hours for courses approved by the candidate's committee.

Plan B (Non-thesis) Requirements

For Plan B, a minimum of 30 credit hours is required. Of that, a total of 18 credit hours shall be earned in the major field or an approved related field in courses numbered 600 and above. Of these credits, at least 6 (but not more than 9) must be for directed research in aspects of botanical sciences chosen by the candidate in consultation with his or her committee.

Doctoral Degree

The PhD program includes gaining a working knowledge in an approved foreign language or other research-tool subject, as well as passing a comprehensive examination and writing a dissertation. Suitability of the language or tool subject is determined by the graduate faculty according to the student's area of specialization, and proficiency is ordinarily determined by examination or satisfactory completion of a specific course of study.

Requirements

The comprehensive examination is solely oral, or a combination of oral and written, and is conducted by the candidate's committee, plus any members of the graduate faculty who wish to attend. In addition to general botany, the candidate is examined in-depth in areas of related disciplines that have been previously agreed upon by the student and the committee.

The dissertation is expected to be an original contribution based on independent research. It is initiated by the

preparation of a critical review of the literature that becomes the basis for a dissertation proposal. Dissertation research for the PhD degree is carried out in an aspect of botanical sciences for which a member of the graduate faculty of the field will accept responsibility as committee chair.

Chemistry

College of Natural Sciences

Bilger 239

2545 McCarthy Mall

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Tel: (808) 956-7480

Fax: (808) 956-5908

E-mail: office@gold.chem.hawaii.edu

Web: www.chem.hawaii.edu

Faculty

- *T. T. Bopp, PhD (Chair)—physical chemistry, nuclear magnetic resonance
- *G. Andermann, PhD—physical analytical chemistry, surface chemistry, natural products material science, X-ray spectroscopy, optical properties, superconductors
- *J. D. Head, PhD—theoretical chemistry, electronic structure determination of large molecules and clusters
- *T. K. Hemscheidt, PhD—organic and bioorganic chemistry, biosynthesis of natural products
- *J. T. Jarrett, PhD—biochemistry, enzymology, structure and function of metalloenzymes
- *C. M. Jensen, PhD—inorganic and organometallic chemistry, polyhydride and dihydrogen metal complexes, homogeneous catalysts, hydrogen storage materials
- *R. I. Kaiser, PhD—physical chemistry, reaction dynamics, chemistry in extraterrestrial environments
- *K. K. Kumashiro, PhD—physical chemistry, solid-state nuclear magnetic resonance of proteins and peptides
- *D. W. Muenow, PhD—physical chemistry, high-temperature chemistry, geochemistry, mass spectrometry
- *K. Seff, PhD—physical chemistry, intrazeolitic chemistry, structure determination by x-ray crystallography
- *S. Takara, PhD—inorganic and organometallic chemistry, development of green catalytic systems, bio-inspired molecular catalysis, organometallic materials chemistry
- *M. A. Tius, PhD—organic chemistry, synthesis of natural products

Cooperating Graduate Faculty

C. J. Simmons, PhD—inorganic chemistry, metal-dioxygen and Jahn-Teller copper complexes, structure determination by X-ray crystallography

Degrees Offered: BA (including minor) in chemistry, BS in chemistry, MS in chemistry, PhD in chemistry

The Academic Program

Chemistry (CHEM) stands at the crossroads between physics and biology. As biological processes are examined in ever finer detail, chemistry is increasingly called upon to provide the insights, techniques, and materials needed to understand the workings of living organisms, including ourselves. Chemistry is thus a popular major for those interested in biomedical careers. In another direction, chemistry is also essential to the search for solutions to the ecological problems created by the ever-expanding range of human activities. Chemists create new substances with new properties that find application throughout our civilization.

As a major, chemistry provides a solid foundation of scientific knowledge and experimental skills that enables one to specialize in many directions toward careers in research, teaching, business, or professional practice. Also, because virtually all constructed things we see and use in our daily lives involve chemistry, there is a huge pool of jobs for chemists in the manufacturing industries.

Undergraduate Study

BA Degree

Requirements

- 27 credit hours in CHEM courses numbered 200 and above, including CHEM 272/272L, 273/273L, 274/274L, 333/333L, 351, and 352/352L
- MATH 243, Calculus III
- PHYS 170/170L, and 272/272L
- Recommended languages: German, French, Russian, or Japanese

BS Degree

Requirements

- 40 credit hours in CHEM courses numbered 200 and above, including CHEM 272/272L, 273/273L, 274/274L, 333/333L, 351, 352/352L, 422, 423 and 443
- A minimum of 6 credits from CHEM 399, 445, 601, 602, 621, 622, 623, 631, 632, 633, 641, 642, 643, 651, 653, 657, or 658, HON 493 and 494, ENBI 402 or BIOC 441
- MATH 243, Calculus III
- PHYS 170/170L and 272/272L
- Recommended electives: MATH 244 and PHYS 274
- Recommended languages: German or French

Minor

Requirements

- 17 credit hours in CHEM courses numbered 200 and above, including CHEM 272/272L, 273/273L, 274/274L, and 351

Graduate Study

The department offers MS and PhD research and study opportunities in inorganic, organic, and physical chemistry, with specialized research opportunities in geochemistry and marine-related chemistry.

Intended candidates for the MS or PhD must present the minimum undergraduate preparation in general, organic, analytical, and physical chemistry courses. Foreign applicants for the MS and all PhD applicants must take the GRE General Test and subject test in chemistry.

Graduate study in chemistry consists of course work, independent study, teaching, and research. A thesis or dissertation based on original research is the most important part of the master's or doctoral degree respectively. Candidates for advanced degrees are required to serve as teaching assistants for a portion of their program.

Additional details concerning MS and PhD degree requirements, as well as assistantships available to prospective students, are outlined in brochures available upon request from the department.

Master's Degree

Requirements

The candidate for the MS in chemistry (Plan A only) is granted 12 credit hours for an acceptable thesis. The remaining 18 credit hours must be selected from acceptable graduate courses in chemistry (listed in the back of this *Catalog*) or from graduate offerings in mathematics and the natural sciences. Required courses are CHEM 691 or 692, and 700.

Doctoral Degree

Requirements

Doctoral candidates must complete a minimum of six semesters of graduate study of which at least three semesters must be in residence at UH Mānoa. Courses are selected from acceptable graduate courses in chemistry listed in the back of this *Catalog* and from graduate offerings in related disciplines as directed by the faculty. Candidates must demonstrate mastery of core material in graduate courses in their chosen areas. Each candidate must pass a comprehensive oral examination consisting of the defense of an original research proposal written by the candidate and a résumé of the candidate's dissertation research and its current status.

The most important requirement for the PhD degree is the research project that culminates in the dissertation. Prior to beginning the second semester of study, each candidate selects one member of the chemistry graduate faculty to serve as his or her research director. The research director works with the candidate throughout his or her program and chairs the candidate's dissertation committee.

More information about the chemistry department and its programs can be found on its website.

Communication

School of Communications
College of Social Sciences
Crawford 320
2550 Campus Road
Honolulu, HI 96822
Tel: (808) 956-8715
Fax: (808) 956-5396
E-mail: comm@hawaii.edu
Web: www.communications.hawaii.edu

Faculty

- G. Kato, MA (Chair)—broadcast news, law, reporting
*G. Fontaine, PhD (Graduate Chair)—intercultural and organizational communication
*T. Brislin, PhD—mass communication, journalism, ethics
*D. M. Davis, PhD—social impact of communication technologies, telecom services, communication and gender
*R. Huard, PhD—new media, human-computer interaction
*J. I. Kim, PhD—communication theory and research, development communication, network analysis, diffusion of innovations
*C. G. R. Macdonald, PhD—multimedia, telecommunication, research
*M. Moody, MFA—video and film production
*D. J. Wedemeyer, PhD—communication policy and planning, telecommunication, forecasting

Cooperating Graduate Faculty

- A. R. Arno, PhD—communication law, ethnography of communication
C. Ho, PhD—communication technologies
D. Lassner, PhD—telecommunication
N. Okamura, PhD—telecommunication
W. Remus, PhD—decision sciences
M. Shapiro, PhD—political science
K. Tokuno, PhD—intercultural, human and organizational development

Affiliate Graduate Faculty

- P. Pedersen, PhD—intercultural, counseling

Degrees Offered: BA in communication, MA in communication, PhD in communication and information sciences (interdisciplinary), Graduate Certificate in Telecommunications Information Resource Management

The Academic Program

Communication (COM) study provides undergraduate and graduate students an academic climate consistent with the mission of the College of Social Sciences. The program focuses on research and active learning in fundamental communication processes with specific emphasis on the areas of interpersonal communication, intercultural communication, international communication, organizational communication, telecommunication, and multimedia production as preparation for fruitful careers, enlightened citizenship, and lifelong learning.

In addition to the faculty and staff, resources include both a state-of-the-art media laboratory, and computer-communication laboratory. The internship program facilitates the merging of academic knowledge with applied experience in the students' fields of interest.

Affiliations

The East-West Center, Pacific Telecommunications Council, PEACESAT, Hawai'i Interactive Television System (HITS), and the many international conferences dealing with Asian/Pacific affairs provide a stimulating environment for international and intercultural communication.

Advising

Each undergraduate major is assigned a faculty advisor. In addition, an undergraduate chair provides a general point of contact for aspiring and declared majors. The graduate program parallels the undergraduate advising structure. However, once a student is admitted to candidacy, the student chooses a permanent advisor for the remainder of his or her program.

Undergraduate Study

The undergraduate program offers courses that provide students with a sound understanding of fundamental communication processes in contexts ranging from dyads and small groups to formal organizations, the community, and society at large. The program also provides students the opportunity to select courses that allow them to specialize in a variety of interest areas within the field, including interpersonal communication, intercultural communication, international communication, organizational communication, telecommunication, and multimedia production.

Bachelor's Degree

Requirements

Students must complete 36 credit hours of communication courses with a 2.5 GPA, including the following:

- Introduction to Communication (COM 201)
- At least 12 credits at the 400 level or above
- Senior Thesis Project (COM 490)

To declare a major in communication, students must be enrolled in, or have completed with at least a B-(2.7) or better in Introduction to Communication (COM 201) and have completed at least 12 credit hours with a 2.5 GPA. Upon declaration of their major, students are assigned a personal faculty advisor to assist them in their progress through the program. Students select the remaining number of credit hours from courses that will support their personal and career interests. To assist in that selection, there are a number of "specialization pathways" through the curriculum identified by the faculty, for example, in areas such as organizational communication, intercultural communication at home and abroad, and media, multimedia and telecommunications. Alternatively, students with the assistance of their faculty advisor can follow their own specialization pathway through the curriculum.

Graduate Study

Master's Degree

The School of Communications offers a graduate program leading to the MA degree in Communication. The Program Areas of Specialization reflect the expertise of our graduate faculty in organizational/intercultural communication, telecommunication, and global Communication. Both individual faculty members and the Program as a whole work within sociocultural and sociotechnical perspectives.

Qualified applicants are admitted to the Program in the fall semester only. Applicants are not required to have an undergraduate communication degree, but may be required to make up undergraduate deficiencies. Applicants to the Program must submit to the School a statement of academic objectives and the planned role of our Program in helping meet those objectives. Applicants must also arrange for three letters of recommendation to be sent to the School. These letters should be written by persons who are familiar with the student's academic accomplishments. Letters from former professors are preferred. Qualified applicants whose academic objectives are in harmony with our program specializations will be admitted as classified students on a space available basis.

Each classified student admitted into our Program is assigned an interim advisor who assists the student in the initial planning of his or her degree program. The student may, at any time, change that advisor by informing the Program staff of the change. Once the student has selected a Thesis or Practicum Committee Chair (see below) that faculty member becomes her or his permanent advisor. The student remains, however, primarily responsible to ascertain that all Program requirements are being met in a timely fashion.

Each student must complete a minimum of 36 credits with at least a 3.0 grade point average. These credits are to be distributed by taking:

- Both Foundation Courses 611 and 612 (6 credits), normally during the first semester in the Program.
- Two courses which demonstrate competence in at least one Area of Specialization (6 credits). Typically these are the core courses in Organizational/Intercultural Communication (e.g., 623 and 643), Telecommunication (e.g., 633 and 634), or Global Communication (e.g., 644 and 645).
- Two Seminars (6 credits) selected from 691 and/or 692 (either repeatable up to 6 credits) and/or 680 from the School's Graduate Certificate Program in Telecommunication and Information Resource Management (TIRM).
- One Capstone Activity (6 credits, 1-6 credits per semester) selected from 700 (Plan A—Thesis) or 695 (Plan B—Practicum).
- The remaining 12 credits are selected from: Core courses outside the Area of Specialization; and/or advanced courses 624, 646, 650, 660; and/or TIRM courses 681, 682, 683, 684; and/or Directed Research 699; and/or 400 level augmented undergraduate courses, or graduate courses outside the Program (both the latter require approval of Committee Chair; maximum 6 credits).

Each student is expected to take at least one 3-credit course or seminar each semester. All substitutions, exceptions, and/or courses external to the Program must be approved by the Thesis or Practicum Committee Chair and noted in the student's official records. If students are not enrolled for courses during a semester they must apply for an official leave of absence. In pursuit of their academic goals students often earn more than the minimum 36 credits. The program can be compressed into 15 months or stretched out over 60 months. Typically, however, students complete the program in 18 to 24 months.

On completing 611 and achieving a 3.0 grade average in all completed coursework, each classified student is eligible for admission to candidacy allowing him or her to formally identify a degree plan from the two options available. These options are to complete either a Thesis (Plan A) or Practicum (Plan B) as her or his Capstone Activity. At the same time the student selects the Chair and Members of their Thesis or Practicum Committee. That Committee is responsible for supervising and evaluating the student's thesis or practicum activity. The Committee must be comprised of at least three members of the graduate faculty from UH with at least two of those members and the Chair from our Program. Both the Committee members and the topic of the activity must be approved by the Graduate Division and research to be conducted approved by the University's Committee on Human Studies. At the completion of the student's program he or she must take a two-hour oral exam on their knowledge of the field and defense of their thesis or practicum report.

For further information please visit our website at www.communications.hawaii.edu/com/pages/graduate/grad.html.

Doctoral Degree in Communication and Information Sciences

The School of Communications is one of four academic programs that cooperate in an interdisciplinary doctoral program in Communication and Information Sciences. See the "Interdisciplinary Program" section for more information on that program.

East Asian Languages and Literatures

College of Languages, Linguistics and Literature

Moore 382

1890 East-West Road

Honolulu, HI 96822

Tel: (808) 956-8940

Fax: (808) 956-9515

Web: www.hawaii.edu/eall/

Faculty

- *J. R. Cohn, PhD (Chair)—Japanese literature, especially comedy and modern fiction; and bibliography
- *D. E. Ashworth, PhD—Japanese and Asian language pedagogy; telecommunications and language learning; translation pedagogy
- *H. M. Cook, PhD—Japanese linguistics, sociolinguistics, discourse analysis and pragmatics; Second Language Acquisition
- S. A. Curry, PhD—Japanese language teaching
- *J. H. Haig, PhD—Japanese linguistics, syntax, and semantics, functional syntax, linguistic theory
- *K. Hijirida, EdD—Japanese language pedagogy; language for special purposes; curriculum design, development and assessment
- S. H. Hirate, MA—Japanese language teaching
- C. I. Hitosugi, MA—Japanese language teaching
- *H.-I. Hsieh, PhD—Chinese language and linguistics; Chinese literature and culture; mathematical linguistics; semantics; cognitive grammar
- *R. N. Huey, PhD—classical Japanese literature (especially *waka*)
- T. Iwai, MA—Japanese language teaching
- S. Jiang, MA—Chinese language teaching
- *K. Kanno, PhD—Japanese linguistics, syntax, second language acquisition, parsing
- H. U. Kelley, MA—Japanese language teaching
- *Y.-H. Kim, PhD—modern Korean women writers; modern Korean literature; Korean culture; East Asian women writers and society
- *T. D. Klafehn, PhD—language acquisition, psycholinguistics, language processing and representation, Japanese inflectional morphology, cognitive science
- *K. Kondo-Brown, EdD—Japanese language pedagogy, second language assessment, heritage language development
- J. Kwan, MA—Chinese language teaching
- M. Lachmann, MA—Japanese language teaching
- *D. J. Lee, PhD—Korean language and linguistics, language acquisition
- *Y.-C. Li, PhD—Chinese syntax and semantics, language acquisition, comparative dialects, classical Chinese, sociolinguistics, language planning, second language acquisition
- *L. B. Lower, PhD—modern Japanese literature and film
- J.-Y. Lu-Chen, PhD—Chinese language teaching, translation and interpretation
- K. A. Masunaga, MA—Japanese language teaching
- *D. R. McCraw, PhD—Chinese classical literature, especially poetry, particularly *Tang shi*, *Song shi* and *ci*, and *Qing ci*
- G. E. Nakahara, PhD—Japanese language teaching
- *N. M. Ochner, PhD—modern Japanese literature, comparative literature of Japan and the West, bibliography

- M. Ogasawara, MA—Japanese language teaching
- D. T. Ogawa, MA—Japanese language teaching
- *K. J. Ota, PhD—Mandarin, Japanese and Taiwanese syntax, application of high-tech in language teaching
- G. E. Ray, MA—Japanese language teaching
- *K. A. Reynolds, PhD—Japanese socio-historical linguistics, and sociolinguistics (gender and class)
- *L. A. Serafim, PhD—Japonic linguistics: Japanese and Ryukyuan language history and dialectology; the relation of Japonic to Korean, Ryukyuan/Okinawan history
- K. Shoji, MA—Japanese language teaching
- *H.-M. Sohn, PhD—Korean language and linguistics, Korean-Japanese comparative syntax, general linguistics
- *M.-W. Song, PhD—modern Chinese literature, especially novel; Chinese film studies; youth culture in twentieth century China
- M. Steverson, MA—Japanese language teaching
- Y. Tateyama, MA—Japanese language teaching
- *A. H. Thornhill, PhD—medieval Japanese literature and religion
- *G. Vitiello, PhD—late imperial Chinese fiction and history of sexuality
- *A. V. Vovin, PhD—Japanese, Korean and Tungusic historical and descriptive linguistics; Central Asian linguistics; the Ainu language
- Y. Wada, MA—Japanese language teaching
- P. C.-K. Woo, MA—Japanese language teaching
- *T.-C. Yao, PhD—Chinese language pedagogy, computer-assisted language instruction in Chinese
- *D. R. Yoshimi, PhD—Japanese second language acquisition and pedagogy; discourse analysis, pragmatics and sociolinguistics
- *M.-B. Yue, PhD—cultural identity in 20th century Chinese literature and film, construction of Chineseness in Asian-American literature, diasporic consciousness in travel and exile literature, post-colonial literature in Asia, multiculturalism in Europe, theories of ideology and representation, feminism and psychoanalysis, film criticism, [Inter-Asia] cultural studies
- S. M. Zeng, PhD—Chinese language teaching, translation and interpretation

Cooperating Graduate Faculty

- G. Kasper, PhD—second-language discourse analysis, conversational analysis, pragmatics, qualitative research methods

Degrees and Certificates Offered: Certificate in Chinese, Certificate in Japanese, Certificate in Korean, Minor in Chinese, Minor in Japanese, Minor in Korean, BA in Chinese, BA in Japanese, BA in Korean, MA in East Asian languages and literatures, PhD in East Asian languages and literatures

The Academic Program

The Department of East Asian Languages and Literatures (EALL) is the largest department of its kind in the country and offers a curriculum unparalleled in its breadth, depth, and variety of courses in Chinese (Cantonese, Mandarin, Taiwanese), Japanese, and Korean.

At the undergraduate level, language skill courses are aimed at developing a high level of proficiency in both the spoken and written aspects of the languages. Cultural awareness as well as language proficiency are promoted through extra-curricular activities such as student clubs, video/film showings, lectures, and study abroad programs. The department currently offers

programs in Hainan, China and Kobe, Japan through the Study Abroad Center. Other courses provide both introductory and advanced coverage of the literatures of East Asia and the analysis and description of the languages themselves. The graduate program is primarily designed to provide students with advanced professional training in language history, structure, pedagogy, and sociolinguistics, as well as literary history and criticism.

While most students enroll in language courses to fulfill the General Education Core requirement for foreign languages, there are many who plan to use Chinese, Japanese, or Korean in research or graduate studies. Those who plan to enter the work force immediately upon completing their undergraduate studies find that their language proficiency opens doors to employment in the local travel industry and other internationally oriented businesses.

Undergraduate Study

BA in Chinese

Requirements

Students must complete a minimum of 34 credit hours, including the following upper division courses:

- CHN 301, 302, 401, and 402
- CHN 451 or 452
- EALL 361 or 362
- One of CHN 470 or EALL 363B, 363C
- 9 credit hours of approved courses in Chinese language and literature

BA in Japanese

Requirements

Students must complete a minimum of 36 credit hours, including:

- JPN 350, 370, 401, 402, and 407E
- JPN 407B, 407C, or 407D
- EALL 271 and 272
- 12 credit hours in approved courses

BA in Korean

Requirements

Students must complete a minimum of 36 credit hours, including:

- KOR 301, 302, 401, 402, 451, 452, and 470
- EALL 281 or 282
- 12 credit hours in approved courses

Minor

Students planning to declare a minor should have completed successfully four semesters of language skill courses or their equivalent and must have a GPA of 2.0 or higher. A minimum of 15-17 credits from five courses in one of the three languages (Chinese, Japanese, Korean) will be required. At least 9 credits will be from non-language skills courses with a focus on linguistics or literature. In the case of native speakers, they will be required to take five non-language skill courses. All

courses selected must have the approval of advisors in both the student's major department and the EALL Department. Only courses with a C (not C-) or above will be counted, and the student must have a cumulative GPA of 3.0 or higher for the five courses. All courses must be taken within the UH system, with minimum of at least three courses taken at UH Mānoa. A detailed description of program requirements is available at the department office in Moore Hall 382.

Certificate

Certificates in Chinese, Japanese, and Korean are offered to eligible students. A minimum of 15 credit hours from 301 or above in the language of choice must be earned with a minimum GPA of 3.0. A detailed description of the program requirements is available from the Department Office in Moore Hall 382.

Graduate Study

Complete details on the graduate programs are available from the department office in Moore Hall 382 and on the department's webpage. All of our graduate degree programs are academic in nature, and focus on the disciplines of linguistic and literary study.

MA graduates of the programs have obtained positions as instructors in private schools, two- and four-year colleges and universities; as translators; and in various capacities in private firms and government service. PhD graduates have obtained teaching positions at universities in the U.S. mainland and in several Asian countries.

The MA and PhD are recognized Western Interstate Commission for Higher Education (WICHE) regional graduate programs. Residents of Alaska, Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming are eligible, upon admission, to enroll at Hawai'i-resident tuition rates. See the "Tuition, Fees, and Financial Aid" section of this *Catalog* for more information on WICHE programs.

The MA degree is offered in the fields of Chinese language, Chinese literature, Japanese language, Japanese literature, Korean language, and Korean literature. The PhD degree is offered with concentrations in the same fields. All applicants for the MA program must have a BA in the language of their concentration or equivalent preparation and must submit three letters of recommendation and GRE General Test scores. All applicants for the PhD program must have a BA, and must have earned with distinction an MA in the language or literature of their concentration, and must submit three letters of recommendation, GRE General Test scores, and a sample of their scholarly writing in English. Normally, each newly-admitted MA student is required to undergo a diagnostic evaluation and each PhD student is required to undergo an assessment, differing according to subfield, as well as fulfill any language requirement, before being advanced to candidacy.

The MA candidate may select either the Plan A (thesis) or Plan B (non-thesis) program; Plan A must have the approval of the Graduate Chair.

Master's Degree

Requirements

For Plan A, students must complete a minimum of 30 credit hours, including at least 18 credit hours in the major field and 6 credit hours of thesis research. A minimum of 12 credit hours in the major field must be earned in courses numbered 600 or higher, including a 700-level seminar and excluding 699V.

For Plan B, students must complete a minimum of 30 credit hours, including at least 21 credit hours in the major field. A minimum of 18 credit hours in the major field must be earned in courses numbered 600 or higher, including a 700-level seminar and excluding 699V.

Doctoral Degree

Requirements

PhD candidates are expected to master four fields, at least one of which will be outside the students' areas of specialization. They must pass a comprehensive examination covering the four fields, complete an original dissertation, and pass a final oral examination in defense of the dissertation. Apart from having a command of English and their concentration language, candidates must have knowledge of a second East Asian language equivalent to two years of study; in some cases a third East Asian language or an additional European language may be required.

Economics

College of Social Sciences

Saunders Hall 542

2424 Maile Way

Honolulu, HI 96822

Tel: (808) 956-8496

Fax: (808) 956-4347

E-mail: econ@hawaii.edu

Web: www.economics.hawaii.edu

Faculty

- *J. Mak, PhD (Chair)—economics of travel and tourism, public finance, economic history
- *C. Bonham, PhD—applied macroeconomics, monetary theory
- *A. Dellis, PhD—political economics, public economics
- *B. Gangnes, PhD—international macroeconomic modeling, U.S.-Japan trade relations
- *T. Greaney, PhD—international economics, industrial organization
- *T. Halliday, PhD—health economics, economic development, econometrics
- *D. E. Konan, PhD—international trade
- *S. La Croix, PhD—economic history, development economics, industrial organization
- *C. Lee, PhD—international economics, development economics
- *S. H. Lee, PhD—econometrics, labor economics
- *A. Mason, PhD—population economics, macroeconomics
- *J. Moncur, PhD—water resource economics, economic statistics, microeconomics

*I. Noy, PhD—international finance

*A. Rieser, LLM—law

*J. Roumasset, PhD—development economics, public resource allocation, resource economics

*J. Russo, PhD—health economics, applied microeconomics

*K. V. Sherstyuk, PhD—experimental economics, game theory

*X. Wang, PhD—macroeconomics, monetary economics, econometrics, applied microeconomics, labor economics

Cooperating Graduate Faculty

P. Garrod, PhD—marketing and production economics

E. Im, PhD—econometrics, statistical theory

P. S. Leung, PhD—production economics, quantitative methods

S. G. Rhee, PhD—Asia-Pacific financial markets

Affiliate Graduate Faculty

R. Blair, PhD—industrial organization, antitrust economics

L. Cho, PhD—population economics

L. Endress, PhD—growth theory

D. Ernst, PhD—science and technology in Asia

F. Fesharaki, PhD—energy economics

B. Kaiser, PhD—environmental economics, microeconomics

Z. Zhang, PhD—environmental and resource economics, economics of climate change

Degrees Offered: Undergraduate Certificates in Political Economy, Social Sciences and Health, and Human Resources/Organizational Management; BA (including Minor) in economics; MA in economics; PhD in economics

The Academic Program

Economics (ECON) is the social science that deals with the allocation and use of human and material resources under conditions of scarcity and uncertainty. It examines this subject matter at the micro level (the consumer, the household, the firm, and the industry) and the macro level (the region, the labor force, the government, the nation, and the world). Courses in these topics are complemented by instruction in the statistical and mathematical tools necessary for modeling, data collection and analysis, and hypothesis testing. Students of economics will learn a body of knowledge that is essential to understanding many aspects of the modern world and contemporary public policy issues, including such vital matters as international trade, economic development, the environment, Hawai'i's economic challenges, regulation, business cycles, and consumer behavior. A BA in economics is an excellent background for demanding analytical and policy positions in the public and private sectors; it is also a highly regarded preparation for graduate work in law, business, and public policy, as well as economics.

Economics at UH Mānoa is consciously directed toward policy challenges in the Asia Pacific region, which comprises the nations of the Pacific rim and the Pacific Islands, as well as Hawai'i. Geographic and subject matter interests of students and faculty contribute to a regional specialization in accord with UH's overall mission.

Exchange Programs

The UH Mānoa Department of Economics participates in academic and educational exchanges with Nihon University, Tokyo, Japan; Yonsei University, Seoul, South Korea; Kobe University, Kobe, Japan, and Thammasat University, Bangkok, Thailand.

Advising

Advising is mandatory for all graduate and undergraduate economics majors. Contact the department office for specific information.

Undergraduate Study

Undergraduate Certificate in Political Economy

This certificate is designed to give students a grasp of the ways in which political, economic and sociological forces interact in the shaping of public policy. The certificate includes substantial study of the central analytical approaches in political science, sociology and economics and seeks to surmount the sometimes artificial barriers of specialization that may characterize individual disciplines. A more complete description and the requirements are described under the Department of Political Science.

Interdisciplinary Certificate in Human Resources/ Organizational Management

The purpose of this certificate is to prepare students intending to enter careers in human relations and management in business, non-profit agencies and public agencies. Such careers require a broad range of knowledge and skills. Understanding finances is fundamental to the life of an organization. In addition, management requires an understanding of cultural styles of communication, modes of resolving conflict, principles of psychological motivation and interpersonal influence. Public relations is also important in reaching the public and communicating with constituencies. Organizations also must operate in an environment of complex legal regulations. A more complete description and the requirements are described under the Department of Sociology.

Interdisciplinary Certificate in Social Science and Health

The purpose of this certificate is to supplement the disciplinary major of students who wish to pursue careers in the field of health and health care by enhancing the breadth, quality and coherence of their education through taking health-related courses in a variety of different academic disciplines. A more complete description and the requirements are described under the Department of Sociology.

Bachelor's Degree

The BA in economics provides students with an intensive knowledge of the theory and practice of economics, with an emphasis on the analysis of contemporary policy challenges of Hawai'i and the U.S. in the Asia Pacific region. Majors study a wide range of current economic policy issues and learn a powerful framework for analyzing these issues. They

also develop reasoning and communication skills that are useful across disciplines. As a result, the BA program has been successful in preparing graduates for advanced study in economics, business, law, and other social sciences, as well as challenging careers in business management, technical analysis, policy evaluation, and education.

Requirements

Majors must complete 24 credit hours of upper division courses including ECON 300, 301, and either 321 or 424. At least six credit hours must be earned by completing Upper Division II ECON courses, and students must earn a C (not C-) or better in all courses designated as counting toward the major.

Minor

Requirements

Students must complete 15 credit hours of approved upper division courses, including ECON 300 and 301.

Graduate Study

The department offers a graduate program leading to the MA and PhD degrees. Graduate alumni are successful economists, entrepreneurs, and government policy experts in a variety of settings and institutions, especially in Hawai'i, Asia, and the Pacific region. Faculty research interests facilitate graduate field specializations with regional emphasis on Hawai'i, Asia, and the Pacific. Student and faculty research focuses on analyses of policy issues of importance to countries in Asia and the Pacific.

The MA program prepares students for policy analysis in government, international agencies, and the private sector, emphasizing application of theory to economic decision-making. The PhD program provides state-of-the-art theoretical and empirical training for high level academic, government, and private-sector careers.

The department maintains strong links with the East-West Center, particularly with the center's programs on population, economics, and energy. Relationships also exist with various country centers located in the UH Mānoa's School of Hawaiian, Asian, and Pacific Studies and with other programs in the College of Social Sciences. In conjunction with the College of Business Administration, the department also offers a program leading to a PhD in economics and business.

Entering graduate students are expected to have a bachelor's degree, not necessarily in economics, and to have completed courses in intermediate micro- and macroeconomic theory, elementary statistics, and a mathematics background that includes at least one semester of calculus. Applicants for the PhD program need additional mathematics. We will consider applicants who have taken the equivalent of at least two three-credit semester courses in calculus, but recommend the completion of two additional courses prior to entry in any of the following subjects: advanced calculus, linear algebra, differential equations, real analysis, or related areas. Students with deficiencies must make them up prior to entering the program or within the first year of study.

TOEFL scores (for all applicants from foreign countries where English is not the primary means of communication)

and two letters of recommendation must be submitted by applicants. Students applying for the graduate program must submit official GRE General Test scores.

Master's Degree

An MA student must be in residence for at least two semesters, and all work must be completed within seven years of admission.

Requirements

A student must earn 30 credit hours in economics, including at least 21 hours of 600- or 700-level courses. Up to 9 credit hours of 400-level courses may apply to the 30 credit hour requirement. Graduate credit will not be granted for 300-level courses. A student must have a B average (3.0 GPR) for all courses completed at UH applied toward the degree, and a B average for all 600-level and 700-level courses.

The MA requires completion of the following:

- A four-course common core comprising ECON 606, 607, 627 and 628, with a B average;
- A two-course area of concentration; and
- An individual research project, constituting the capstone experience for the degree.

A student may also choose to write a master's thesis in lieu of the individual research project. Students who complete the PhD core may substitute a passing grade on either of the PhD qualifying exams for the individual research project requirement for a master's degree.

A student who completes the MA degree may apply to the PhD program. By taking appropriate courses, a student may be able to earn both MA and PhD degrees within five years.

Doctoral Degree

A PhD student must be in residence for at least three semesters and complete all requirements within seven years of admission to the graduate program.

Requirements

The PhD in economics requires successful completion of

- seven core courses comprising ECON 606, 607, 608, 609, 627, 628 and 629 with a grade of B- or better in each course;
- qualifying examinations in microeconomic theory and macroeconomic theory;
- seven 600-level and 700-level courses in economics (including ECON 730) beyond the core;
- two fields;
- a research paper;
- an oral comprehensive exam, administered jointly with the defense of the dissertation proposal;
- a final oral exam, including defense of the final dissertation; and
- submission of the final dissertation manuscript to Graduate Division.

Normal progress requires students to take and pass both theory qualifying exams at the end of the first two semesters of study, and to complete all core courses in the first three semesters of enrollment. Students failing a qualifying examination may retake it only once.

Students choose two fields, each consisting of two courses, from among the following five fields offered by the department:

1. Economic development (ECON 610 and 611)
2. International economics (two of ECON 660, 662, and 664)
3. Public economics (ECON 650 and 651)
4. Resource and environmental economics (ECON 637 and 638)
5. Human resources (ECON 670 and 672)

Some field courses are offered annually, others less frequently. Students may petition to substitute a field in another discipline or another field in economics for one of the five fields listed above.

Before the end of their fourth semester, students should, in consultation with the Graduate Chair, reach agreement with a UH Mānoa Economics faculty member to serve as their research paper advisor. Doctoral students are required to enroll in ECON 730 in their fifth semester and complete their research paper. Students must receive a grade of "Pass" or "High Pass" on their research paper to continue in the doctoral program. Students who receive a grade of "Fail" on their paper may submit a revised version during the following semester. Students who receive a grade of "Fail" on the revised paper will not be allowed to proceed further in the doctoral program.

The comprehensive examination—of which the written qualifying examinations are a part—will include a broad probing of the candidate's general economic knowledge. The oral part of the PhD comprehensive examination will be administered jointly with the defense of the dissertation proposal, before a dissertation committee chosen by the student and approved by the graduate chair and the Graduate Division of UH Mānoa. A student who fails the comprehensive examination may repeat it once. A student who fails a second time is dropped from the program. Students who pass the oral exam are advanced to candidacy for the PhD.

The final examination, which is oral, covers the candidate's defense of the final dissertation draft. It is administered orally and is open to the public. Candidates failing the final examination may be allowed to repeat it once upon petition approved by the graduate faculty concerned and the dean of the Graduate Division. Those failing it twice are dismissed from the program.

Finally, a dissertation accepted by the dissertation committee is submitted to the Graduate Division. The final dissertation must also conform to UH standards in content and format.

English

College of Languages, Linguistics and Literature
Kuykendall 402
1733 Donaghoo Road
Honolulu, HI 96822
Tel: (808) 956-7619
Fax: (808) 956-3083
E-mail: See list of contacts on webpage
Web: www.english.hawaii.edu

Faculty

- *F. R. Ardolino, PhD—Renaissance literature, drama
- *C. Bacchilega, PhD—folklore, narrative, fairy-tale studies, 20th-century fiction, feminist criticism, literary theory, translation studies
- *D. Baker, PhD—early modern literature and history
- *M. Blair, MA—creative writing
- *S. Canham, PhD—Victorian and juvenile literature, the novel
- *J. Caron, PhD—19th-century American literature, Mark Twain, comic art and literature, popular culture
- *J. Carroll, PhD—rhetoric and composition, American novel, fiction
- *S. Curry, PhD—American literature, children's literature, comparative literature, critical theory, creative non-fiction and autobiographical writing
- *L. Despain, PhD—theory and practice of teaching composition, American literature, 20th-century fiction
- *D. Desser, PhD—20th-century rhetorics, writing and difference, and composition studies
- R. Fand, PhD—identity and culture theory, feminist-dialogic criticism, women writers
- *C. Franklin, PhD—contemporary women's literature, ethnic American literatures, feminist theory
- *R. Friederich, PhD—Renaissance, German, and comparative literature
- *M. Fuchs, PhD—modern American literature, autobiography, women writers
- *C. Fujikane, PhD—literatures of Hawai'i, Asian American literatures, feminist/nationalist critical theory and practice
- *S. Goldsberry, PhD—creative writing
- M. Hara, MA—creative writing, composition and literature instruction
- *M. Heberle, PhD—Renaissance literature, American Vietnam Literature
- J. Henry, PhD—composition studies, technical writing, professional writing, auto-ethnography
- L. Hershinow, MA—composition and literature instruction
- *T. Hilgers, PhD—composition, psychology and literature
- *C. Howes, PhD—life writing, literary theory, research methods, 19th-century literature
- *R. Hsu, PhD—modernism, ethnic literature, Asian American literature, feminist criticism
- *R. Hughes, PhD—late 19th- and 20th-century American literature, fiction
- *J. Kellogg, PhD—medieval English and French literature, comparative literature, medieval women writers
- S. Kosanke, MA—composition and literature instruction
- *R. Lessa, PhD—English romanticism, English poetry, pastoralism
- *J. Lew, PhD—late 18th-century literature, English and European romanticism, Gothic
- *L. Lyons, PhD—post-colonial literatures and theory, Irish literature, cultural studies
- *P. Lyons, PhD—American literatures, literary theory
- *I. MacMillan, MFA—creative writing
- *G. Man, PhD—film, narrative, 19th-century British literature
- K. McAndrews, PhD—American literatures, folklore and oral narrative, cultural studies
- *R. W. McHenry Jr., PhD—Restoration and 18th-century literature, Shakespeare, literature and art
- *B. Menikoff, PhD—19th- and 20th-century literature, textual criticism
- L. Middleton, PhD—19th-century literature by women, feminist theory, psychology and literature
- *R. Morales, MA—creative writing, Pacific literature, American ethnic literature
- *J. Morse, PhD—American literature, literary history
- R. Nettell, PhD—composition and literature instruction
- *P. Nicholson, PhD—Old English, Chaucer, medieval literature, English language
- *J. H. O'Mealy, PhD—Victorian literature, literature and society, modern drama
- *R. Onopa, PhD—creative writing, science fiction
- *G. Pak, PhD—creative writing, literature of Hawai'i and the Pacific, Asian American literature, Ethnic American literature
- *D. Payne, PhD—composition and rhetoric, computer-mediated writing, collaborative learning
- *J. Peters, PhD—modern British and American literature, narratology, the British novel (1700-1945)
- *K. Phillips, PhD—gender studies, literature of war, postcolonial literature
- *A. Rayson, PhD—African American literature, ethnic American literatures, professional editing, autobiography
- *J. Rieder, PhD—literary and cultural theory, science fiction, British Romanticism
- *T. Sammons, PhD—Renaissance and 17th-century literature, Milton, science fiction, rhetoric
- *S. Schultz, PhD—20th-century poetry in English, American literature, creative writing
- *S. Shankar, PhD—postcolonial literature and theory, South Asian literatures, translation and translation studies
- *R. Shapard, PhD—creative writing, contemporary American fiction
- *G. Sibley, PhD—British and American novel, Victorian literature, satire
- *C. Sinavaiana-Gabbard, PhD—Pacific literature and drama, ethnic literatures, folklore, feminist criticism
- *F. Stewart, MA—creative writing, modern and contemporary poetry and poetics, American nature writing
- *R. Sullivan, Dip.Lib.—creative writing, folklore, Pacific literature, modern and contemporary poetry and poetics
- E. Suyama, MA—composition and literature instruction
- *C. Ward, PhD—critical theory, post-colonial literature, popular culture, oral and performance theory, the novel
- *V. Wayne, PhD—Shakespeare, feminist criticism, Renaissance literature, textual editing
- A. Wendt, MA—Pacific literature and other new literatures in English, creative writing

R. Whaitiri, MA—composition and literature instruction, poetry and drama, Maori literature and culture

*J. Zuern, PhD—computer-mediated communication, comparative literature

Degrees Offered: BA (including minor) in English, MA in English, PhD in English

The Academic Program

The Department of English encourages students to develop their critical reading, writing, and creative skills through study of a variety of literatures in English, composition and rhetoric, and creative writing. The Department recognizes the unique diversity of cultures in Hawai'i and employs a variety of approaches, including multicultural and Asia Pacific perspectives, to address this uniqueness. Students work directly with faculty in relatively small classes to allow personal attention. The Department participates actively in UH Mānoa's Honors Program and its Study Abroad Semester and offers professional internships for interested students in the senior year.

The goals of the undergraduate English program are (a) to offer a comprehensive range of courses which recognizes Hawai'i's geographic and cultural location in the Pacific as part of a challenging program in literary and cultural studies, composition and rhetoric, and creative writing; (b) to develop students' critical thinking and reading skills; (c) to develop students' interests and abilities in rhetoric and writing across a variety of genres.

The graduate program enriches students' knowledge of literature, composition, and cultural studies. MA students are asked to take approximately half of their course work in a specific concentration so that they begin to develop an area of expertise while broadening their understanding of other areas of study. The MA thesis or final project at the end of the program gives them the opportunity to do extended research and writing on a topic of their own choosing.

The doctoral program prepares students to become professionals in the field. Required courses are not its focus; rather, it offers students considerable latitude in course selection and requires disciplined, independent work on examinations and the dissertation. Candidates completing the program should have the skills and experience to function as critics, scholars, and writers in an area associated with the profession of English.

Undergraduate Study

Bachelor's Degree

The Department of English offers the BA degree with informal emphases in American, British, and Pacific literatures; composition and rhetoric; and creative writing.

Requirements

Students must complete 33 credit hours of upper-division courses, including:

Level Requirements

- at the 300 level:
 - A. ENG 320, Introduction to English Studies; this course is foundational and should be taken in the student's first or second semester of upper-division English work; 3 credits
 - B. 5 courses in addition to ENG 320; 15 credits. Several of these courses should be in areas prerequisite to/preparatory for specific courses at the 400 level.
 - at the 400 level (ENG 320 and one 300-level course are prerequisite to "Studies" courses):
 - C. Single Author (440 Alpha Single Author; 442 Chaucer; 445 Shakespeare; or 447 Milton); 3 credits.
 - D. 2 additional elective courses; 6 credits. At least one 400-level course must be a designated "Studies" course.
 - at the 300 or 400 level:
 - E. 2 courses; 6 credits
 - No more than two upper-division English large enrollment courses may be counted toward the major.
- Total: 33 credits

Breadth Requirements

Breadth of Field: the five 300-level courses in addition to Introduction to English Studies must come from at least three different categories:

- Composition/Language/Rhetoric (300-311)
- Creative Writing (313)
- Literary History (321-56)
- Genre (360-65)
- Literature and Culture (370-83)

Historical Breadth: of the nine courses in addition to Introduction to English Studies and Single Author, one must be pre-1700, one 1700-1900, and one after 1900.

Non-English Department Course

With the consent of the student's advisor or the Director of Undergraduate Programs, one appropriate three-credit upper-division course from outside English may be counted as a major elective.

Minor

English offers a fifteen-credit minor for students who wish to emphasize a specific aspect of English studies without completing the actual major. Beyond the two required courses, the minor may focus on literary studies, creative writing, or rhetoric and composition. Or the student may take electives from all three of these areas.

ENG 100 and two DL courses are prerequisite for Arts and Sciences students; the second DL may be taken concurrently with 300-level ENG courses. Students enrolled in colleges other than Arts and Sciences may elect ENG DL courses (as per current policy). All UH Mānoa courses applied to the English minor will come from the Department of English or cross-listed courses. Appropriate upper-division transfer credits may apply toward the minor. The minor consists of:

1. ENG 320, Introduction to English Studies. This course is foundational and should be taken in the student's first or second semester of upper-division English work.
2. Single author course (440 Alpha Single Author; 442 Chaucer; 445 Shakespeare; or 447 Milton)

3. 300-level ENG elective
4. 400-level ENG elective
5. 300 or 400-level ENG elective

Advising is mandatory; new majors and minors will be assigned an advisor when they meet with the Director of Undergraduate Programs (Kuykendall 429; (808) 956-3048 for appointments) for their initial intake/informational meeting.

Certificate in Professional Writing

The English Department's Certificate in Professional Writing offers students professional marketability by formally recognizing the technical, rhetorical and collaborative abilities they have developed through completing key courses. 15 credits, total. Please see the Undergraduate Director in Kuykendall 429 for further information.

Requirements (9 credits)

- ENG 308 Technical Writing
- Either ENG 307 Rhetoric, Composition, and Computers or ENG 407 Writing for Electronic Media
- ENG 408 Professional Editing

Electives (6 credits)

- ENG 300 The Rhetorical Tradition
- ENG 306 Argumentative Writing I
- ENG 307 Rhetoric, Composition, and Computers if not chosen as a required course
- ENG 364 Non-fiction Prose
- ENG 406 Argumentative Writing II
- ENG 407 Writing for Electronic Media if not chosen as a required course
- ENG 495 Internship

Graduate Study

The Department offers the MA in English with four concentrations: literary studies in English, composition and rhetoric, creative writing, and cultural studies in Asia/Pacific. It offers the PhD in these and other areas, for the doctoral program is sufficiently flexible to allow students to develop individualized courses of study. Students applying for the MA are expected to have acquired between 24 and 30 upper division undergraduate credit hours in English or closely related subjects. PhD applicants normally will have completed the MA in English, although exceptionally well-qualified students may petition to transfer into the PhD program after completing 18 credit hours in the MA program in English. In addition to the application and transcripts required by the Graduate Division, all applicants must submit directly to the department three letters of recommendation and the GRE General Test scores. PhD applicants must also submit a comprehensive statement of professional goals and objectives and a representative sample of their writing (scholarly paper or MA thesis); those interested in a dissertation with a creative emphasis must also submit examples of their creative work. Residents of O'ahu applying to the PhD program may arrange for an interview with the graduate director. The completed application should be sent to the Graduate Division by **January 1** for the PhD program and

February 1 for the MA program, but the GPC may consider, during the fall semester, unusually strong applications to the PhD program from students currently enrolled in other UH Mānoa graduate programs at the PhD level. Complete information on the graduate program is provided in a graduate student manual, available on request from the department.

Courses for the MA and PhD are to be selected from the list of English (ENG) courses, although advanced courses in other disciplines may be substituted with the prior approval of the graduate director. The consent of the instructor is required for ENG 691, 699, 700, and 800; the consent of the graduate director is required for all graduate courses. The following courses may be repeated for credit, since content differs from semester to semester: ENG 613, 625, 691, 699, 702, 705, 709, 727, 730, 735, 740, 760, 780 and 790.

Master's Degree

Graduates of the MA program in English have taught in secondary schools, junior and community colleges, four-year colleges, and universities. Some have pursued doctoral work; others have combined their work in English with another professional field (e.g., business, law, library studies). Still others have found employment in writing, editing, or research-related fields.

MA candidates are required to select a concentration by the end of their first semester in the program. Plan A (thesis) applies only to those admitted into the concentration in creative writing. Plan B (non-thesis) applies to those who have selected the concentrations in literary studies in English, composition and rhetoric, or cultural studies in Asia/Pacific.

Plan A (Thesis) Requirements

- Applicable only to those students admitted to the concentration in creative writing. Students should submit a writing sample during the admission process or apply to the chair of creative writing for admission to the concentration during their first semester in the program
- 27 credit hours of course work, including 21 credit hours of courses numbered 600 and above
- 6 additional credit hours of work on the MA thesis
- ENG 620—taken during the first semester if possible
- ENG 625D—taken during the second semester if possible
- Final oral examination on the thesis
- A minimum of 12 credit hours of course work in creative writing and 12 credit hours of course work outside of that concentration. Courses listed in different concentrations may be applied to either area.
- One graduate course in a subject area before 1900. In exceptional cases, the graduate director may approve the use of a 400-level course to meet this requirement.
- One course in the English language (ENG 402, 403, 404, 601, or equivalent)—taken prior to entering the program. Students may meet this requirement within the program by taking an undergraduate course in the English language in addition to the total of 33 credit hours required for the MA degree or by taking an appropriate graduate course, such as 601, which will count towards the MA degree but may not also be used to fulfill the pre-1900 course requirement.

- One course with substantial content in Asia/Pacific at the 400-, 600- or 700-level, in or out of the English Department while in residence at UH Mānoa.
- Reading knowledge of one foreign language

Plan B (Non-thesis) Requirements

- 33 credit hours of course work, including 27 credit hours in courses numbered 600 and above. Applies to all students except those in creative writing
- ENG 620—taken during the first semester if possible
- ENG 625B, C or E—a course in theories and methods associated with the concentration selected by the student, taken during the second semester if possible
- ENG 691—a minimum of 3 credit hours and a maximum of 6 credit hours required for work on the MA final project
- Final oral examination on the MA project
- One course in the English language (ENG 402, 403, 404, 601 or equivalent)—taken prior to entering the program. Students may meet this requirement within the program by taking an undergraduate course in the English language in addition to the total of 33 credit hours required for the MA degree or by taking an appropriate graduate course, such as 601, which will count towards the MA degree but may not also be used to fulfill the pre-1700 or pre-1900 course requirement.
- One course with substantial content in Asia/Pacific, at the 400-, 600-, or 700-level, in or out of the English Department, while in residence at UH Mānoa.
- Reading knowledge of one foreign language
- Requirements for those in literary studies: between 12 and 24 credit hours of course work in the student's concentration, including ENG 625B; one graduate course in a subject area before 1700
- Requirements for those in composition and rhetoric: ENG 605, 625C, 705 and 709; a minimum of 12 credit hours of course work outside the concentration; one graduate course in a subject area before 1900. Courses listed in different concentrations may be applied to either area.
- Requirements for those in cultural studies in Asia/Pacific: a minimum of 12 credit hours of course work in the concentration, including ENG 625E and 3 credit hours in Hawai'i's local literature, Asian American literature, or Pacific literature; a minimum of 12 credit hours of course work outside the concentration; one graduate course in a subject area before 1900. Courses listed in different concentrations may be applied to either area. Students in cultural studies will be allowed to meet 3 credit hours of work in their concentration with a course outside of the English department with permission of their concentration advisor.

Doctoral Degree

Since the PhD program offers diverse courses and the opportunity to specialize in a range of different areas, graduates may pursue careers from among several professions, including teaching, research, and writing.

Requirements

PhD candidates must fulfill the residency requirement and are required to take seven graduate-level courses in the Department of English; two courses, normally at the 400 level or above, in a field outside of English but related to the student's research interests; one course with substantial content in Asia/Pacific at the 400-, 600-, or 700-level, in or out of the English Department, while in residence at UH Mānoa. They must pass three area examinations and a comprehensive examination and demonstrate competence in two languages other than English (one of which, if appropriate to the candidate's research, may be a computer language) or in one language at an advanced level of proficiency. Candidates will be required to complete an original scholarly or creative dissertation representing a substantial contribution to the discipline of English, suitable for publication, and a final oral examination on the dissertation.

Environmental Studies

Colleges of Arts and Sciences

Environmental Center

Krauss Annex 19, 2500 Dole Street

Honolulu, HI 96822

Tel: (808) 956-7361

Fax: (808) 956-3980

E-mail: jth@hawaii.edu

Web: www.hawaii.edu/envctr

Faculty

- J. T. Harrison, PhD (Coordinator/Advisor)—environmental studies, environmental management, ecosystem dynamics
- J. H. Cusick, PhD—environmental education, political ecology, protected areas
- K. M. Silvius, PhD—community ecology, conservation science, resource management by local communities and indigenous peoples

Affiliate Faculty

- S. Conant, PhD—Professor of Zoology; ornithology, ecology, behavior, conservation biology
- G. D. Curtis, BS—Affiliate Professor and Lecturer of Natural Sciences at UH Hilo; instrumentation, oceanography, tsunami research
- E. P. Dashiell, MA—Environmental Planning Consultant; environmental and facilities planner, environmental impact statements, environmental investigations
- D. Drigot, PhD—natural resource management
- P. Ekern, PhD—Emeritus Professor of Agronomy and Soil Science; soil management, agricultural meteorology
- M. C. Jarman, JD, LL.M.—Professor of Law; environmental law, ocean law, legal writing
- E. A. Kay, PhD—Emeritus Professor of Zoology; systematics, biogeography, malacology
- K. E. Kim, PhD—Professor of Urban and Regional Planning; planning theory, planning methods, infrastructure planning, alternative tourism planning
- G. K. Lowry, PhD—Professor of Urban and Regional Planning;

alternative dispute resolution, coastal management, planning theory, community-level planning

- F. T. Mackenzie, PhD—Professor of Oceanography; geochemistry, biogeochemical cycling, global environmental change
 J. Maragos, PhD—U.S. Fish and Wildlife Service, Pacific Island Ecoregion; ecology of coral reefs
 J. N. Miller, PhD—environmental assessment, environmental oceanography, environmental studies
 J. Morrow, PhD—Environmental Management Consultant; air quality
 P. J. Rappa, MA—Extension Agent in Sea Grant College Program; environmental assessment, coastal zone management
 H. Takemoto, MS—U.S. Army Corps of Engineers; environmental chemistry, hazardous waste management
 R. Wilkens, PhD—Associate Researcher in Hawai'i Institute of Geophysics and Planetology; rock and sediment properties, bore-hole research

Degree and Certificate Offered: Certificate in Environmental Studies, BA in interdisciplinary studies (major equivalent in environmental studies)

The Academic Program

Environmental studies is an individually designed, interdisciplinary program established in 1975 and coordinated by the Environmental Center. Students wishing to earn a BA degree with a major equivalent in environmental studies may do so under the Interdisciplinary Studies Program. The program encourages a great deal of self direction to accommodate the student's individual goals and interests.

Environmental studies students may focus their curriculum on either the social or natural/physical sciences and find employment in both the public and private sectors as environmental resource managers, environmental specialists, hazardous waste managers, or any number of related fields. Others pursue graduate studies in environmental sciences, law, chemistry, biology, public health, planning, geography, resource management, etc. A unique feature of the program is the ability to undertake an internship with a local agency or organization chosen by the student. In this internship (IS 489), students design and carry out an environmental research project complete with proposal, progress and final reports, and formal oral presentation to the internship sponsors. The EVS program has enjoyed the consistent cooperation and enthusiasm of more than 40 federal, state, and county agencies and departments and many private organizations as sponsors of EVS students.

Undergraduate Study

Bachelor's Degree

The equivalent of an undergraduate major in environmental studies is available in the BA in interdisciplinary studies program. For information, contact the Environmental Center or Interdisciplinary Studies Program. Interested students should refer to the "Interdisciplinary Studies" section within the Colleges of Arts and Sciences.

Requirements

- Introductory courses:
 - BIOL 101/101L or BIOL 171/171L or BIOL 124/124L
 - CHEM 151/151L or 161/161L or 171/171L
 - ECON 120 or 130
- Major courses: Students must complete a minimum of 36 credit hours, including:
 - BIOL 310 or OCN/OEST/MET 310
 - BOT 351/351L or 454 or ZOOL 200/200L
 - GEOG 301
 - OCN 320
 - IS 489
 - 20 to 24 credit hours in courses specific to the student's area of environmental studies specialization

Students must maintain a 2.5 GPA in the major course work.

Certificate in Environmental Studies

A Certificate in Environmental Studies signifies that a student has completed substantial environmental course work in addition to the requirements of his or her regular major. Certificate candidates are required to submit a proposal and complete 15 credit hours of course work, including two required courses and three electives from an approved list of courses. The required courses are BIOL 310 or OCN/OEST/MET 310, and IS 489. Electives for social science or humanities majors are two courses in the natural sciences and one from the social sciences. Natural science majors must select two courses from the social sciences and one from the natural sciences.

- Electives for the natural science courses include the following:
 - BIOL 360, 410, 425
 - BOT 351/351L, 450, 453, 454, 455
 - GEOG 300, 301, 305, 309, 401, 405, 410
 - GG 454, 455
 - OCN 320, 330, 331
 - ZOOL 439/439L, 450, 485
- Electives for the social science courses include the following:
 - ARCH 341
 - AMST 320, 420
 - ANTH 303, 415, 435
 - ECON 358
 - GEOG 326, 328, 330, 335, 380, 415
 - IS 361
 - NREM 302, 432
 - PLAN 310, 399
 - POLS 346E, 378G
 - SOC 412

For more information, contact the Environmental Center.

Ethnic Studies

College of Social Sciences
2560 Campus Road, George Hall 301
Honolulu, HI 96822
Tel: (808) 956-8086
Fax: (808) 956-9494
E-mail: alegado@hawaii.edu

Faculty

D. T. Alegado, PhD (Chair)—Filipino American experience in the U.S./Hawai'i, international labor migration
I. G. Aoudé, PhD—Hawai'i political economy, Middle East politics, social movements in Hawai'i and the South Pacific
M. Das Gupta, PhD—South Asians in America, race and gender politics, U.S. immigration policies
N. Kent, PhD—political economy in Hawai'i and the Pacific, American ethnic relations
D. McGregor, PhD—Hawaiian history, social movements in Hawai'i and the Pacific
J. Y. Okamura, PhD—Japanese in Hawai'i and the U.S.
T. Tengan, PhD—identity, gender, indigenous theory and methodology, Hawai'i and the Pacific
E. J. White, PhD—African American experience

Degree and Certificate Offered: Certificate in Ethnic Studies, BA in ethnic studies

The Academic Program

The Department of Ethnic Studies (ES) is an interdisciplinary program with emphasis on undergraduate education. Initiated in 1970, ethnic studies combines traditional and contemporary methodologies with new perspectives on issues of race, ethnicity, and class. The focus is Hawai'i with its rich legacy of multiethnic heritages, but the research, teaching, and service components also involve the U.S. as a whole and comparative studies of societies around the globe.

Ethnic studies provides introductory and advanced courses on theories and practices of ethnicity, race, and class. The program also offers courses on the history and experiences of specific groups, including African Americans and Native Americans. Among groups in Hawai'i, Caucasians, Chinese, Filipinos, Hawaiians, Japanese, and Koreans are subjects of separate courses. There are also courses dealing with critical topics such as ethnic identity, land tenure, social movements, and labor history.

Students may earn a BA or the Certificate in Ethnic Studies. Graduates have gone on to successful work in public service, social service, business, law, labor organization, education, and other fields that require sensitivity to people and their backgrounds.

Undergraduate Study

Certificate in Ethnic Studies

Requirements

- Complete 18 credit hours in ethnic studies with a 3.0 GPA
- ES 101 (301 may be substituted) and 380
- 6 credit-hours on the history and dynamics of ethnic groups from ES 221, 305, 306, 330, 331, 332, 333, 335 and 308
- 6 credit-hours on the history, theory, and problems of ethnic groups and ethnicity in the framework of social, economic, and political change from ES 301, 310, 318, 320, 340, 348, 350, 360, 365, 370, 372, 381, 390, 392, 399, 410, 420, 430, 455, 492, 393, 495.

Bachelor's Degree

Requirements

Students must complete 36 credit-hours, including:

- ES 101 and 380
- 12 credit hours on the history and social dynamics of ethnic groups from ES 221, 305, 306, 330, 331, 332, 333, 335, and 338
- 12 credit hours on the history, theories, and problems of ethnic groups and ethnicity in the framework of social, economic, and political change from ES 301, 310, 318, 320, 340, 348, 350, 360, 365, 370, 372, 381, 390, 392, 399, 410, 420, 430, 455, 492, 493, 495
- 6 credit hours of related courses approved by a department advisor
- A 2.75 GPA in ethnic studies and the 6 credit hours of related courses must be approved by a departmental advisor

European Languages

(See Languages and Literatures of Europe and the Americas)

Geography

College of Social Sciences
Social Sciences 445
2424 Maile Way
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Fax: (808) 956-3512
E-mail: uhmgeog@hawaii.edu
Web: www.geography.hawaii.edu

Faculty

*M. A. Ridgley, PhD (Chair)—resource systems analysis, environmental decision making, water resources, coastal and marine resources
*S. D. Chang, PhD—China, urban development
*T. W. Giambelluca, PhD—climatology, hydrology
*J. Goss, PhD—urbanization, built environment, social theory, Southeast Asia
*M. G. McDonald, PhD—agricultural change, social theory, political geography, Japan

- *M. McGranaghan, PhD—computer cartography, geographic information systems
- *K. Suryanata, PhD—political ecology, agricultural geography, natural resource management, Third World
- *R. A. Sutherland, PhD—geomorphology, soil erosion, water quality
- *B. Szuster, PhD—environmental impact assessment, coastal resource management (especially in SE Asia), tropical aquaculture, cumulative environmental effects
- *L. Wester, PhD—plant geography, biogeography of islands, human-plant relationships
- *E. A. Wingert, PhD—cartography, remote sensing

Cooperating Graduate Faculty

- K. W. Bridges, PhD—computer cartography
- P. Jokiel, PhD—coral reefs
- J. O. Juvik, PhD—climatology, biogeography, resource management, humid tropics
- J. Liu, PhD—tourism, regional development
- M. D. Merlin, PhD—biogeography, natural history of Hawai'i

Affiliate Graduate Faculty

- J. Fox, PhD—social forestry
- J. Maragos, PhD—coastal and marine resources
- T. A. Siddiqi, PhD—energy technology, environmental policy

Degrees Offered: BA (including minor) in geography, MA in geography, PhD in geography, Graduate Certificate in Ocean Policy

The Academic Program

Geography (GEOG) provides a broad perspective on human and physical phenomena that define and transform the surface of the Earth. It explores the complexity of and interrelationships among the cultures, economies, histories, ecologies, and physical state that characterize particular places and how such relationships vary across space. Three themes (the operation on interlocking systems of the natural environment; the relationship between environment and society; the nature of *place* and *space* and the relationships and processes defining and changing them) focus upon the myriad challenges in the contemporary world, such as global environmental change, its causes, and its implications for the human experience; resource management and regional development in the Third World; regional conflict fed by ethnic, religious, economic, and territorial differences; the making of resource and locational decisions; and the collection, processing, display and communication, and management of spatial information. The department is uniquely placed to examine these issues in the Asia-Pacific region. Hawai'i's historical, sociocultural, economic, and environmental context provides a fascinating setting for learning and research and can serve as a springboard into the wider region.

Students with a geography degree have gained both a holistic understanding of the world and a specific set of concepts and methodologies that can be applied to a wide range of career opportunities dealing with environmental and resources issues, location and resource decision-making, planning and policy questions, and the display of information on maps and through geographic information systems in all levels of government,

private firms, nonprofit organizations, and international agencies.

Undergraduate Study

Bachelor's Degree

Requirements

Students must complete 37 credit hours including:

- GEOG 101/101L, 151, 375, 380, and 390
- One upper division course in each subdiscipline:
 - human geography (GEOG 305, 312, 314, 321, 324, 325, 326, 328, 330, 335, 336, 385, 409, 410, 411, 412, 415, 420, 421, 425, 435, 455)
 - physical geography (GEOG 300, 301, 303, 309, 400, 401, 402, 403, 404, 405, 409, 410, 411, 412, 420)
 - Hawaiian, Asian and Pacific regional problems (GEOG 340, 352, 353, 355, 356, 365, 366, 368, 453, 468)
 - cartography, remote sensing, and geographic information systems (GEOG 370, 375, 387, 470, 472, 475, 476, 480, 487, 488)
- Three additional upper division courses concentrated in one of four subdisciplines listed above

Individual programs are designed in consultation with the undergraduate advisor.

Minor

Requirements

The minor in geography requires 15 credits of upper division course work in geography, which should include at least one course in three of four areas: human geography; physical geography; Hawaiian, Asian and Pacific regional problems; and cartography, remote sensing, and geographic information systems.

Graduate Study

The department offers programs of graduate study and research leading to the MA and PhD degrees. Faculty interests and supporting strengths of UH Mānoa provide advantages for study of the following general topics: (a) environmental studies and policies; (b) resource systems; (c) population, urbanization, and regional development; (d) cartography, remote sensing, and geographic information systems; and (e) Pacific and Asian regional problems.

Applicants are expected to have a broad-based undergraduate education encompassing basic courses in the physical sciences, social sciences, and humanities. They should have a firm grasp of the fundamentals of physical and human geography and of basic cartographic and quantitative techniques. Intended candidates for the MA or PhD need not have an undergraduate major in geography; students from related fields are welcome, but any subject-area weakness must be remedied by course work.

Holders of graduate degrees in geography are employed in research and administrative positions in county, state, federal, and international agencies; research positions in private

business, especially consulting firms; and teaching positions in secondary schools, community colleges, colleges, and universities.

Master's Degree

Applicants for admission to the MA program in geography must provide two transcripts, GRE scores (General Test only), completed application forms (available from the department, the Graduate Division, and the Web), and three letters of reference.

Requirements

The department offers a Plan A (thesis) program. In consultation with an advisory committee, the candidate plans a coherent program of study drawn from departmental offerings and pertinent courses from other UH Mānoa departments and programs. Each MA student must complete a minimum 31-credit program, including:

- 7 credit hours of core classes (GEOG 692, 695, 696)
- 15 credit hours in the chosen field of specialization
- 3 credit hours in advanced research skills
- 6 credit hours in GEOG 700 Thesis Research

Ocean Policy Certificate Program

The wise use and careful stewardship of the ocean require people with multidisciplinary and interdisciplinary advanced education in the natural and social sciences. This program is designed for classified graduate students, law students, and community professional practitioners who wish to complement their existing degree or curriculum. An advisory committee assists each student in custom-designing a 21-credit (minimum) program that draws on marine-related courses in law, geography, agricultural and resource economics, oceanography, coastal management, civil and ocean and resources engineering, geology and geophysics, meteorology, botany and zoology, and includes an interdisciplinary seminar and two practica (one each in natural science and social science). For further information and applications, contact the department.

Doctoral Degree

The PhD program is highly selective, and admission is based upon demonstrated competence in previous work and promise of research ability. In addition to the materials required for MA admission, PhD applicants must submit representative samples of research writing and a comprehensive statement of professional goals and objectives. Students who have completed MA degrees in fields other than geography may be considered for admission to the PhD program. If admitted, however, they must undertake any remedial course work recommended by the department.

Requirements

The PhD program consists of advanced courses and research seminars in the department, independent reading and research, and work in related disciplines. Each candidate will be expected to have taken the core program required for MA candidates or its equivalent. In addition, the following are common elements of all geography PhD programs:

1. Attendance and participation, while in residence, in the geography colloquium;
2. Familiarity with the general development of geographic thought (GEOG 695);
3. 30 credit hours in a major field and 15 credit hours in a minor field of departmental specialization (course work taken at the MA level may be used in partial fulfillment of this requirement)
4. Fulfillment of a research skills requirement including (a) one language and (b) 9 credit hours in research technique courses (quantitative, computer applications, cartography, remote sensing, field, bibliography, or laboratory) or a second language;
5. Passing of written and oral comprehensive examinations; and
6. Submission and defense of a satisfactory dissertation.

Hawaiian and Indo-Pacific Languages and Literatures

College of Languages, Linguistics and Literature

Spalding 255

2540 Maile Way

Honolulu, HI 96822

Tel: (808) 956-8672

(808) 956-7452

Fax: (808) 956-5978

E-mail: hip@hawaii.edu

Faculty

*N. C. Losch, MA (Chair)—Hawaiian language and culture, Pacific cultures

C. Baker, MA—Hawaiian grammar, construction of Hawaiian identity through language, Hawaiian language theatre, linguistic anthropology

T. Baker, MFA—Hawaiian language theatre, Pacific art and culture

J. L. Basham, MA—Hawaiian language with a focus on history and cultural practices

J. Clausen, PhD—Ilokano language, language learning and teaching, Philippine linguistics, language and multimedia

K. de Silva, MA—Hawaiian language and literature, revitalization of language through mass media

P. L. Espiritu, MA—Ilokano language, Philippine theater, language learning and teaching

E. Fonacier, DA—Second and foreign language learning and teaching (Tagalog and English); language assessment and program evaluation; curriculum development; Philippine literature; Filipino (Tagalog) language; cross-cultural communication

*E. Hawkins, PhD—language learning and teaching, Polynesian linguistics, Hawaiian, immersion education

Y. Hoonchamlong, PhD—Thai linguistics, language learning and teaching, information technology in language research and language learning

R. Koga, MA—Hawaiian and English language and literature, language teaching and learning

U. Kozok, PhD—Indonesian language and literature, prehistory and paleogeography of Island Southeast Asia, Sumatran philology

F. Lesa, MA—language learning and teaching, Samoan

- R. Lopes Jr., MA—innovative instruction of Hawaiian language through cultural means such as hula and music
- T. Lopes, MA—recruitment and retention programs coordinator, student service related activities coordinator/advisor, instruction of Hawaiian language, culture, hula and music
- K. K. Lucas, MEd—Hawaiian language learning and instruction
- R. E. S. Mabanglo, PhD—Philippine literature, poetry, drama, creative writing, Filipino language
- J. F. Mayer, PhD—language learning and teaching, Samoan
- M. Nobrega, MEd—educational technology, indigenous education, distance education, and Hawaiian language immersion education
- *M. R. Nogelmeier, PhD—Hawaiian language and literature, language teaching and learning
- S. D. O'Harrow, Doceo—Vietnamese language, philology and civilization, Sino-Vietnamese
- K. R. K. Oliveira, MA—innovative instruction of Hawaiian language through various cultural activities, Hawaiian place names and land tenure
- T. V. Ramos, PhD—Philippine linguistics, language learning and teaching, multilingualism, sociolinguistics, child acquisition of language, Filipino language
- M. L. K. Saffery, MEdT—place-based Hawaiian curriculum for the Waikiki ahupua'a; development of Hawaiian language undergraduate and graduate curriculum; partnerships with other university departments, Hawaiian language immersion schools and other community groups for development of culturally appropriate interdisciplinary curriculum
- C. Sak-Humphry, PhD—Khmer language, linguistics and literature; development of Khmer language teaching materials, linguistics research on Old Khmer inscriptions (Pre-Angkor to Angkor period)
- R. N. Sharma, PhD—Indian linguistics, Hindi, Sanskrit, and Panini
- R. Solis, MA—Hawaiian language learning and instruction, Hawaiian religion, newspaper translating and broadcasting
- J. H. Ward, PhD—Polynesian linguistics, Tahitian, Balinese
- *S. L. Warner, PhD—Hawaiian language, Hawaiian language immersion education, evaluation, curriculum development and second-language acquisition, educational psychology
- A. K. Wong, MEd—Hawaiian language and culture, immersion education, curriculum development, native Hawaiian language speaker
- K. L. Wong, MA—revitalization of Hawaiian language and people
- M. S. Zamar, MA—Filipino (Tagalog) language, Philippine linguistics, language and multimedia, second/foreign language teaching

Cooperating Graduate Faculty

N. Silva, PhD—political science

Degrees and Certificates Offered: Undergraduate Certificate in Hawaiian; Undergraduate Certificate in Indo-Pacific languages (Burmese, Filipino, Hindi, Ilokano, Indonesian, Samoan, Sanskrit, Tahitian, Thai, or Vietnamese); BA in Hawaiian; BA in Philippine Language and Literature; BA in interdisciplinary studies (concentration in Hindi, Indonesian, Samoan, Sanskrit, Thai, or Vietnamese); Minor in Filipino and Ilokano Language and Culture; MA in Hawaiian

The Academic Program

Hawaiian (HAW) and Indo-Pacific (IP) Languages and Literatures provides instruction in the languages of the Indo-

Pacific area to a broad spectrum of students at UH Mānoa. The department's coverage of these languages is unique in the U.S.: this is the only department in the country to offer a BA degree in Hawaiian language and the only one to offer every national language of Southeast Asia, as well as classical and modern Indian languages. Beyond language, the department offers courses in the literatures and cultures of the area, including literature in translation of Hawai'i, South and Southeast Asia, and the Philippines. Opportunities are available for study abroad in certain areas. The department at UH Mānoa provides an opportunity without parallel elsewhere in the country for students to acquire an in-depth knowledge of the languages and cultures of that part of the world that encompasses more than 25 percent of the Earth's population and an unusual diversity of peoples.

All the department's elementary- and intermediate-level language courses may be used to fulfill the Hawaiian or foreign language requirement for all bachelor's degrees at UH Mānoa. Students of Indo-Pacific languages and cultures can also enhance their opportunities to find a career in international relations; provide service to the community in such fields as social work, public health, nursing, medicine, and law; perform research on Asia and the Pacific; and develop cross-cultural awareness and understanding in Hawai'i's multicultural environment.

Language offerings include Burmese, Cambodian (Khmer), Hawaiian, Hindi, Ilokano, Indonesian, Pali, Prakrit, Samoan, Sanskrit, Filipino, Tahitian, Thai, Classical Tibetan, and Vietnamese. For additional languages and topics, see Indo-Pacific languages (IP) courses listed at the back of the *Catalog*.

Undergraduate Study

BA Degree in Hawaiian

Requirements

30 credit hours above HAW 202 with a GPA of 3.0 or better, including:

- Required courses: HAW 301, 302, 401, 402, and 452
- Electives: HAW 321, 331, 332, 345, 373, 425, 426, 428, 435B, 435C, 435D, 445, 454, 463, 466, 470, 483, 484, 485, 486, 488, 490, and 499
- A maximum of 3 credit hours from MAO 102, SAM 102, TAHT 102, 104, MUS 312, MUS 330E, LING 345, ESL 360, MUS 412, MUS 413, SLS 430, ENG 482

Minor

In collaboration with the College of Education, the Hawaiian Language Division administers this minor in Hawaiian (immersion education) to prepare secondary subject area teachers for the Hawaiian Language Immersion Program in the Department of Education. Acceptance into the minor follows:

- Completion of 55 credits of university work with a 2.75 cumulative and major GPA
- Admission to an appropriate academic major
- Successful completion of the College of Education entrance exam and personal admissions interview
- Successful completion of HAW 302 or higher

- Attainment of a B (not B-) average for all advanced level Hawaiian language courses.

Requirements

A total of 27–36 credits will be required with a minimal GPA requirement of 2.75 in the minor courses: 15–18 from the College of Education and 12–18 from Hawaiian Language

- College of Education: ITE 312D, EDEP 311, EDEF 310, one complementary course (ETEC 414; SPED 445; ITE 360; EDCS 431), ITE methods course (33X–34X) in subject area
- Hawaiian: HAW 331, 332, 401, 402, 463, and 470

Certificates

On recommendation of the Department of Hawaiian and Indo-Pacific Languages and Literatures, the University confers certification of achievement in Filipino, Hawaiian, Hindi, Ilokano, Indonesian, Samoan, Sanskrit, Tahitian, Thai, and Vietnamese.

Requirements

15 credit hours beyond the intermediate level in the language of choice, including:

- 6 credit hours in continuing language study
- 9 credit hours in language, literature, or structure courses selected to complement the major field of study

A 3.0 GPA in courses leading to the certificate is required.

BA Degree in Philippine Language and Literature (with concentration in Filipino or Ilokano)

The program has the following objectives: prepare students for future careers in community service and education; prepare students for advanced research and/or graduate studies in various fields in the Humanities and Social Sciences; and ultimately, serve students of Filipino ancestry by providing them with a better understanding of Philippine culture and proficiency in a Philippine language.

Requirements

A minimum of 36 credit hours, made up of 24 credits in required language and literature courses in Filipino or Ilokano

- 12 credits language skill courses: 301–402
- 12 credits literature and culture courses
- and 12 credits upper-division and outside electives

Minor in Filipino

Students completing the program would have both oral and written competence in Filipino as well as cultural content sufficient for use in professional careers, graduate work or research, and field work.

Requirements

A minimum of 15 credit hours from five non-introductory courses in Filipino and Philippine culture is required.

- at least 9 credits culture and literature courses
- 6 credits language skill courses

Minor in Ilokano

Students completing the program would have both oral and written competence in Ilokano as well as cultural content sufficient for use in professional careers, graduate work or research, and field work.

Requirements

A minimum of 15 credit hours from five non-introductory courses in Ilokano language and culture is required.

- at least 9 credits culture and literature courses
- 6 credits language skill courses

Master's Degree

The graduate program in Hawaiian is designed to provide broad, in-depth education in the Hawaiian language, culture, and literature and is an integral part of the efforts to revitalize Hawaiian as a living language. The program is designed to create scholarship in Hawaiian in new domains, including advanced study of literature; to strengthen and expand the understanding and use of various styles of Hawaiian; to develop curriculum and resources and teacher training for the Kula Kaiapuni (Hawaiian medium schools); to provide support to graduate students in related fields; and to create new literature in Hawaiian. The MA in Hawaiian is intended for students who have a broad background in Hawaiian language and culture, but want more depth in their knowledge. The three areas of the curriculum that are available are:

- Mo'olelo. The Mo'olelo curricula focuses on Hawaiian history and literature through the analysis, critique, creation and presentation of Hawaiian language resources.
- Kumu Kula Kaiapuni. The Kumu Kula Kaiapuni curricula focuses on the educational, linguistic and cultural tools that teachers need to perform better in Hawaiian medium schools. Students producing curriculum and developing their own teaching skills will also be able to work closely with the newly established Mary Kawena Pukui Hale: Center for the Survival and Promotion of Hawaiian.
- Kālai'ōlelo. The Kālai'ōlelo curricula focuses on the linguistic analysis of Hawaiian.

Admission Requirements

Applicants to the MA in Hawaiian must have completed a Bachelor's degree and submitted the following to the Graduate Chair prior to admission: transcripts from each school attended; 18 upper-division credit hours in Hawaiian and HAW 402, or equivalent; a statement of objectives written in Hawaiian; and three letters of recommendation.

In addition, a written and oral examination in Hawaiian will be administered by the Graduate Chair, and an interview will be conducted by an admissions committee of Hawaiian language faculty.

Degree Requirements

Students must complete 33 credits, including the core requirements and must include at least 24 credits at the 600 level or higher. The required courses are HAW 601 Kākau Mo'olelo (Narrative Writing), HAW 602 Kāka'ōlelo (Hawaiian Speech Styles), HAW 612 Nā Mana'o Politika Hawai'i (Hawaiian Political Thought) and HAW 615 Kuana'ike

(World View). With pre-approval from the graduate advisor, a student may include a limit of 9 credits not taught in Hawaiian. Thesis (Plan A) and Portfolio (Plan B) options are offered. The required course for Plan A is HAW 700 which can be taken for up to 6 credits. A student must write a thesis in Hawaiian on a topic approved by the student's advisor. For Plan B a student will enroll in HAW 695 for up to 6 credits. This capstone course is the culminating experience where the student will display the knowledge s/he has researched into a form of his/her choice with the approval of the advisor. Students may also choose the internship/haumāna relationship with a mānāleo (native speaker), kupuna (elder), or other cultural practitioner where the student will observe, learn, participate and document the expert.

For more information on the MA in Hawaiian, contact the Graduate Chair through the departmental office of Hawaiian and Indo-Pacific Languages and Literatures.

Honors and Awards

Lokomaika'iokalani Snakenberg Hawaiian Language Graduate Scholarship

Offered to encourage graduate-level research and study for students specializing in Hawaiian language and related fields, this scholarship provides an award of up to \$5,000 per semester to students registered in graduate programs at UH Mānoa.

Dorothy M. Kahananui Scholarship in Hawaiian Language

This scholarship is offered to students who have successfully completed at least the intermediate level of Hawaiian language, with preference given to doctoral or master's degree candidates who plan to teach the language. The minimum amount of the award is resident tuition at UH Mānoa.

Red Mandarin and Lady Yi-suen Shen Scholarship in Hawaiian Studies

Offered to undergraduate students in Hawaiian studies at UH Mānoa, this scholarship covers tuition for the academic year. It is awarded to a degree candidate who demonstrates exceptional promise and achievement. Applicants must be pursuing a program of study that shows a central commitment to Hawaiian studies, including Hawaiian language.

History

College of Arts and Humanities
Sakamaki A-203
2530 Dole Street
Honolulu, HI 96822
Tel: (808) 956-8486
Fax: (808) 956-9600
Web: www.hawaii.edu/history

Faculty

- *K. L. Jolly, PhD (chair)—medieval Europe
- *L. Y. Andaya, PhD—Southeast Asia, Indonesia
- *J. H. Bentley, PhD—early modern Europe, world history
- *S. J. Brown, PhD—20th century China
- *D. A. Chappell, PhD—Pacific Islands, Africa
- *E. L. Daniel, PhD—Islam, Middle East
- *M. L. Daniel, PhD—early America, early national U.S.
- *E. L. Davis, PhD—middle China
- *W. W. Farris, PhD—traditional Japan
- *Q. Guo, PhD—Ming-Qing China
- *M. A. Henriksen, PhD—recent America
- *P. H. Hoffenberg, PhD—England, British Empire
- *L. C. Kelley, PhD—Southeast Asia
- *P. N. King, PhD—Hawai'i, U.S. in the Pacific
- *J. P. Kraft, PhD—U.S. business and labor
- *M. V. Lanzona, PhD—Philippines, Southeast Asia, women
- *M. J. Lauzon, PhD—European intellectual
- *R. E. McGlone, PhD—19th-century U.S., social history, biography
- *M. T. McNally, PhD—Tokugawa Japan, Japanese intellectual
- *L. L. McReynolds, PhD—Russian intellectual history, cultural studies
- *S. A. Minichiello, PhD—modern Japan
- *R. L. Rapson, PhD—U.S. cultural and intellectual history
- *R. C. Rath, PhD—early modern Atlantic world
- *M. P. Speidel, PhD—Greece and Rome; ancient Near East
- *T. J. Yoo, PhD—modern Korea
- *H. F. Ziegler, PhD—modern Europe, modern Germany, Holocaust

Cooperating Graduate Faculty

- B. Andaya, PhD—Southeast Asia
- D. L. Hanlon, PhD—Pacific Islands, ethnographic history

Degrees Offered: BA (including minor) in history, MA in history, PhD in history

The Academic Program

History (HIST) is the study of change and continuity in human society over time. Drawing upon concepts and methods of many disciplines, history provides perspective on the human condition, past and present. The discipline of history develops skills in evaluating evidence, organizing information, clarifying and structuring concepts, and writing narratives and expositions. History is a core around which liberal education can be structured. The study of history lays a foundation upon which one can develop a cultural, social, and intellectual life that enriches an understanding of the wider world.

Majoring in history is an excellent way to move into specialized study in such areas as teaching, library and

information science, foreign service, medicine, law, and business. Those who plan to pursue a career as professional historians will want to continue their education and obtain the MA and PhD degrees. The Department of History of UH Mānoa offers a full range of courses in American, Asian, European, Pacific, and world history.

Undergraduate Study

Bachelor's Degree

Requirements

Students must complete 33 credit hours of history at the 200-level and above, including:

- HIST 396 and 496
- 15 credit hours in one of four fields (U.S., Europe, Asia/Pacific or comparative/world)
- One upper division course (3 credit hours) in each of the other fields
- One additional history course

No more than 6 credit hours in 200-level courses are applicable to the major.

Minor

Requirements

For a student to minor in history, the declaration of intent should be made as early as possible after matriculation. The student must contact the undergraduate advisor of the department and complete the appropriate forms. The minor requires the successful completion with a grade of C (not C-) or better of 15 credit hours of upper-division history courses. It is possible to concentrate in a particular area of history, but it is not necessary to do so. No one specific course is required for the minor.

Graduate Study

The department of history offers the MA and PhD degrees in the American, Asian, European, and Pacific fields. A field of world history is offered at the PhD level only. All applicants for advanced degree programs in history are requested to supplement the application and transcripts required by the Graduate Division with letters of recommendation (two for the MA, three for the PhD), preferably from professors with whom the applicant has worked; a sample of written work such as a term paper, seminar paper, or MA thesis; and the General Test scores from the GRE. These supplementary items should be sent directly to the department.

Complete details on all graduate programs in history, as well as financial aid available to prospective students, are outlined in a departmental brochure, available upon request from the department in Sakamaki A-203, 2530 Dole Street, or by e-mail at gradhist@hawaii.edu.

Recipients of advanced degrees in history have undertaken careers as teachers of history and social studies in secondary schools, community colleges, colleges, and universities. In addition, the study of history provides an excellent background for alternative careers in museology, library and archival

work, government service, historical preservation, business and marketing research, and allied research fields. The department has a placement officer to assist graduates with career choices and in locating employment opportunities.

Courses for the graduate programs are to be selected from among the history courses listed in back of the *Catalog* and from graduate offerings in related disciplines as directed by the student's supervisory committee. The consent of the instructor is required for admission to all courses numbered 600 and above. Courses numbered over 600, except HIST 602 and 790, may be repeated *once* for credit.

Master's Degree

Intended candidates for the MA degree must present a minimum undergraduate preparation of 18 upper division credit hours in history or some closely allied field such as Asian studies or American studies. Students who lack this preparation or who wish to undertake study in an area of history other than that of their undergraduate preparation must make up deficiencies either before or during graduate study. In the latter case the student will be admitted only conditionally, pending removal of the deficiencies.

The prospective MA candidate may select either Plan A (thesis) or Plan B (non-thesis). Both plans require the intended candidate to give evidence of competence in a foreign language appropriate to the field of major interest. In addition, students in the U.S. or East Asia history areas in either Plan A or Plan B must also meet seminar distribution requirements, which raise the minimum required 600-level work to 18 credit hours.

Plan A (Thesis) Requirements

Plan A requires a minimum of 24 credit hours of graduate work, at least 15 of which must be in courses numbered 600 and above (including HIST 602), plus 6 credit hours of HIST 700 Thesis Research, a written thesis, and a final oral examination, which is a defense of the thesis.

Plan B (Non-thesis) Requirements

Plan B requires a minimum of 30 credit hours of graduate work, at least 18 of which must be in courses numbered 600 and above (including HIST 602), comprehensive examinations in two fields of history (a major and a minor), a final oral examination covering those two fields of history, and submission of two major research papers from graduate seminars, one in the major field and the other in the minor field.

Doctoral Degree

Intended candidates for the PhD degree are expected to possess the MA degree in history or its equivalent. The PhD candidate must demonstrate the capability of pursuing a successful career as a professional historian by showing initiative in historical research and by giving evidence of the ability to present findings both orally and in writing.

Requirements

The candidate must prove competence by the acquisition of a broad background in general history, passing four comprehensive examinations in two broad geographic areas

of history and completing an original dissertation and a final oral examination. The candidate must also demonstrate a knowledge of at least two foreign languages related to the dissertation topic; for students of American or Hawaiian history an alternative requirement may, at the discretion of the doctoral committee, be substituted for one of the languages.

Information and Computer Sciences

College of Natural Sciences
POST 317
1680 East-West Road
Honolulu, HI 96822
Tel: (808) 956-7420
Fax: (808) 956-3548
Web: www.ics.hawaii.edu

Faculty

- *M. E. Crosby, PhD (Chair)—human-computer interaction, cognitive science
- *K. Baek, PhD—computer vision, neural computation, machine learning
- *E. Biagioni, PhD—networks, systems, languages
- *K. Binsted, PhD—artificial intelligence, human-computer interaction, cognitive science, natural language processing
- *H. Casanova, PhD—high performance computing, distributed systems
- *D. Chin, PhD—artificial intelligence, natural language processing, cognitive science
- D. DeRyke, MA—software engineering, data modeling
- *W. Gersch, DEngSc—mathematical statistics, time series, bio-medicine, geophysics
- *S. Y. Itoga, PhD—database systems, expert systems, logic programming
- *P. Johnson, PhD—software engineering, artificial intelligence
- *A. Lew, PhD—systems programming, systems analysis, software engineering
- *I. Miyamoto, DrEng—software engineering
- *D. Pager, PhD—compiler theory, theory of computability, artificial intelligence
- *W. W. Peterson, PhD—programming languages, software engineering
- *G. Poisson, PhD—cognitive informatics, bioinformatics, machine learning
- *L. Quiroga, PhD—information retrieval, databases, library systems, website design
- *N. Reed, PhD—artificial intelligence, autonomous agents
- *J. Stelovsky, DrTechSc—computer-hypermedia, human-computer interaction
- *S. Still, PhD—bioinformatics/theoretical biology, information theory, machine learning
- *D. Streveler, PhD—medical informatics
- *K. Sugihara, DrEng—algorithms, distributed computing, visual languages
- *D. Suthers, PhD—educational technologies, artificial intelligence, human-computer interaction

Affiliate Graduate Faculty

D. R. Stoutemyer, PhD—computer algebra, mathematical software

Degrees Offered: BA in information and computer sciences, BS (including minor) in computer science, MS in computer sciences, MLISc in library and information science, PhD in computer science, and PhD in communication and information sciences (interdisciplinary)

The Academic Program

Information and computer sciences (ICS) is the study of the description and representation of information and the theory, design, analysis, implementation, and application of algorithmic processes that transform information. Students majoring in ICS will learn to use computer systems, a valuable skill which can be applied in all fields of study. Students will also learn the scientific principles and technology required to develop new computer systems and applications. The curriculum covers all major areas of computer science with special emphasis on software engineering, computer networks, artificial intelligence, human-computer interaction and bioinformatics, and areas uniquely suited to Hawai'i's role as a multicultural and geographical center of the Pacific.

Undergraduate Study

Bachelor's Degree

To be admitted into the program, first-year students entering UH Mānoa directly from high school must first be admitted into the Colleges of Arts and Sciences. For continuing students, a cumulative GPA of at least 2.0 is required for admission.

BA in Information and Computer Sciences

Requirements

Students pursuing this degree are required to submit a short proposal listing the courses they intend to take to complete their ICS major. An ICS faculty advisor must approve this proposal in writing. Samples of course proposals are available at the ICS Department Office. Students must complete the following courses (49 credits):

- ICS 111, 141, 211, 212, 241, 311, 312, 313, and 321
- At least three ICS courses at the 400-level or above,
- Four upper division (300-level or above) courses in some area of concentration. The area of concentration courses do NOT have to be from the same department.

BS in Computer Science

Requirements

Students must complete the following courses (47 credits):

- ICS 111, 141, 211, 212, 241, 311, 312, 313, 321, and 331
- At least five ICS or other approved courses at the 400 level or above

Substitutions are permitted with the written approval of an ICS faculty advisor.

Waiver of certain requirements, such as by Advanced Placement CS Exam, must be approved by the ICS faculty advisor.

Minor

A cumulative GPA of at least 2.0 and a grade of B (not B-) or higher in ICS 111 in computer science are required for admission.

Requirements

Students must complete ICS 211, 212, and 241 and their prerequisites, 111 and 141, and three ICS courses at the 300 level and above with a grade of C (not C-) or better.

Graduate Study

The department offers the MS degree in computer science, the MLISc degree in library and information science (see the “Library and Information Science” section within the Colleges of Arts and Sciences for more information), and the PhD degree in computer science. The department is one of four academic programs that cooperate in an interdisciplinary doctoral program in communication and information sciences (see the “Communication and Information Sciences” section within the Colleges of Arts and Sciences for more information).

Applicants for the MS and the PhD in computer science are required to take the GRE General Test. The subject area examination in computer science is highly recommended. Applicants from foreign countries must be academically qualified, proficient in English (minimum 600 TOEFL), and have sufficient financial support.

The department offers three forms of financial aid: teaching assistantships, research assistantships, and tuition waivers. The department offers a limited number of assistantships each semester, most of which are teaching assistantships. Teaching and research assistants work approximately 20 hours per week under the supervision of a faculty member and receive a stipend as well as a tuition waiver. Teaching assistants support instruction and research assistants support extramurally funded research projects. Teaching assistantships are awarded to those applicants who can best support the instructional program. Similarly, research assistantships are awarded to those applicants who can best assist faculty with their research projects. Applicants accepted for admission may be eligible for partial financial aid in the form of a tuition waiver from the Graduate Division and foreign applicants from Pacific or Asian countries may be eligible for Pacific-Asian Scholarships. Prior to submitting a tuition waiver application form, foreign applicants must submit TOEFL scores and documentation of financial support for expenses other than tuition to the Graduate Division Admissions Office. To apply for any of these forms of support, student should submit the ICS Graduate Assistantship Application along with three letters of recommendation using the Graduate Assistantship Evaluation Form. Because we can offer assistance to only a small fraction of applicants, we highly encourage students to also seek other forms of support, such as the East-West Center or computer-assisted databases such as CASH (Computer-Assisted Scholarship Help), which lists over a thousand scholarships.

Master's Degree

The master's program is intended for students planning to specialize in computer science or to apply computer science to another field. Applicants who do not possess an undergraduate degree in computer science from an accredited institution will need to complete equivalent coursework.

Requirements

Plan A (thesis) and Plan B (non-thesis) are available. A minimum of 30 credit hours is required under both plans. A minimum B average must be maintained in all courses.

Plan A (Thesis) Requirements

1. At least six ICS courses numbered 600 to 691, excluding 690;
2. Two elective courses, which can be any combination of ICS 600-level courses or graduate courses from other departments. The elective courses may be two ICS 699 courses for thesis preparation research. A proposal of elective courses must be submitted in writing by the students and approved by the master's program chair prior to enrollment in these courses;
3. Thesis research taken as 6 credits of ICS 700 at the end of the student's program of study; and
4. ICS 690 (taken for CR/NC), which does not count toward the 30-credit-hour minimum.

Plan B (Non-thesis) Requirements

1. At least eight ICS courses numbered 600 to 691, excluding 690;
2. A final project taken as ICS 699 (a maximum of 6 credits is counted toward the degree); and
3. ICS 690 (taken for CR/NC), which does not count toward the 30-credit-hour minimum, and

A written report of the final project is required at the end of the student's program of study.

The administrative procedures for the program include the following rules:

1. The student must meet with the Graduate Program Chair during the first semester.
2. Upon completion of at least 12 credit hours of courses applicable to the degree, students must file a degree plan by selecting Plan A (Thesis) or Plan B (Non-Thesis) options.
3. Plan A students must choose a thesis topic and committee upon completion of 18 credit hours of applicable courses.
4. All requests for changes in the degree plan must be submitted in writing by the student and approved by the master's program chair before the diploma application is filed.

Doctoral Program

The department offers a PhD in computer science intended to prepare students for creative research, teaching, and service. There are two programs leading to the PhD degree, one designed for applicants entering with bachelor's degrees, and the other for those who already have master's degrees. Students may begin their program either in the spring or fall semesters.

Applicants with bachelor's degrees must first satisfy the admission and degree requirements of the ICS master's degree.

The advantages are: (1) they are admitted at an early stage to the PhD program, (2) they will, in practice, usually take a year LESS to obtain their PhD degree since they will be motivated to select courses in the MS portion of the requirements which prepare them for their comprehensive examinations, and (3) students who have completed the MS requirements will have the option of obtaining an MS degree even if they do not continue with the program.

Applicants with master's degrees in areas other than computer science may be admitted to the program, but will be required to fulfill their program deficiencies with additional coursework.

Requirements

Students must pass the comprehensive examinations by the end of their fifth semester or be dropped from the program. The comprehensive examination may cover the following areas:

- Compilers (ICS 611)
- Operating Systems (ICS 612)
- Software Engineering (ICS 613)
- Algorithms (ICS 621)
- Theory of Computation (ICS 641)
- Networks (ICS 651)
- Artificial Intelligence (ICS 661)
- Databases (ICS 624)

In addition, students must pass a seminar course(s), ICS 690, during the "PhD portion" of their program. After passing an oral examination covering their general preparation for the research involved, students must write a dissertation, which must be approved by a doctoral committee.

Interdisciplinary Studies

Colleges of Arts and Sciences
Krauss 116
2500 Dole Street
Honolulu, HI 96822
Tel: (808) 956-7297
Web: www.hawaii.edu/libst/

Faculty

P. Manicas (Director), PhD
E. Drechsel, PhD
J. Odin, PhD
K. Takara, PhD

Degree Offered: BA in interdisciplinary studies

The Academic Program

The objective of the Interdisciplinary Studies (IS) Program is to provide students with an opportunity to pursue a course of study that is not restricted to conventional departmental or unit boundaries. A crucial feature is the advising process, which aims

to develop the student's ability to formulate a major equivalent comprised of non-introductory courses with thematic integrity and continuity. This ensures flexibility in the curriculum while precluding loss of academic substance and rigor. Thus students create their own degree proposals that must draw upon no less than three disciplines in the UH Mānoa *Catalog* in the study of a particular problem or theme, along with specifically designed IS courses.

Students in Arts and Sciences interested in any interdisciplinary course of study should make an appointment for an orientation at Interdisciplinary Studies, 116 Krauss Hall.

While the IS program encourages creation of individually conceived curricula, it also serves to accommodate students in a variety of fields that lack an undergraduate major and are interdisciplinary in nature. These include:

1. Pre-professional majors (e.g., pre-law, pre-med, pre-optometry, pre-physical therapy);
2. Undergraduate majors that are established at UH Mānoa only as graduate programs (e.g., astronomy, educational psychology, English as a second language, linguistics);
3. Interdisciplinary majors for which there is no currently existing department or program (e.g., criminology, gerontology, disability studies, health studies, globalization studies, international studies); and
4. Majors in existing interdisciplinary programs that do not at this time grant BA degrees (Academy of Creative Media [ACM], Crawford 210); Environmental Studies, Environmental Center Krauss Annex 19; Peace Studies [PACE], 717 Saunders Hall; Women's Studies [WS], 772 Saunders Hall;

Students interested in these programs should see both the program in Interdisciplinary Studies for an orientation and an advisor from the relevant program.

Degree proposals must focus upon the identified academic theme, be made in writing, and be accepted by the Interdisciplinary Studies faculty before the student enrolls for 21 of the 36 credits required in the major equivalent.

In all cases, IS students must satisfy the UH Mānoa degree graduation requirements and General Education Core in order to be eligible for a bachelor's degree. Students must also maintain a minimum 2.5 GPA for the major equivalent courses. These courses may not be taken CR/NC, unless mandatory. Successful candidates earn a bachelor of arts in Interdisciplinary Studies from the Colleges of Arts and Sciences in the appropriate interdisciplinary program.

There are interdisciplinary programs within UH Mānoa that offer certificates but do not provide a baccalaureate degree. The College of Health Sciences and Social Welfare also offers a number of interdisciplinary programs of study. These programs have different requirements. (See this *Catalog*)

Details about admission to the IS program offered in the Colleges of Arts and Sciences, and assistance in preparing an individually designed major are available at the program office.

Interpretation and Translation Studies

College of Languages, Linguistics and Literature
Center for Interpretation and Translation Studies
TP 104 (Temporary Portable)
1859 East-West Road
Honolulu, HI 96822
Tel: (808) 956-6233
Fax: (808) 956-2078
E-mail: cits@hawaii.edu
Web: cits.hawaii.edu

Faculty

D. Ashworth, PhD (Director)—interpretation and translation theory, translation, computer applications
J. Y. Lu-Chen, PhD, Certificate in I and T—translation, computer-assisted translation, consecutive and simultaneous interpretation
S. Zeng, PhD, Certificate in I and T—translation and interpretation theory, Web-based translation, consecutive and simultaneous interpretation

The Academic Program

Interpretation and Translation (TI) is the study of appropriateness in interlingual and cross-cultural communication. Translation students focus on written work. They acquire basic knowledge of computer-assisted tools and programs that facilitate translation, as well as an understanding of analytical and research techniques needed for translating written texts. Interpretation students focus on oral work. They learn the techniques needed to facilitate interpersonal, interlingual oral communication. Both fields of study emphasize sociolinguistic and communication skills and techniques needed to facilitate cultural, scientific, and technical exchanges in cross-cultural and multinational settings. Students may also focus on both fields of study by following, concurrently or sequentially, both programs of study.

The Center for Interpretation and Translation Studies was established at UH Mānoa within the College of Languages, Linguistics and Literature in 1988. The center's primary goal is to provide, through theoretically based academic programs, basic training in interpretation and nonfiction translation. Additional objectives of the center include developing of an interdisciplinary research program and serving the community as a clearinghouse for information on professional resources and practices. It also aims to provide the community at large with a broad range of educational opportunities by sponsoring lectures, seminars, and workshops. For the latest information, please visit the center's webpage at cits.hawaii.edu.

Journalism

School of Communications
College of Social Sciences
Crawford 320
2550 Campus Road
Honolulu, HI 96822
Tel: (808) 956-8881
Fax: (808) 956-5396
E-mail: jour@hawaii.edu
Web: www.communications.hawaii.edu

Faculty

G. Y. Kato, MA (Chair)—broadcast news, law, reporting
A. Auman, PhD—news editing, publication design, media futures
T. J. Brislin, PhD—mass communication, history/trends, ethics
B. D. Keever, PhD—news reporting, coverage of U.S. racial groups
J. J. Lillie, PhD—online journalism, new media, international communication

Degree Offered: BA in journalism

The Academic Program

Journalism (JOUR) education develops the student's ability to gather, analyze, and organize information and to communicate it clearly, effectively, and responsibly using multiple media platforms. Journalism education embraces the social, cultural and historic contexts of reporting on public and social institutions as well as on individuals and groups. It stresses the importance of a free, vigorous and responsible press to the maintenance of an informed citizenry in order to exercise the rights of self-governance in a democracy. Students learn how journalists also contribute to life-long learning through reports that enlighten and enliven audiences, whether in print, broadcast, online or other new media formats.

The Journalism degree program is professional in its orientation and accepts a limited number of upper-division students each fall into a two-year program. Admission to the major requires junior standing with a minimum 3.0 GPA and acceptable score on an admission test. Majors must maintain a 3.0 GPA and follow the prescribed course sequencing to remain in the program.

Students are encouraged to work for campus media such as *Ka Leo O Hawai'i* or KTUH-FM news and to participate in an extensive program of professional internships.

Advising

Advising is mandatory for all journalism majors.

Undergraduate Study

Bachelor's Degree

Requirements

- Admission to the major is restricted to students with junior standing, a 3.0 GPA and acceptable score on an admission test. Admission in fall semester only.

- Journalism Admission Test—Currently enrolled sophomores with at least a 3.0 GPA may take the required test to be admitted to the Journalism Degree Program in the fall semesters by contacting 956-8881 or jour@hawaii.edu.
- 33 credit hours minimum in journalism courses, following a prescribed sequence
- Maintenance of 3.0 GPA
- All students enrolled in journalism classes requiring off-campus assignments must sign a UH Waiver Form—Assumption of Risk and Release

Required Courses

- JOUR 301, 302, 401, 402, each 6 credits
- JOUR 365, 460, each 3 credits
- 3 credits of electives or internship (JOUR 485)

Languages and Literatures of Europe and the Americas

College of Languages, Linguistics and Literature
Moore 483

1890 East-West Road
Honolulu, HI 96822
Tel: (808) 956-8520
Fax: (808) 956-9536
E-mail: fadil@hawaii.edu
Web: www.hawaii.edu/llea

Faculty

- *R. J. Ball, PhD (Chair)—Latin literature, Augustan poetry, teaching methodology
- *L. Aranda, PhD—U.S. Latino literature, translation
- *V. Bennett, PhD—Russian language and literature, 19th-century Russian literature, Russian symbolism, modernism and literature of the 1920s
- *J. E. Brown, PhD—Russian language and literature, 19th-century Russian literature and poetics
- *P. M. Chandler, PhD—second language acquisition, coordinator of elementary Spanish, teaching assistant supervisor, Portuguese language
- *A. Dias, PhD—modern Spanish literature, Puerto Rican literature
- *M. J. Fassiotto, PhD—18th-century French literature, 19th-century poetry, coordinator of second-year French
- *M. C. Garneau, PhD—19th century French literature, oral genres, Italian
- *K. Hoffmann, PhD—17th-century French literature, critical theory, theater
- *K. Klingebiel, PhD—French linguistics and language, history of French, phonetics, Italian, Occitan, Welsh
- *R. J. Littman, PhD—Greek literature, ancient history, ancient medicine
- *J. Logan, PhD—Spanish American literature and cultural studies, women's studies
- *M. Overstreet, PhD—pragmatics, discourse analysis, sociolinguistics, German language teaching, psycho-sociolinguistic perspectives on categorization

- *B. Quintana, PhD—Spanish classical theater, colonial and post-colonial studies, Mexican culture
- *D. Rudolph, PhD—Renaissance, medieval literature, Francophone literature
- J. G. Sang, DrPhil—contemporary German literature, 18th- and 19th-century genres
- *P. A. Schroeder, PhD—Latin American poetry and film, cultural theory
- *N. Schweizer, PhD—18th-century German classicism, Germans/Europeans in the Pacific
- *E. M. Thau, PhD—contemporary Spanish literature, film, cultural studies
- *J. M. Toyama, PhD—20th-century French novel, criticism, poetry

Degrees and Certificate Offered: BA in Classics, BA in French, BA in German, BA in Russian, and BA in Spanish; MA in languages and literatures of Europe and the Americas with concentration in Classics, French, German or Spanish; Certificate in Classics, Certificate in French, Certificate in German, Certificate in Russian, Certificate in Spanish, Certificate in Latin America and Iberian Studies

The Academic Program

The Department of Languages and Literatures of Europe and the Americas (LLEA) is divided into five language divisions: Classics (Greek and Latin), French/Italian, German, Russian, and Spanish/Portuguese/Latin American Studies. Courses of language instruction at the beginning and intermediate levels are offered in French, German, Greek, Italian, Latin, Russian and Spanish. Other languages such as Dutch, Hebrew, Polish and Portuguese are also offered depending on available budget and staff. Advanced courses in composition, conversation and linguistics are offered in French, German, Russian and Spanish. Courses in the literatures of France, the Francophone world, German-speaking countries, Italy, Latin America, Russia, Spain and Wales are offered in the original language, as are courses in classical literary texts written in Greek and Latin. Cultural studies courses that use a strong interdisciplinary approach and critical interpretive perspectives to consider the politics of representation, culture, and identity include Hispanic Cultural Studies, U.S. Latino Culture and Literature, Indigenous Peoples of Latin America, Latin American Cultural Perspectives, Spanish Cultural Perspectives, Freaks and Monsters, the Ethics of Otherness, French Civilizations, French Culture for Americans, French and Italian Literature as Film. Courses designed to acquaint students from other fields with the traditions and cultures of Europe and the Americas are also available, both in English and in the target language and in advanced courses in specialized topics: Classical Foundations, Europeans in the Pacific, French and German civilization, and Russian Arts and Culture.

LLEA believes that the study of film allows for an array of interdisciplinary considerations ranging from the aesthetics and politics of representation to the socioeconomics of production and distribution. It enriches students' literacy concerning visual arts, narrative, sound, movement and space, at the same time that it provokes their questioning of ethical, critical, social and moral assumptions. LLEA offers a wide range of courses focusing on the aesthetic and historical development

of film in Europe and Latin America: History of World Film, International Film Criticism, French, German, Italian, Latin American, Russian, and Spanish Film.

MA programs are offered in Classics, French, German and Spanish. In addition, BA degrees and certificate programs are offered in Classics, French, German, Russian, and Spanish. The department promotes language proficiency and cultural awareness through its sponsorship of student clubs, films, lectures, scholarships, and Study Abroad programs. Currently, the department supports programs in France (Angers, Annecy, Paris) and Tahiti; Florence, Italy; Berlin, Germany; Vladivostok, Russia; and several sites in the Hispanic World.

Undergraduate Study

Bachelor's Degree

BA in Classics

- 24 credit hours of Greek and Latin courses numbered 300 and above in a combination approved by the major advisor

BA in French

- 33 credit hours of FR, exclusive of FR 101, 102, 201, and 202
- FR 311, 312, 331, and 332
- Four French 400-level courses, including three on literature

BA in German

- 30 credit hours of courses numbered 300 and above

BA in Russian

For a language emphasis:

- 30 credit hours of courses above RUS 202
- 6 credit hours of LLEA Russian-related courses

For a literature emphasis:

- 18 credit hours of language beyond the 202 level
- 18 credit hours of literature (including 6 credit hours of LLEA Russian-related courses)

BA in Spanish

- 33 credit hours above the 200 level
 - SPAN 301[†], 302[†], 303[†], 351, 352
 - SPAN 361 or 362
 - SPAN 371 or 372
 - Two 400-level courses^{††}
 - Two electives^{††}
- Minimum GPA of 2.5 for advanced (300- to 400-level) courses used to satisfy major requirements

[†]Language skill courses (SPAN 301 to 303) are normally limited to nonnative speakers of Spanish. Native and near-native speakers should consult a department advisor to determine what courses they may take.

^{††}Recommended courses for prospective teachers: SPAN 330, 403, 451, and 452

^{††}Recommended courses for prospective graduate students: SPAN 451, 452, and two 400-level literature courses

Approved study abroad of at least one semester in a Spanish-speaking country is recommended for all majors.

Certificate

Certificate in Classics, French, German, Russian, or Spanish

Upon recommendation of the appropriate division chair of the Department of Languages and Literatures of Europe and the Americas, UH Mānoa confers certification of achievement in Classics, French, German, Russian, and Spanish. Students must complete 15 credit hours beyond the intermediate year in the language of choice. For the Certificate in Classics, students must complete 12 credit hours of Greek or Latin beyond the intermediate year, plus GRK 101-102 for those emphasizing Latin and LATN 101-102 for those emphasizing Greek. A minimum of 3.0 must be achieved.

Certificate in Latin American and Iberian Studies

The Certificate in Latin American and Iberian Studies provides a systematic program of study in English for students interested in the arts, traditions, values, histories, religions, socioeconomic systems, and mythologies of Latin America and the Iberian Peninsula. It combines studies on literature, history, film and cultural studies for a richer and more comprehensive understanding of the peoples and heritage of Latin America and Iberia. Its interdisciplinary nature treats issues of colonization, imperialism, race, ethnicity, class, neoliberal practices, aesthetics, popular culture and globalization as they have been played out within the Ibero-Latin context.

Requirements

- sophomore standing or consent
- 15 credit hours (all five courses must be taken with a letter grade, minimum GPA of 2.5 required)
- LLEA 360 (Alpha) Studies in Culture: (B) Latin America, or (C) Spain and Portugal (should be taken the first semester in the program, it may be taken concurrently with one of the electives)
- at least one from LLEA 478/HIST 478, HIST 479, LLEA 360B, LLEA 362, LLEA 363, LLEA 366, LLEA 372
- at least one from HIST 448, LLEA 360C, LLEA 361, LLEA 365, LLEA 380

Graduate Study

Master's Degree

In keeping with the global focus of UH Mānoa, LLEA is committed to offering the students of Hawai'i an opportunity to acquire a broad cross-cultural perspective on and a sensitivity to the classical and modern languages and cultures. With this in mind, LLEA has designed an MA program that combines the study of language and literature with other forms of expressive culture in their permutations in the specific geographical regions of Europe, Latin America, the U.S., the Russian Far East, and parts of the Pacific Basin. Graduate students are offered the following opportunities: an MA degree in LLEA with concentration in a particular language division (Classics [Greek and Latin], French, German, or Spanish); teaching and research assistantships; preparation for a PhD program; preparation for professional careers such as teaching, government/foreign service; editing/publishing, international banking and business, travel industry, fashion, etc.

Admission Requirements

In addition to meeting the requirements of the Graduate Division, applicants must have the following:

1. A major or its equivalent in the chosen area of concentration with a minimum GPA of 3.0 (B);
2. The competence equivalent to two years of study at the college level in a second foreign language, except for candidates in Classics, who are required to have advanced competency in both Greek and Latin; and
3. For French, German, and Spanish, an acceptable accent and fluency in the language of the area of concentration as demonstrated in a personal interview or by a tape recording as specified by each division.

Applicants with minor deficiencies may be accepted provisionally, but course work taken to make up deficiencies may not be counted toward satisfaction of the degree requirements. Students deficient in the second foreign language are strongly advised to make up this deficiency early in the program in order to participate meaningfully in the research/interdisciplinary aspects of the program.

Requirements

- All students in the program will be required to select two courses from the following: LLEA 630, 671, 680, 681, 682, 683;
- earn 6 credit hours selected from among the core courses (LLEA 680, 681, 682, and 683);
- satisfy remaining specific requirements in the area of concentration; and
- pass satisfactorily the comprehensive examinations required in the area of concentration.

Students who select Plan A (thesis) in their area of concentration must present a thesis proposal, including justification of the topic and a bibliography, for approval by the thesis director and two members of the thesis committee before the end of the second semester of work. The completed thesis must be presented to the thesis committee at least four weeks before the Graduate Division deadline. The Graduate Division requires all theses to be written in English.

All graduate students must take at least one 600-level course in the selected area of concentration each semester.

The core courses are designed to provide students with advanced study in linguistic and literary analysis and cultural critique. Although the courses are taught in English, candidates are expected to read the works from their own area of concentration in the original language.

Classics Requirements

For admission to the MA program, candidates must present an undergraduate major in Classics, with the traditional mastery of Greek and Latin in the original languages. Candidates admitted to the program must pursue both languages at the graduate level, in classes that will involve joint-instruction with advanced undergraduate students.

Plan A (thesis) requires a minimum of 30 credit hours in Greek and Latin. Under this plan, students must complete 24 credit hours, at least 12 of these in courses numbered 600 and

above and at least 6 of these in the 600-level LLEA core courses. Students must also take 6 credit hours of thesis research under a sponsor of their choice and defend the thesis at a final oral examination.

Plan B (non-thesis) requires a minimum of 30 credit hours in Greek and Latin. Under this plan, students must take 30 credit hours, at least 18 of these in courses in the 600-level LLEA core courses. Students must also pass a final comprehensive examination on Greek and Roman literature.

French Requirements

Candidates in French literature may select Plan A (thesis) or Plan B (non-thesis). A minimum of 18 credits must be earned in courses numbered 600 and above, for a total of 30 credit hours, including 6 credit hours from among the core courses. All specified requirements are minimal; a program for each student will be worked out based on the results of the preliminary conference with the graduate chair.

Plan A requires a minimum of 30 credit hours: at least 24 credit hours of course work and 6 credit hours of thesis research. A minimum of 18 credits must be earned in courses numbered 600 and above. Of these, a minimum of 15 credit hours must be in French courses numbered 600 and above, including at least one graduate seminar. Additional requirements are a written comprehensive examination and a thesis.

Plan B requires a minimum of 30 credit hours of course work. A minimum of 18 credits must be earned in courses numbered 600 and above. Of these, a minimum of 15 credit hours must be in French courses numbered 600 and above, including at least one graduate seminar. A written comprehensive examination is also required.

German Requirements

Candidates select either Plan A (thesis) or Plan B (non-thesis). Both plans require a minimum of 30 credit hours. The requirements specified below are the minimum requirements; a program for each student will be worked out on the basis of a preliminary conference.

Plan A requires a minimum of 30 credit hours with a minimum cumulative GPA of 3.0. At least 12 credit hours must be in German courses numbered 600 and above, 3 credit hours in LLEA 630, 6 credit hours of thesis research, and 6 credit hours from among the core courses. Electives may be arranged upon consultation with a graduate advisor. Thesis approval and a thesis defense complete the requirements.

Plan B requires a minimum of 30 credit hours with a minimum cumulative GPA of 3.0. At least 18 credit hours must be in courses numbered 600 and above, 3 credit hours in LLEA 630, 3 credit hours in LLEA 480 or 481, 3 credit hours in LLEA 680 or 681, and 6 credit hours (or more) of electives. A final written comprehensive examination completes the degree requirements.

Spanish Requirements

Candidates in Spanish may select Plan A (thesis) or Plan B (non-thesis). Candidates in both plans are required to take 30 credit hours, including 6 credit hours of LLEA core courses. At least 18 of the 30 credit hours must be numbered 600

and above, including at least one graduate seminar. Students electing Plan A (thesis) must complete 6 credit hours of LLEA 700 Thesis Research. Graduate assistants in Spanish are also required to take SPAN 658 Seminar in Spanish Linguistics or LLL 455 Second Language Learning and Technology. Candidates of both plans must pass a comprehensive final examination in literature (Peninsular and Spanish American) and in one of the following three areas (language, Latino Studies, cultural studies/critical theory). The examination is based on the minimum reading list and is also tailored to fit the background and course work of the individual candidates and the thesis, if offered.

Library and Information Science

College of Natural Sciences
Hamilton Library, Ground Floor
2550 McCarthy Mall
Honolulu, HI 96822
Tel: (808) 956-7321
Fax: (808) 956-5835
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Web: www.hawaii.edu/slis/

Faculty

- *R. Knuth, PhD (Chair)—history of libraries, international librarianship
- D. Bair-Mundy, MLIS—information systems
- *V. Harada, EdD—school library administration, information literacy
- *P. Jacsó, PhD—online technology, computer system analysis, databases
- *D. Nahl, PhD—information services, human-system interaction
- *L. Quiroga, PhD—information retrieval, databases, library systems
- *A. Wertheimer, PhD—library history, Japanese American print culture

Adjunct Faculty

- K. Anderson, MLIS—reference librarian, Science and Technology, Hamilton Library
- J. Barnwell, MLIS—librarian, Pacific Collection, Hamilton Library
- M. Chohey, MLS—cataloging, UH
- R. Christiansen, MLIS—humanities librarian, Hamilton Library
- L. Davis, MLIS—preservation librarian, Hamilton Library
- N. Everhart, PhD—Division of Library and Information Science, St. John's University (Jamaica, NY)
- L. Farmer, EdD—library media teacher services, California State University Long Beach
- G. Fitzpatrick, MLIS—Library of Congress, Geography and Map Division
- D. Flynn, MLS—business librarian, Hamilton Library
- N. Fujii-Babb, MLS—librarian, Salt Lake/Moanalua Public Library
- L. Gassie, MLIS—senior systems librarian, Homeland Security Digital Library, Department of the Navy
- R. Gazan, PhD—post-doctoral researcher, UCLA
- G. Geary, MLS—music librarian, Sinclair Library
- R. Hensley, MLS—head, Public Services, Hamilton Library

- J. Hori, MLS—curator, Hawaiian Collection, Hamilton Library
- M. Jackson, PhD—Dean Emeritus
- S. Johnson, MLIS—reference librarian, Business/Humanities/Social Sciences, Hamilton Library
- C. Kellett, MLIS—systems librarian, Library Information Technology, Hamilton Library
- V. Lebbin, MLS—social sciences librarian, Hamilton Library
- D. Minatodani, MLIS—librarian, Hawaiian Collection, Hamilton Library
- J. Nordbotten, PhD—Department of Information Science, University of Bergen, Norway
- L. Osborne, PhD—Dean of Information Technology and Libraries, Chaminade University
- K. Peacock, PhD—curator, Pacific Islands Collection, UH
- B. Richardson, PhD—reference librarian, Windward Community College
- C. Sato, MLIS—school library media specialist, retired
- S. Shaner, MLIS—Hawai'i state archivist
- M. Suzuki, MLIS—librarian, Government Documents, Hamilton Library
- P. Wermager, MLIS—head, Science and Technology, Hamilton Library

The Academic Program

Founded in 1965, the Library and Information Science (LIS) Program prepares professionals for work in libraries and other types of information-handling agencies. It currently offers a master's in library and information science (MLISc) and a Certificate in Advanced Library and Information Science and participates in an interdisciplinary doctoral program in Communication and Information Sciences. The LIS program is aware of the opportunities and the responsibilities inherent in its Pacific setting and the unique cultural amalgam of Hawai'i. Its major goals are:

1. To furnish students with the knowledge, skills, and attitudes that are basic to professional competence and career-long professional growth in the field of library and information services.
2. To expand the knowledge base of the profession through research.
3. To share its resources by extending services to the UH and its academic units and to the people of Hawai'i and beyond.

Graduate Study

Master's Degree

The MLISc degree program was first accredited by the American Library Association in 1967 and was reaccruited in 1974, 1980, 1986, 1996, and 2000. The curriculum is subject to continuous review and modification, and every effort is made in academic advising to ensure that students plan programs of study suited to their individual goals. Entering students are expected to be computer literate. Graduate standing is the normal prerequisite for all courses.

Degree Requirements

Students are required to take the following courses:

- LIS 601 Introduction to Reference and Information Services
- LIS 605 Basic Cataloging and Classification
- LIS 610 Introduction to Library and Information Science

In addition, they must take one of the following:

- LIS 650 Management of Libraries and Information Centers
- LIS 684 Administration of School Library Media Centers

Plan A (Thesis)

The normal requirement for the MLISc degree under the thesis option is a minimum of 42 credit hours of approved graduate study. At least 27 credits must be taken in LIS courses or a combination of LIS and approved Information and Computer Sciences courses. In addition, 3 credit hours in LIS 695 Seminar in Research in Librarianship and 6 credit hours in LIS 700 Thesis Research must be taken. No directed reading credits are allowed as part of thesis research.

General examination is not required for admission to candidacy. After completing 15 credits of course work, students are advanced to candidacy upon the recommendation of the program's graduate faculty. The oral examination is not required, but research results will be presented at a student-faculty colloquium.

Plan B (Non-thesis)

The normal requirement for the MLISc degree under the non-thesis option is a minimum of 42 credit hours of approved

graduate study. At least 36 credits must be taken in LIS courses or in a combination of LIS and approved ICS courses. Up to 6 credits may be taken in other schools or colleges when the courses are relevant to the individual student's specialization and approved by the LIS program chair and the Graduate Division.

The maximum course load is 15 credit hours per term. Therefore, 42 credit hours would require at least two terms and a summer. A full load is a minimum of 8 credit hours per term. The program may be undertaken on a part-time basis but must be completed within five years (a two-year extension is allowed by the Graduate Division for a total of seven years).

Students who were in MLISc-degree programs from other ALA-accredited library programs may, in special circumstances, transfer up to 21 credit hours toward their MLISc degree at UH Mānoa, provided the work to be credited has been completed within the time limit previously cited. Such requests must be included in the application.

Comprehensive Examination

All Plan B students are required to take an oral comprehensive examination as a requirement for the MLISc degree. The examination is taken during the semester the student expects to graduate.

Distance Education

The MLISc program utilizes the Hawai'i Interactive Television System (HITS) to deliver courses to remote sites in the state. LIS has been one of the pioneers on campus in using this innovative instructional delivery system. It currently offers approximately 40 percent of its courses through HITS; at least two courses are available through HITS each fall and spring, and two during summer sessions.

Summers-Only Program

Students may select to enroll in the MLISc program exclusively during the summer sessions. There are four sessions in the summer, each three weeks long. Only one course may be taken in each three-week session. Every effort is made to ensure a balanced selection of courses during the summers. The deadline for the summers-only program is **April 1** of each year. The summers-only program is not open to international students.

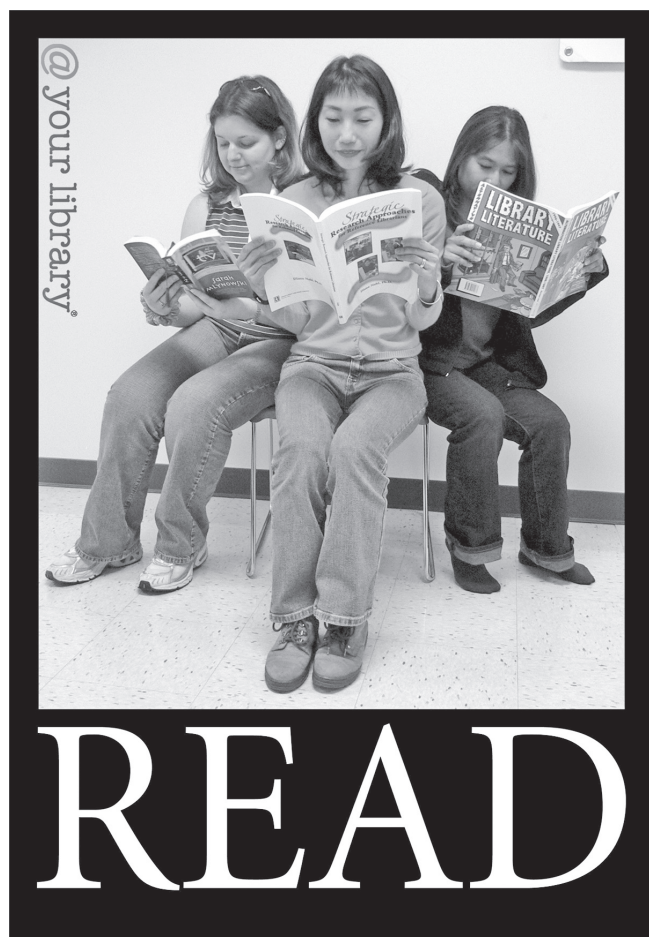
Dual Master's Degree Programs

Students may pursue the MLISc degree and a second master's concurrently, cooperating with the following departments and fields of study: information and computer sciences (MS), history (MA), Pacific Islands studies (MA), American studies (MA), Asian studies (MA), and Law (JD). For more information on these programs, contact the LIS program chair or the other respective departments.

Doctoral Degree

Interdisciplinary Doctoral Degree Program

LIS participates in an interdisciplinary PhD program in Communication and Information Sciences (CIS) integrating computer science, communication, library science, and management information systems. Because of the broad



knowledge base required to support the interdisciplinary approach, the program also draws on political science, economics, engineering, operations research, and behavioral sciences. This unique program is sponsored by four academic faculties: communication, information technology management, information and computer sciences, and library and information science.

For information on admission and requirements, refer to the "Communication and Information Sciences" in the Interdisciplinary Programs section.

School Library Media Specialist Certification

The LIS program recommends graduates to the Hawai'i Department of Education for certification as school library media specialists. To be eligible, graduates must meet the MLISc degree program requirements and the course requirements approved for certification by the Hawai'i Department of Education. The National Council for Accreditation of Teacher Education (NCATE) is used in conducting periodic reviews of the program.

A student who enters the LIS program to earn this certification must have completed a state-approved teacher education program. For more specific and current information on prerequisites and required as well as recommended LIS courses, contact the LIS program chair.

Certificate Program

The Certificate in Advanced Library and Information Science (CALIS) offers two options. Option A is available for those who complete a successful, coherent program of specialized study and research beyond the MLISc degree. The program allows for specialization in 1) applying computer and information technologies to information environments and 2) extending information management skills in information system design, evaluation, and the development of user services.

Option B focuses on school librarianship. It allows for specialization in 1) applying computer and information science technologies in elementary and secondary school libraries, and 2) extending curriculum planning skills in information literacy and general literacy instruction.

For both options, students must complete a research paper that meets the approval of the CALIS Committee and give an oral presentation of their research to students and faculty. Students are expected to remain enrolled each semester until the requirements are completed. If it is necessary to withdraw temporarily, students must reapply for admission within application deadlines before returning. Credits more than five years old cannot be applied to the certificate requirements; thus, the program must be completed in five years. For more specific information on prerequisite and elective courses, contact the LIS program chair.

Linguistics

College of Languages, Linguistics and Literature

Moore 569

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E-mail: linguist@hawaii.edu

Web: www.ling.hawaii.edu

Faculty

- *R. A. Blust, PhD (Chair)—historical linguistics; Austronesian linguistics and culture history; field methods
- *K. Deen, PhD (Co-Graduate Chair)—language acquisition, syntax, Bantu languages and linguistics
- *A. M. Peters, PhD (Co-Graduate Chair)—children's speech
- *V. B. Anderson, PhD—phonetics-phonology interface, phonetic and phonological universals, prosody, Austronesian and Australian languages, endangered languages, speech technology
- *B. K. Bergen, PhD—cognitive linguistics; computational linguistics; psycholinguistics; sound symbolism
- *P. J. Donegan, PhD—natural phonology, vowel systems, acquisition, typology, computerized lexicography, Munda languages
- *M. L. Forman, PhD—general linguistics, ethnographic linguistics, Philippine studies
- P. Lassetre, MA—phonology, morphology, Micronesian linguistics
- *P. A. Lee, PhD—logical semantics and pragmatics, history of linguistics, animal communication
- *P. G. Lee, PhD—theoretical linguistics, phonology, syntax, computer applications
- *W. O'Grady, PhD—syntax, language acquisition, Korean
- *Y. Otsuka, DPhil—syntax, Polynesian
- *K. L. Reh, PhD—phonology, Micronesian linguistics, lexicography, endangered languages, language contact and language planning
- *A. J. Schafer, PhD—sentence comprehension and production, sentence prosody, psycholinguistics
- *D. Stampe, PhD—computational linguistics; phonology and prosody, holistic typology and drift; Munda languages
- *A. D. Wong, PhD—sociolinguistics, Cantonese

Retired Faculty—In Residence

- B. W. Bender, PhD—general linguistics, morphology, Micronesian linguistics
- D. Bickerton, PhD—language variation, pidgins and creoles, language and literature
- G. W. Grace, PhD—historical linguistics, Austronesian
- A. V. Lyovin, PhD—typology, Sino-Tibetan, historical linguistics
- A. J. Schütz, PhD—descriptive linguistics, field methods, lexicography, Fijian and other Melanesian languages; history of linguistics in the Pacific
- L. C. Thompson—North American Indian linguistics, Southeast Asian linguistics

Cooperating Graduate Faculty

- D. E. Ashworth, PhD—language learning and teaching, Japanese linguistics
- J. M. Bilmes, PhD—sociolinguistics, discourse analysis, ethnosemantics, Tai linguistics

- *R. Bley-Vroman, PhD—English syntax, language acquisition
 J. D. Brown, PhD—language learning and teaching, language testing
 C. J. Chaudron, PhD—applied psycholinguistics, discourse analysis
 H. M. Cook, PhD—Japanese linguistics, sociolinguistics, discourse analysis and pragmatics
 R. Day, PhD—language learning and teaching, discourse analysis, language planning
 E. Drechsel, PhD—ethnolinguistics, American Indian languages
 *J. Haig, PhD—Japanese linguistics
 E. Hawkins, PhD—language learning and teaching, Polynesian linguistics
 Y. Hoonchamlong, PhD—Thai linguistics (syntax, discourse, semantics), Tai/Thai dialectology, language learning and teaching, internet technology in language research and language instruction, translation
 H. I. Hsieh, PhD—Chinese linguistics, semantics, pragmatics, mathematical linguistics
 G. Kasper, PhD—second-language curriculum, discourse analysis, interlanguage pragmatics
 Y. C. Li, PhD—Chinese linguistics, semantics, language learning and teaching
 T. V. Ramos, PhD—Philippine linguistics
 K. A. Reynolds, PhD—classical Japanese, history of the Japanese language, Japanese sociolinguistics
 C. Sak-Humphry, PhD—Khmer language, linguistics and literature
 R. Schmidt, PhD—psycholinguistics, sociolinguistics, language learning and teaching
 B. Schwartz, PhD—linguistic theory and second-language acquisition and analysis, universal grammar, child second language acquisition
 L. Serafim, PhD—Japanese linguistics, Japanese language history, dialectology, and Ryukyuan languages
 R. N. Sharma, PhD—Indo-Aryan linguistics, Hindi, Sanskrit
 *H. M. Sohn, PhD—Korean linguistics
 *A. V. Vovin, PhD—history of the Japanese and Korean languages, comparative Altaic linguistics, the Ainu language
 J. Ward, PhD—Polynesian linguistics, Tahitian, Balinese

Affiliate Graduate Faculty

- S. P. Harrison, PhD—Oceanic linguistics
 M. Meyerhoff, PhD—sociolinguistics, creoles

Adjunct Faculty

- M. Choo, PhD—Korean
 K. Cook, PhD—cognitive and relational grammar; Polynesian languages, especially Samoan
 J. Grimes, PhD—theory of the lexicon, discourse, language divergence
 M. Nakamura-Bigus, PhD—psycholinguistics, especially sentence processing in Japanese

Degrees Offered: Certificate in Languages of Hawai'i and the Pacific, Certificate in Human Language and Computers, Certificate in Language Acquisition, Certificate in Language and Cognition, BA in interdisciplinary studies (linguistics), MA in linguistics, PhD in linguistics

The Academic Program

Linguistics (LING), also called linguistic science or the science of language, is the study of how language works—how

it is acquired, how it is used, how it is represented in the brain, how it changes over time and so on. Major subfields are phonetics, phonology, morphology, syntax, semantics, discourse analysis, pragmatics, historical linguistics, sociolinguistics, psycholinguistics (including developmental psycholinguistics), neurolinguistics, mathematical and computational linguistics and ethnographic linguistics.

Linguistics is relevant to many endeavors, including cognitive science, language planning, language teaching, speech synthesis and recognition, treatment of language disorders, repair of communication breakdowns, and information technology. Our program presents unique opportunities for the study of Austronesian (Malayo-Polynesian) and Asian languages. It also has special strengths in language acquisition, psycholinguistics and sociolinguistics, among other areas.

The program is recognized as one of the top 25 in the U.S.

Advising

All faculty in the department participate in the advising of students majoring in linguistics. Undergraduates majoring in linguistics under interdisciplinary studies are advised initially by the undergraduate advisor. Graduate majors are advised by the chair of the graduate field of study. Students are later assigned to specific faculty members for advising according to their special interests.

Undergraduate Study

Bachelor's Degree

Students may major in linguistics for the BA degree at UH through the Interdisciplinary Studies Program. In this program, students create for themselves a major equivalent with the guidance of a faculty advisor. The major equivalent may combine the study of linguistics with that of one or more foreign languages or with related disciplines, such as anthropology or psychology. Students majoring in linguistics in this way may include some or all of the MA core of courses in their BA programs and are thus able to do more advanced work in their later MA program.

Graduate Study

The faculty represents a variety of theoretical viewpoints. The various faculty members are especially qualified to direct research on languages of the Pacific and parts of Asia. Fields of special competence include descriptive and comparative linguistics, general linguistic theory, language contact and variation, ethnolinguistics, language development, experimental phonetics, psycholinguistics, sociolinguistics, and cognitive linguistics.

Although the Department of Linguistics is primarily a graduate department and is thus focused mainly on research, it recognizes that many graduates will eventually seek teaching positions and would be more likely to obtain one if they can provide evidence of teaching experience in linguistics or a language-related field.

Accordingly, the department requires each student enrolled in either the MA or PhD program, in addition to the 30 and

33 credits required, respectively, for the completion of those degrees, to have at least 1 credit of LING 699 (Directed Research) or 799 (Apprenticeship in Teaching Linguistics) that involves teaching a linguistics or language-related course (such as a foreign language course) under the supervision of a faculty member either at UH or, by special arrangement, at another institution.

Students may be excused from this requirement if they have already had an equivalent teaching experience before coming into the program. In addition, the chair of the graduate field of study may waive this requirement if it is determined that the student was unable to obtain an appropriate teaching appointment through no fault of his or her own and that no suitable alternative was available.

Students admitted to graduate programs in linguistics normally have a background in at least one foreign language. Some background in mathematics or one of the sciences may also be useful. Students without a course equivalent to LING 320 are required to take this course to make up for this deficiency in their preparation for graduate work.

The GRE General Test is required of all applicants.

The MA program provides a basic introduction to the subject matter and skills of the discipline. The PhD program provides full professional training for careers in research and teaching. Employment opportunities for graduates of both programs today often require additional knowledge of one or more related disciplines. Students are, therefore, encouraged to broaden their training in linguistics by including work in other disciplines. Such programs, and those that include many of the specializations previously listed, will involve the inclusion of faculty members from other fields of study on students' program committees. Students should make known their interests to the graduate chair as early as possible so that appropriate advisors can be chosen to direct students to courses, and any key prerequisite courses, that will help them explore their interests further. It is also possible for students to include concentrations in linguistics in their programs for the MA degree in Asian studies or Pacific Islands studies.

The guidelines listed below are offered to guide students in their preparation for the various examinations, although individual study must be done in areas not covered by course offerings. Linguistics courses bearing 700-level numbers are seminars, and various sections of these seminars are typically offered in a given semester, depending on the interests of the resident faculty and students. Each semester there are normally a number of seminars dealing with geographical areas, particular language families, the structures of individual languages, and particular theoretical problems. A major portion of the work done beyond the MA level is in seminars and in directed research.

Master's Degree

Requirements

The department offers MA Plan A, Plan B, and Plan C programs. In addition to the UH-wide residence requirements of a minimum of two semesters of full-time work, all three programs require that students demonstrate competence in one language other than their native language.

Plan A requires a thesis (12 credit hours) and a minimum of 18 credit hours of course work. A final oral examination covering the thesis and related areas is also required.

Plan B requires a minimum of 30 credit hours and a final seminar presentation near the end of course work. The topic and format of the presentation must be approved in advance by the graduate chair. (More information on Plan B below.)

Plan C requires two semesters of full-time course work in addition to a final examination with both written and oral portions. Plan C is open to select students who have had some previous work in linguistics and who show both high potential for scholarly development and the motivation and discipline necessary for an independent course of study. A committee of faculty is appointed for each prospective student for Plan C. The committee administers a general examination during the student's first semester of study to determine the appropriateness of Plan C, advises the student in developing a program of study, and administers the oral portion of the final examination.

Plan B students must complete 30 credit hours of course work for a grade (not CR/NCR or Audit), of which 18 hours must be at the 600 level or above, including 3 hours of a 700 level seminar. Students may choose between three "streams": Linguistic Analysis, Language and Cognition, and Language Documentation and Conservation. For all streams there is a Core List from which different numbers of courses are to be selected:

- **Core List:** LING 410, 420, 421, 422, 440, 615, 645
- **Linguistic Analysis stream:** 10 courses, to include:
 - six courses (18 credits) from the Core List.
 - three courses (9 credits) of your choice (but not 699)
 - one 700 level seminar (3 credits)
- **Language and Cognition stream:** 10 courses, to include:
 - four courses (12 credits) from the Core List:
 - two courses (6 credits) from List 1
 - one course (3 credits) from List 2
 - two courses (6 credits) of your choice, but not 699
 - one 700 level seminar (3 credits)
 - **List 1: language and cognition:** LING 431, 441, 616, 640G (General linguistics), 640Y (Psycholinguistics), 670.
 - **List 2: data analysis:** EDEP 429, SLS 490, 671, PSY 610, 611.
- **Language Documentation and Conservation (LDC) stream:** 10 courses, to include:
 - six required courses (18 credits)
 - three courses from List 3 (9 credits)
 - one more course from List 3, subject to your advisor's approval.
 - **Required courses (6):** LING 410, 420, 421, 422, 640G (General Topics in Linguistics); 770; and either 750G (General Linguistics Seminar) **or** SLS 680P (Second Language Pedagogy)
 - **List 3: methods:** LING 611, 630, 631, 640S (Sociolinguistics), 645, 750F (Phonology and Phonetics Seminar), 770
- **Exit requirement for LDC stream:**

By the end of the final semester, the student must submit for approval by the Language Documentation and Conservation

Committee a 'Research Portfolio' of at least 50 pages. This portfolio will include samples of work done by the student on his/her research language. For example, it might include an outline of a reference grammar, sample dictionary entries, language policy or planning proposals, papers on phonetic, phonological, morphological, or syntactic aspects of the language, etc.

Doctoral Degree

Requirements

All students in the PhD program are required to complete a minimum of 33 credit hours of course and seminar work at the UH (exclusive of LING 800) beyond those counted towards the MA degree. Courses in phonology (LING 621), grammar (LING 622), and a Methods course are required of all PhD students. Methods courses include LING 630: Field Methods, LING 632: Laboratory Research, LING 750F: Phonetic Fieldwork on Endangered Languages, and LING 750Q: Methods in Language Acquisition. Students interested in experimental research are strongly advised to take one or more courses in statistical analysis as well (e.g. EDEP 429, ESL 490 or 671).

PhD students must pass a preliminary examination, a comprehensive examination, and a final oral examination in defense of the dissertation. The preliminary requirement has two parts: a written examination and acceptance of a Working Paper. The written exam tests four areas: general linguistics, phonology, grammar, and historical linguistics. This examination is offered once each semester, in August and January. Candidates must register for it in advance; check with the departmental office for relevant deadlines and details.

Students who wish to be considered for admission to the PhD program or who are already in the PhD program must take the preliminary examination at the first opportunity after having completed the necessary courses. A student who does not receive an overall grade of 'Pass' on the first attempt will be allowed to retake all or any parts of the exam in each of the next two semesters. If s/he has still not received an overall grade of 'Pass' at the end of that period, s/he must petition the Graduate Chair for permission for each subsequent retake. The Graduate Chair will call for comments from the faculty before making a decision.

The time period for passing the preliminary exam will be extended for students on official Leave of Absence (as defined by the Graduate Division), provided that the leave is justified for independent reasons (e.g., medical problems, family crisis, etc.).

Students are encouraged to form their PhD program committees in consultation with the graduate chair as soon as possible after they have passed this exam. Students must also have a paper accepted for publication in the Department's *Working Papers* series, or in some other acceptable forum (as determined by the editor of the Department's *Working Papers*). Both of these preliminary requirements are waived for students receiving the MA under Plan A who also have their theses accepted for publication in an outlet agreed to beforehand by the linguistics faculty.

All PhD candidates must demonstrate competence in two languages other than their native language. One of these two languages must be in the 'research tool' category—a major language of the world in which there is ample published material on linguistic topics, such as Chinese, English, French, German, Japanese, Korean, Russian, or Spanish. Students are expected to demonstrate their knowledge of such a language by taking a reading/translation test involving a linguistics-related passage. Foreign students may use English if it is not their native tongue; certification by the English Language Institute that they are exempt from ELI courses suffices to establish their competence in English.

The other language can be any of the world's languages (including American Sign Language) for which a qualified examiner can be found in Hawai'i. This second language requirement is most commonly satisfied either by passing a fourth semester course in the language (e.g. JPN 202) with a grade of at least B (not B-) or by taking a placement test to demonstrate comparable knowledge.

Students are admitted to candidacy after demonstrating competence in both languages and performing successfully on the comprehensive examination, which is both written and oral. Students are expected to demonstrate expertise in three areas of specialization chosen from among the following: phonological theory, syntactic theory, phonetics, semantics, morphology, language in its social and cultural context, psycholinguistics, discourse analysis, language acquisition, computational linguistics, language documentation and conservation, language learning and teaching, language planning, multilingualism, pidgins and creoles, translation, typology and universals, lexicography, or linguistics of any of the following areal or genetic groups: Austroasiatic, Austronesian, Chinese, English, Indo-European, Japanese, Korean, Sino-Tibetan, or Tai. Related disciplines may also be designated as areas of specialization. These particulars are determined when the student's doctoral committee is formed, after the preliminary exam has been passed.

Each student must then develop a written proposal outlining his or her intended dissertation research project. The student then meets with his or her committee to defend the proposal orally and to discuss various issues that it raises. In addition to traditional dissertation topics of a theoretical, descriptive, historical, or experimental nature, the faculty is open to topics in applied linguistics when it can be demonstrated that the project will add to the knowledge of language, broadly conceived. Research may include studies of language use in education, law, or other institutions of society; social and cultural influences on language acquisition and use; bilingualism, multilingualism, foreign accent, and translation, the interrelations of language and literacy, etc. Although many such topics can also be treated within disciplines such as anthropology, psychology, literature, and pedagogy, when presented for the PhD in linguistics they are expected to have a linguistic perspective and to make a distinctive linguistic contribution. The decision as to whether such expectations are met is made by the student's dissertation committee. Committees formed for applied topics will include members drawn from the faculties of closely related and cooperating fields of study such as Asian languages and literatures, English,

Languages and Literatures of Europe and the Americas, and Second Language Studies. Students wishing to explore such areas are encouraged to include relevant courses beyond those required for the MA as electives early in their program.

Mathematics

College of Natural Sciences
Keller 401-A
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Honolulu, HI 96822
Tel: (808) 956-4680
Fax: (808) 956-9139
E-mail: patg@math.hawaii.edu
Web: www.math.hawaii.edu

Faculty

*T. Craven, PhD (Chair)—commutative algebra
*C. Allday, PhD—algebraic topology, transform group
*D. Bleecker, PhD—differential geometry
*R. Brown, PhD—algebra and number theory
*M. Chyba, PhD—control theory
*G. Csordas, PhD—complex function theory
*K. Dovermann, PhD—algebraic topology
*R. Freese, PhD—lattice theory, general algebra
*M. Gotay, PhD—mathematical physics, symplectic geometry
*E. Guentner, PhD—geometrical functional analysis
*H. Hilden, PhD—geometric topology
*G. Hile, PhD—partial differential equations
*T. Hoover, PhD—operator theory
*W. Lampe, PhD—universal algebra
*R. Little, PhD—algebraic topology
*A. Mader, PhD—group theory
*D. Myers, PhD—mathematical logic
*J. Nation, PhD—lattice theory
*M. Ortel, PhD—complex function theory
*L. Ramsey, PhD—harmonic analysis
*D. Ross, PhD—logic, probability
J. Siu, MA—mathematics education
*W. Smith, PhD—analysis, function theory
*D. Stegenga, PhD—analysis
*J. Weiner, PhD—differential geometry
*G. Wilkens, PhD—differential geometry, control theory
*L. Wilson, PhD—singularity theory

Degrees Offered: BA (including minor) in mathematics, BS in mathematics, MA in mathematics, PhD in mathematics

The Academic Program

The mathematics (MATH) program offers preparation in the full spectrum of mathematical sciences, including algebra, geometry, differential equations, real and complex analysis, topology, logic, number theory, and probability and statistics, as well as various topics in applied mathematics. Mathematics majors begin with the study of calculus and linear algebra. After completion of these fundamental courses, students may choose to specialize. The department advises each prospective major on

requirements and course options to meet his or her needs and interests. Departmental advisors are also available every day to all students.

Depending upon individual interest, students of mathematics may pursue careers in a variety of fields such as teaching, computer science, operations research, statistics, business, and economics. In addition, students who continue on to the graduate program may choose to become professors and/or research mathematicians. The faculty has the competence and resources required to provide the basic mathematical preparation required for any of these professions.

A goal of all non-survey mathematics courses is the development of precision of thought and expression. This receives special emphasis in the many writing-intensive courses the department offers.

Undergraduate Study

BA Degree

Requirements

Students must complete 21 credit hours in mathematics courses numbered above 300, including:

- MATH 321
- MATH 480
- 3 credit hours in a writing-intensive mathematics course
- 6 credit hours in courses numbered above 400
- 6 credit hours in a sustained two-course sequence approved by the department and completed within one year
- Only courses in which a student earns a grade of C (not C-) or better will be counted toward fulfillment of major requirements
- A cumulative 2.0 GPA in all completed upper division mathematics courses is required
- All mathematics majors are required to see a mathematics advisor each spring semester prior to fall registration

BS Degree

Requirements

Students must complete 24 credit hours in mathematics courses numbered above 300 and 15 credit hours in additional upper division mathematics courses or appropriate non-introductory courses in the natural or information sciences, including:

- MATH 321
- MATH 480
- 6 credit hours in writing-intensive mathematics courses
- 6 credit hours in a sustained two-course sequence approved by the department
- Only courses in which a student earns a grade of C (not C-) or better will be counted toward fulfillment of major requirements
- A cumulative 2.0 GPA in all completed upper division mathematics courses is required
- All mathematics majors are required to see a mathematics advisor each spring semester prior to fall registration

Students must also demonstrate the ability to program scientific problems on a computer.

Minor

Requirements

Students must complete MATH 243 plus 12 credit hours in mathematics courses numbered above 300, including:

- 3 credit hours in a writing-intensive mathematics course
- 6 credit hours in courses numbered above 400

Graduate Study

Prospective graduate students are expected to have adequate undergraduate preparation in linear algebra, advanced calculus, and abstract algebra. Applicants must submit to the department their scores for the GRE General Test; applicants for the graduate assistant positions are strongly encouraged to submit scores for the subject test in mathematics as well. The department requires a score of at least 650 on the quantitative section of the GRE General Test for admittance as a regular student. The department requires a general examination of all incoming graduate students for course placement purposes. This diagnostic examination consists of two parts, algebra and analysis, and is designed to evaluate the student's command of undergraduate mathematics in the areas of linear algebra, advanced calculus, and abstract algebra.

Master's Degree

Requirements

The department does not have a thesis option (Plan A) for the MA, and most students will select Plan B. Plan B requires 30 credit hours of course work. Each Master's candidate must form a two member committee and pass an examination on a topic chosen by the student and committee. An exceptional student may be admitted to Plan C at the discretion of the graduate chair.

Doctoral Degree

Requirements

For the PhD degree, the department requires that the student show proficiency in two of the following languages: French, German, Russian, or a computer language. Teaching experience is required of all PhD students. To be admitted to PhD candidacy, the student must satisfy the language requirements and pass three written examinations: (a) linear algebra and abstract algebra; (b) real analysis and the basic facts of complex analysis and general topology; and (c) a third field chosen by the student with the approval of the graduate chair. All new students in the PhD program shall complete a minimum of five mathematics department courses numbered between 600 and 690, other than 611, 612, 621, 631, 632, 644, 645, 649. These five courses may be taken under the CR/NC option. Exceptions: Up to two 3-credit 649 (alpha) seminars (meeting three hours/week) may be substituted for (up to) two of these required five courses, with the written approval of the graduate chair. Also, with the written approval of the graduate chair, credit may be given for equivalent courses

taken in another mathematics department or for graduate-level courses taken in another department that are recommended by the student's thesis advisor and directly related to the dissertation topic; such credit for graduate courses taken in another department is limited to a total of no more than two courses.

Microbiology

College of Natural Sciences

Snyder 207

2538 McCarthy Mall

Honolulu, HI 96822

Tel: (808) 956-8553

Fax: (808) 956-5339

Faculty

*P. Q. Patek, PhD (Chair)—cellular immunology

*M. Alam, PhD—microbial physiology and biotechnology

*R. D. Allen, PhD—ultrastructure and cell biology

*S. M. Callahan, PhD—bacterial genetics

*S. Donachie, PhD—marine microbiology and microbial diversity

*J. T. Douglas, PhD—medical microbiology and infectious diseases

*T. T. Hoang, PhD—bacterial genetics and physiology

*F. M. Robert, PhD—microbial ecology and bioremediation

Cooperating Graduate Faculty

D. Borthakur, PhD—molecular genetics of nitrogen fixation

S. P. Chang, PhD—immunology, molecular biology, molecular approaches to vaccine development

R. S. Fujioka, PhD—environmental microbiology

J. C. Leong, PhD—virology and fish vaccines

T. Lewis, PhD—comparative immunology and pathobiology, immunotoxicology, eco-genomics of reef organisms

Y. Lu, PhD—molecular virology

F. D. Miller, PhD—epidemiology

V. R. Nerurkar, PhD—infectious diseases

M. S. Rappe, PhD—microbial ecology of marine systems

G. Wang, PhD—marine microbial diversity, ecology & biotechnology

K. Yamaga, PhD—immunological mechanisms of diseases

Degrees Offered: BA (including minor) in microbiology, BS in microbiology, MS in microbiology, PhD in microbiology

The Academic Program

Microbiology (MICR) deals with microscopic forms of life and their activities. Bacteria, algae, fungi, protozoa, and viruses are included in this discipline. The field is diverse and concerns the nature of microorganisms, as well as their interactions—both advantageous and adverse—with other organisms and with the environment. Entire academic disciplines and commercial enterprises are based on what microorganisms do. For example, the very forms that may cause infectious diseases and epidemics may also support industries that produce vaccines or antimicrobial agents. Microorganisms play an essential role in the cycling of the limited supply of nutrients available on Earth's surface by decomposing plant residues and animal

remains and by being primary producers of food in the oceans. Many microorganisms or their products may be eaten, drunk, used as fuel, or carefully disposed of as undesirable. They may be used to clean up the environment or controlled only with great effort to prevent corrosive, obnoxious, or destructive activities that they may bring about. Microbiology also deals with the physiology, biochemistry, genetics, and molecular biology of microorganisms. Many of the advances in DNA technology are mediated through bacteria, yeasts, and viruses; much of what we know about metabolism in general comes from their study.

Advising

Students can contact the department's main office at (808) 956-8553 for information regarding advising services.

Undergraduate Study

BA Degree

Requirements

Students must complete the following:

- 18 credit hours in microbiology, including required courses:
 - MICR 351 and 351L
 - Three courses from MICR 361, 401, 431, 461, 463, 470, 475, 485, and 490, plus two associated laboratories
- The following required related courses:
 - BIOL 171, 172, 275 plus labs
 - CHEM 161/161L and 162/162L; or 181A/181L
 - CHEM 272/272L and 273
 - MATH 215 or 241
 - PHYS 151/151L, 152/152L; or 170/170L, 272/272L
- 9 credits of approved major electives

BS Degree

Requirements

Students must complete the following:

- 23 credit hours in microbiology, including required courses:
 - MICR 351, 351L, 431, 461, 475; and
 - one course from MICR 361, 401, 463, 470, 485, or 490, plus three 400-level MICR lab courses
- The following required related courses:
 - BIOL 171, 172, 275 plus labs
 - BIOC 441, MBBE 402 or CMB 405
 - CHEM 161/161L and 162/162L or 181A/181L
 - CHEM 272/272L and 273
 - MATH 215 and 216 or 241 and 242/242L
 - PHYS 151/151L, 152/152L; or 170/170L, 272/272L
- 6 credit hours of approved major electives

Major electives should be chosen with the assistance and approval of a department advisor to provide a well integrated and coherent program. Prospective majors should consult the microbiology advisors promptly, so as to design a curriculum that satisfies the major requirements.

Minor

Requirements

Students must complete 15 credits, including MICR 351 and microbiology courses at the 400 level.

All prerequisites for these courses must be met. Persons wishing to complete the minor and graduate in four years should have completed CHEM 272, if possible, before the middle of the junior year.

Graduate Study

The department offers programs leading to the MS and PhD in microbiology with areas of specialization in microbial ecology, biochemistry, physiology, genetics, and ultrastructure; metabolic regulation and the regulation of gene expression; marine microbiology; medical microbiology; animal and environmental virology and viral pathobiology; and immunology, immunogenetics, and immunochemistry. In addition, an option is offered in cell biology that leads to the MS and PhD in microbiology. Research programs in interdisciplinary fields are possible. Graduate students in microbiology may join two interdisciplinary graduate specializations: the Ecology, Evolution, and Conservation Biology (EECB) Program, and the Marine Biology (MB) Program.

Applicants for advanced degree programs in the department must supplement the forms and transcripts required by the Graduate Division with three letters of recommendation and the official scores from the GRE General Test and the subject test in biology. These supplementary items should be sent directly to the department.

Complete details on the graduate program in microbiology and the availability of financial aid to prospective students are outlined in a departmental brochure available on request from the department, Snyder 207, 2538 McCarthy Mall.

Courses for the graduate programs are to be selected from the list below and from other graduate offerings in related disciplines as directed by the student's advisor or advising committee. The following courses may be repeated: MICR 625, 632, 652, 661, 671, 680, 681, 690, 699, 700, 795, and 800. However, repeated courses other than MICR 699, 700, 795, and 800 may only be used for credit once per degree. MICR 690 is a required course.

Required courses for the cell biology emphasis (MS) are MICR 461, 641, 690, and 699, plus courses in biochemistry and biophysics.

Potential degree candidates are required to take a diagnostic exam (MS) or a qualifying exam (PhD). Course deficiencies shall be made up before admission to candidacy.

Master's Degree

Intended candidates for the MS degree should present a minimum undergraduate preparation in biological and physical sciences including biology, genetics, microbiology, organic chemistry, physics, and calculus. Deficiencies in some of these areas do not preclude admission. Qualified students with undergraduate majors in fields other than microbiology are welcome.

Requirements

The prospective MS candidate may select either Plan A (thesis) or Plan B (non-thesis).

Plan A Minimum Requirements - 30 credit hours

- 2 units of directed research (MICR 699);
- 1 credit of seminar (MICR 690);
- 6 credit hours of thesis (MICR 700);
- an additional 12 credit hours of coursework at the 600 level or higher; plus
- 9 credit hours at the 400 level or higher

Plan B Minimum Requirements - 30 credit hours

- 1 credit of seminar (MICR 690);
- 6 credit hours of directed research (MICR 699),
- an additional 17 credit hours of coursework at the 600 level or higher; plus
- 6 credit hours outside the major.

For a more detailed explanation, refer to the departmental bulletin.

Doctoral Degree

The doctoral degree (PhD) is offered in microbiology in the various areas of interest represented by research programs of the department's graduate faculty.

Intended candidates for the PhD degree are expected to possess the MS degree in microbiology or to be able to pass at least four sections of the MS comprehensive examination.

Requirements

The PhD candidate must demonstrate the ability to do original experimental research and to produce an acceptable dissertation. A comprehensive examination, written and oral, is required, and the dissertation must be successfully defended before the faculty. At least one year of experience in teaching in a laboratory course is considered part of the training of the PhD candidate. The specific requirements for each of the joint degree programs are modified somewhat from those given above.

Music

College of Arts and Humanities
Music 3
2411 Dole Street
Honolulu, HI 96822
Tel: (808) 956-7756
Fax: (808) 956-9657
E-mail: uhmmusic@hawaii.edu
Web: www.hawaii.edu/uhmmusic

Faculty

- *D. Womack, DMA (Acting Chair)—composition
- *T. Bingham, MA—music education
- *E. D. Bomberger, PhD—musicology
- *K. Kennedy, DMA—choral music
- *E. T. Kudo, DMA—composition

- *F. Lau, DMA—ethnomusicology
- *B. W. Lee, PhD—ethnomusicology
- *I. B. Lin, DM—strings performance
- *B. P. McLain, PhD—music education
- *H. Miyamura, MA—woodwind performance
- *J. Moulin, PhD—ethnomusicology
- *J. Mount, MM—voice performance
- *G. Okamura, MA—music education
- *L. Paxton, MM—voice performance
- B. Payne, MM—band
- T. Rosenkranz, MM—piano performance
- *R. D. Trimillos, PhD—ethnomusicology
- *L. Wright, PhD—musicology
- *B. Yasui, DMA—composition
- *T. Yee, DMA—piano performance

Degrees Offered: BA (including minor) in music, BEd in elementary education (music), BEd in secondary education (music), BMus, MA in music, MMus, PhD in music

The Academic Program

The music (MUS) department offers the bachelor of arts in music, bachelor of music, master of arts in music, master of music, and doctor of philosophy in music. In conjunction with the College of Education, the department offers the bachelor of education in elementary education (music) and the bachelor of education in secondary education (music). Information about each of these programs may be found in the *Music Department Graduate Bulletin* or *Music Department Undergraduate Bulletin*, available in the department office.

The department is housed in a complex of buildings, including studios, practice and rehearsal facilities, and the Mae Zenke Orvis Auditorium, noted for its fine acoustics. In addition to many offerings in Western classical, vocal, and instrumental music, the department specializes in non-Western music, notably the musics of Asia and the Pacific.

Accreditation

The bachelor's, master's, and PhD programs are fully accredited by the National Association of Schools of Music (NASM).

Advising

Students interested in majoring in music, minoring in music, or participating in various ensembles may obtain information at the department office and arrange to see a music advisor. Advising is mandatory for music majors.

New Students

An orientation session for new students is held each fall before classes begin. At that time, incoming students take theory, history, and piano placement tests and receive advising and approval for music courses.

Undergraduate Study

Bachelor degree concentrations include performance and composition, music education, and general music studies.

For specific course requirements, see the *Music Department Undergraduate Bulletin*, available from the department office. All prospective majors and new and transfer students should consult the undergraduate chair when making plans to enter UH Mānoa.

Admission Requirements

In addition to the UH System Application form, prospective music majors must submit a Music Department Undergraduate Admission Application and perform an audition. Forms and instructions are available from the department office and the department website at www.hawaii.edu/uhammusic.

BA Degree

Requirements

Major requirements include approximately 41 credit hours in various music courses. Bachelor of Arts majors may work with an advisor to emphasize general music, theory, Hawaiian music, musical theater, or musicology.

BMus Degree

Requirements

BMus candidates must complete approximately 80 credit hours in music and major in composition or performance (guitar, piano, voice, and selected orchestral instruments).

BEd Degree

Prospective music education majors should see the chair of the music education committee in the Department of Music for information and requirements. This degree program is offered in elementary and secondary education in conjunction with the College of Education.

Minor

Requirements

Students can pursue an interest in music while continuing their chosen major. The minor program requires a minimum of 15 credit hours in three of four areas in music: theory, performance, ethnomusicology, and history. For further information, contact the music department office.

Graduate Study

Master's Degree

The department offers programs leading to the MA in music with concentrations in ethnomusicology, music education, musicology, and theory and to the MMus with concentrations in composition and performance (voice, piano, and selected instruments). The MA in music education is available either on-campus or online.

Admission Requirements

Applicants for admission to the master's degree program must have an undergraduate degree with a major in music or a bachelor's degree and evidence of an equivalent musical background; three confidential (not more than two years old)

letters of recommendation or forms provided by the music department; and, for non-native speakers of English, a TOEFL score of 500 minimum for performance or 540 for other concentrations and 600 for teaching assistants. A GRE General Test score is recommended but not required. Application forms are available at the music department, the department website, the Graduate Division or their website. The completed forms should be submitted with two copies of all transcripts by **February 1** for the fall semester, and by **September 1** for the spring semester. In the following concentrations, students must meet additional admission requirements:

1. Ethnomusicology—Background in cultural anthropology is desirable and, depending on the thesis research, may be required.
2. Music Education—Minimum of one year of full-time music teaching experience in a public or private school.
3. Composition—Three original scores representative of various forms and media.
4. Performance—An audition of works representative of various musical styles. An applicant not residing in Hawai'i must submit an unedited tape recording or CD comparable in scope and length to an in-person audition and, if admitted, will audition before the department admissions faculty before registering for the first semester of residency to ascertain appropriate placement in the curriculum sequence. A recent UH Mānoa graduate may be admitted without a hearing if the BMus senior recital is considered to be of high enough quality by the majority of the department admissions faculty.
5. Musicology—Sample of academic writing proficiency (a 10-page term paper in English from an upper division music history course is preferred).
6. Theory—Sample of academic writing proficiency (e.g., undergraduate term paper).

An applicant must declare a specific concentration within the MA or MMus; admission, if granted, is for that concentration only. If a student later wishes to change to another concentration, s/he must petition the graduate faculty in music for approval.

More detailed information and links to relevant forms for all degree programs are posted on the department's website: www.hawaii.edu/uhammusic. Information is also contained in the *Music Department Graduate Bulletin*, available on request from the department office, 2411 Dole Street, Honolulu, HI 96822.

Diagnostic and General Exams

Prior to enrolling for the first semester of study, each classified graduate student will take a diagnostic examination in music history (part I) and theory (part II) to determine whether or not the general exams in those areas (or specified courses in lieu of the general exams) are needed to clear pre-program deficiencies. Students in all areas are also tested in their area of concentration (part III). The content of the diagnostic examination consists of material normally included in the work required for a bachelor's degree. The purpose of this examination is twofold: (a) to assess the student's background and determine if there are deficiencies that should be remedied and (b) to assist the advisor and the student in planning a

program of study. Detailed information about the examination is available on request.

Before being admitted to candidacy for a degree, each graduate student must pass the department's general examination, which consists of three parts: music history, theory, and the student's area of concentration. Successful performance on specific parts of the diagnostic examination exempts the student from the equivalent parts of the general examination. Parts I and II of the general examination must be taken prior to enrolling for the second semester of study. All parts of the general examination must be passed before the student earns 18 credit hours toward the degree. Credits earned in excess of this limit will not be counted if they are earned before all three parts of the general examination are passed. When a student fails any part of the general examination, s/he must take that part again the next time it is offered. If the examination is not taken, a failure will be reported; students failing the examination a second time will be dropped from the program. Any exceptions to these procedures must receive prior approval by petition to the graduate faculty.

Courses taken to clear pre-program deficiencies or in lieu of general exams, must be taken for grade during the first two semesters of study and passed with a grade of B (not B-) or better. Otherwise, the student will be dropped from the graduate program. Credits earned for these courses do not count toward degrees. Students taking the general exams may fail once only. Furthermore, the exams (and any retest) must be taken when offered. A no show for any reason constitutes a failure. All deficiencies must be cleared by the end of the first year of study. Deferral of any retest must receive prior approval by the graduate chair. The student petitions the graduate faculty by memo, signed and dated, explaining the reason for the deferral request, no less than five weeks before the exam retest date. All deficiencies must be cleared before the start of the second year of study.

The student's principal advisor, appointed by the graduate chair, will consider the test results in advising the student.

When all portions of the general examination have been passed, the student will be advanced to candidacy.

Some concentrations require language competence:

1. Ethnomusicology—A reading or speaking knowledge of a foreign language relevant to the thesis research (or equivalent competence in linguistics).
2. Musicology—A reading knowledge of French or German.
3. Theory—A reading knowledge of French, German, or Latin.
4. Music Education—Language appropriate to the area of research or research statistics.

Degree Requirements

Plan A requires a minimum of 30 credit hours, 22 in course work and 8 of thesis. Candidates concentrating in ethnomusicology, music education, musicology, theory, and composition follow this plan. (Candidates in music education may choose either Plan A or Plan B, described below.) An ethnomusicology thesis is usually based on fieldwork. Composition students must compose an original work in one of the larger forms, plus write a detailed essay on the background and problems involved or a detailed theoretical analysis of the work.

Plan B also requires a minimum of 30 credit hours but does not include a thesis. Candidates in performance follow this plan. It is also an option for candidates in music education.

Plan A music education students must pass a comprehensive exam of topics in this field after completing MUS 651 (Foundations of Music Education).

Plan B students in music education must fulfill the following requirements:

1. A comprehensive three-hour examination, exhibiting strength in written expression and a grasp of the essentials of the broad field of music education; and
2. A project or paper about some specific aspect of music education whose size and scope will be determined by the student and the faculty member directing the project.

Under Plan A, the student arranges the oral final examination in consultation with the thesis committee, usually during the semester in which all course work has been completed and after the student has completed the thesis document. Copies of the document must be presented to the committee at least two weeks prior to the examination. At the examination, the thesis committee examines the student's knowledge and understanding of the field of concentration, with emphasis on the content of the thesis.

Candidates concentrating in performance must give a public recital. Additionally, in the recital semester and before the recital date, the student will meet with the recital committee for a one-hour oral examination to discuss historical and analytical aspects of the works to be performed in the graduate recital.

Doctoral Program

The department offers programs leading to the PhD in music with concentrations in composition, music education, ethnomusicology, and musicology.

Admission Requirements

Applicants for admission to the PhD program must present a master's degree in music (in the area of emphasis) or equivalent, an excellent academic record (two copies of all college transcripts), three confidential letters of recommendation (not more than two years old) on forms provided by the music department, a sample of academic writing proficiency such as recent term papers, a GRE General Test score, and, for non-native speakers of English, a TOEFL score of 560 or better. Application forms are available at the music department, the department website, Graduate Division, or the Graduate Division website. The completed forms should be submitted with two copies of all transcripts by **February 1** for entrance in the following fall semester and by **September 1** for entrance in the following spring semester.

In the following concentrations, students must meet additional admission requirements:

1. Composition—A master's degree in composition or the equivalent in terms of course work and original composition; a score of one large-scale work; scores of two shorter works; and a tape of at least one of the above.
2. Ethnomusicology—A master's degree in ethnomusicology or the equivalent in terms of coursework and fieldwork. A major research paper in ethnomusicology as evidence

of extensive background in musical traditions other than Western art music.

3. Musicology—A master's degree in musicology or a minimum of four graduate seminars in musicology, and a 7,500-word research paper in English on a subject in historical musicology.
4. Music Education—A master's degree in music education is preferred, but an equivalent background is acceptable. A minimum of two years full-time music teaching in a public or private school; three confidential letters of recommendation on the applicant's teaching ability, at least two of which must be written by the applicant's job supervisors (principal or other supervisor); and one of the following: (a) a videotape of a teaching demonstration (or actual teaching), or (b) an in-person teaching demonstration.

An applicant must declare a concentration in one of the four areas previously listed. Admission, if granted, is for that concentration only. If a student later wishes to change to another concentration, s/he must petition the graduate faculty in music for approval. Each student will have a principal advisor who must be a member of the music department's graduate faculty. An application will be denied if it is determined that no principal advisor in the applicant's area of interest is available on the music department's graduate faculty.

Degree Requirements

This degree requires an emphasis in ethnomusicology (11 credits of specified course work) for students who are not concentrating in tethnomusicology. This emphasis ensures that all PhD graduates will be able to teach introductory courses in world music. Requirements for music PhD students also include MUS 659 Seminar in College Music Teaching, followed by supervised college teaching experiences.

The PhD student must spend three semesters in residence (full-time work or the equivalent in credit hours) at UH Mānoa and must complete the degree within seven years.

Language Requirements. Before advancing to candidacy, reading proficiency must be satisfactorily demonstrated as follows:

1. Ethnomusicology—One dissertation research language and one library research language.
2. Music Education—Language appropriate to the areas of research or research statistics.
3. Musicology—Two European languages: German and one other language, preferably French.
4. Composition—None.

Diagnostic and Qualifying Exams. Prior to enrolling for the first semester of study, each PhD student will take diagnostic exams in music history and theory to determine whether or not the qualifying exams in those areas (or specified courses in lieu of the qualifying exams) are needed to clear pre-program deficiencies. Additionally, ethnomusicology majors take their area's diagnostic exam to determine whether or not specified courses are needed to clear pre-program deficiencies. Courses taken to clear such deficiencies or in lieu of qualifying exams must be taken for grade during the first two semesters of study and passed with a grade of B (not B-) or better; otherwise,

the student will be dropped from the graduate program. Credits earned for these courses do not count toward degrees. Students taking the qualifying exams may fail once only. Furthermore, the exams (and any retest) must be taken when offered. A no show for any reason constitutes a failure. All deficiencies must be cleared by the end of the first year of study. Deferral of any retest must receive prior approval by the graduate chair. The student petitions the graduate faculty by memo, signed and dated, explaining the reason for the deferral request, no less than five weeks before the exam retest date. All deficiencies must be cleared before the start of the second year of study.

The student's principal advisor, appointed by the graduate chair, will consider the test results in advising the student.

Comprehensive Exam and Advancing to Candidacy.

This exam measures the student's readiness to begin significant research in the selected major area of research. It is given only after successful completion of course work, fulfillment of residency requirements, successful completion of all language requirements, and notice from the advisory committee that the student is sufficiently prepared for this examination. This two-part exam consists of a written portion and a two-hour oral portion, passed or failed as a whole. A student failing this exam may retake it once, but must do so within one year. Passing this exam enables the student to begin the dissertation process and receive an ABD certificate from UH Mānoa, indicating that all requirements of the doctorate except for the dissertation have been completed. Following the comprehensive exam, the formation of a five-member doctoral committee, and submission and approval of a dissertation proposal by the doctoral committee, the student is advanced to candidacy.

After this occurs, all that remains is fieldwork (for ethnomusicology majors only), writing of the dissertation, and the oral defense of the dissertation.

Final Oral Examination. Basically a defense of the dissertation, this exam is conducted by the five-member doctoral committee, consisting of graduate faculty members appointed by the music graduate chair and approved by the Graduate Division dean. The chair of the student's advisory committee normally serves as the chair of the student's doctoral committee. At least one member must be from outside the music department, but music department members make up the majority. All committee members must be present at the exam, which is subject to other regulations detailed in the "Graduate Education" section in this *Catalog*.

The student arranges the date of the final oral exam in consultation with the doctoral committee; it usually takes place during the semester the student has completed the dissertation document. Copies of the document must be presented to the committee at least two weeks prior to the examination. At the examinations, the committee scrutinizes and judges the student's knowledge and understanding of the field of concentration, with emphasis on the content of the dissertation.

Peace Studies

College of Social Sciences
Saunders Hall 717
2424 Maile Way
Honolulu, HI 96822
Tel: (808) 956-7427
MIP/PCR Fax: (808) 956-9121
E-mail: uhip@hawaii.edu
Web: www.peaceinstitute.hawaii.edu

Faculty

*B. Barnes, JD, LLM—conflict resolution
B. Hallett, PhD—peace studies

Cooperating Faculty

I. Aoude, PhD—ethnic studies
D. Bangert, PhD—management
J. Barkai, JD—law
T. Brislin, PhD—media
R. Chadwick, PhD—political science
D. Chandler, PhD—sociology
S. Chandler, PhD—public policy/social work
D. Ching, PhD—family and consumer services
D. Foley, PhD—urban research and planning
G. Fontaine, PhD—communication
A. Hubbard, PhD—speech
M. Jones, PhD—physics
G. Kent, PhD—political science
N. Kent, PhD—ethnic studies
R. Lamb, PhD—religion
K. Lowry, PhD—urban research and planning
J. Lum, PhD—educational foundations
N. Milner, PhD—political science
J. Najita, PhD—industrial relations
D. Neubauer, PhD—political science
P. Pedersen, PhD—psychology
R. Robertson, PhD—management
I. Rohrer, PhD—political science
L. Ruby, PhD—art
W. Sharkey, PhD—speech
L. Sponsel, PhD—anthropology
C. Stephenson, PhD—political science
J. Van Dyke, JD—law

Degree and Certificates Offered: Certificate in Peace Studies,
BA in interdisciplinary studies (peace and conflict studies),
Graduate Certificate in Conflict Resolution

The Academic Program

Peace and conflict education (PACE) studies examines the causes of war and other forms of violence, the nonviolent ways to resolve destructive conflicts and engage in peacemaking, and the conditions necessary for creating a positive peace. As an interdisciplinary field, PACE finds its center in the social sciences, but it also extends to the humanities, the natural and physical sciences, and professional schools. PACE students learn critical thinking related to issues of justice, conflict resolution,

security and peace, and steps to effect these goals, including the making and evaluating of policies.

PACE is an individually designed interdisciplinary program that is coordinated by the Spark M. Matsunaga Institute for Peace. Students may either complete a BA degree with a major equivalent in peace and conflict studies through the Interdisciplinary Studies Program, or they may earn a peace certificate that is available to undergraduate students prior to their graduation from UH Mānoa. Both the certificate and major can be designed to accommodate the student's personal goals and interests.

Students taking these courses go on to careers in diplomacy (including the UN and its affiliates), Third World aid and development (research, administration, and fieldwork), mediation services, public relations, defense planning, management operations, industrial relations, education (teaching and administration), welfare and public interest work, journalism, service industries, and, of course, the fields of peace and conflict research, peace education, and peace advocacy. The development of perspectives and skills in peace, justice, and conflict resolution are relevant in the general areas of private business, the arts, national and international nongovernmental organizations, and national, regional and international government bodies.

The heads of private and public bodies, including UH officials, are increasingly calling for people expert in the management of conflict. A rising backlog of court cases, the cost and delay of justice, crime in the streets, domestic violence, disorder in the schools, ongoing conflict in various workplace settings, and people generally unable to cope with the stress of modern living, all contribute to a pressing need for more peacemakers, mediators, and facilitators capable of resolving conflict with justice.

An appreciation of the diverse cultural perspectives that Asians and Pacific Islanders bring to the study of peace and conflict is featured throughout the PACE program. The island of O'ahu (meaning "the gathering place") nurtures a rich ethnic and cultural pluralism that provides a unique setting for the study and practice of peacemaking and the nonviolent resolution of conflict.

Undergraduate Study

Bachelor's Degree

The equivalent of an undergraduate major in peace and conflict resolution is available through the BA program of interdisciplinary studies. For information, contact the Matsunaga Institute for Peace or the Interdisciplinary Studies Program. Interested students should refer to the "Interdisciplinary Studies" section within the Colleges of Arts and Sciences.

Major Requirements

- POLS 201 Problems of War and Peace
- PACE 210 Survey Peace and Conflict Studies
- PACE 345/ANTH 345 Aggression, War and Peace
- PACE 495 Practicum and Internship

- The remaining 24 credit hours, or eight courses, to meet the major's minimum requirement of 36 credit hours must be selected from either the peace studies or conflict resolution stream as long as at least one course is done from the other stream. For example, a student may elect to do seven conflict resolution courses but would have to do one of the peace studies courses. Or the student may elect to concentrate in the peace studies stream and take one conflict resolution course at a 7/1 ratio. The mix could also be 6/2, 5/3 or 4/4.

Peace Studies Stream

- WS 304 Women, War and the Military
- BIOL 310 Environmental Issues
- PACE 315 Personal Peace: Stories of Hope
- GEOG 336 Geography of Peace and War
- POLS 394/WS 353 Democracy in Organizations
- PACE 373/POLS 396 Nonviolent Political Alternatives
- PACE 397 Nonviolent Alternatives
- PACE 399 Directed Reading
- PACE 410 History of Peace Movements
- PACE 412 Gandhi, King, and Nonviolence
- ANTH 423 Social and Cultural Change
- ECON 454 Economics and Cooperation or ECON 466 Growth and Crisis in the Global Economy
- COM 459 Special Topics
- PACE 485 Topics in Peace and Conflict Resolution
- PACE 495 Practicum and Internship

Conflict Resolution Stream

- PACE 247 Survey of Conflict Management
- POLS 319 International Organization
- COM 340 Intercultural Communication
- PACE 340 Negotiation
- FAMR 350 Leadership and Group Process
- POLS 375 Public Law and Judicial Behavior
- PACE 399 Directed Reading
- SOC 433 Analysis in Law and Social Change
- PACE 447 Mediation Skills: UH Basic
- SOC 451 Analysis in Marriage and the Family
- SP 455 Conflict Management
- PACE 477 Culture and Conflict Resolution
- PACE 478 International Law and Disputes
- PACE 485 Topics in Peace and Conflict Resolution
- PACE 495 Practicum and Internship*
- A student may not apply towards the major more than 9 credit hours from any combination of PACE 399 and PACE 495.
- A 2.5 GPA must be maintained in the major course work and no grade below a C.

Certificate in Peace Studies

To receive a Certificate in Peace Studies, students must take PACE 210 and 495, and 9 credit hours from any of the approved course list. Courses must be distributed between those emphasizing conflict resolution and those emphasizing social justice or conflict prevention. At least one course should come from a discipline other than PACE. Maintenance of an overall GPA of 2.5 is required in prerequisite and certificate courses. This certificate may not be offered every year.

Graduate Study

Certificate in Conflict Resolution

The Certificate in Conflict Resolution allows students pursuing a master's or doctoral degree in another area to become acquainted with conflict resolution theory, practice, and activities. It is also available to students seeking the certificate only and considers unclassified students, as well as degree students, for admission. Students enrolled in public administration, education, law, political science, sociology, anthropology, geography, health, social work, environmental science, zoology, and psychology are part of the program, along with professionals in the community. Students are encouraged to use the certificate program to increase their competence in conflict resolution as it relates to their major area of study.

Certificate students are required to complete at least 15 credits from the approved course list, which includes two (2) three-credit "core" courses at the 600 level or above, two (2) electives and one (1) three-credit Practicum (to be taught by program faculty on a rotating basis).

The core courses consist of MGT 660, PACE 695, PLAN 627, POLS 633, PUBA 661, and SOC 730. The elective courses are multi-disciplinary in nature. The areas include Industrial Relations, Law, Peace (Negotiation, Mediation, Culture and Conflict Resolution, International Disputing/ International Law, ADR Systems Design, Conflict Resolution for Educators and International Relations and War), Political Science and Speech. Specific information about the core and elective courses, including access to the graduate certificate brochure, can be found at <http://www.peaceinstitute.hawaii.edu/index.html>.

A capstone paper is also required. The paper will be based on one or more seminar papers and evaluated by two or more PCR faculty. For most students, the certificate program will require at least one (1) additional semester of coursework as the Practicum requires a 100-hour commitment. This can take place in a variety of settings. Upon completion of the required courses, each student is expected to demonstrate their skills in facilitation, mediation, or process design.

Successful completion of the program leads to a Graduate Certificate in Conflict Resolution and is available to students seeking the certificate only or concurrently with a Masters or PhD program. Consideration for admission to the certificate program requires filing of an application form available from the department.

- PACE 650 Dispute Resolution System Design
- PACE 652 Conflict Management for Educators
- PACE 655 Facilitation and Advanced Mediation
- PACE 695 Conflict Resolution Practicum

Philosophy

College of Arts and Humanities
Sakamaki D-301
2530 Dole Street
Honolulu, HI 96822
Tel: (808) 956-8649
Fax: (808) 956-9228
E-mail: philo@hawaii.edu
Web: www.hawaii.edu/phil

Faculty

- *E. Deutsch, PhD (Chair)—comparative philosophy, Indian philosophy, metaphysics, aesthetics
- *T. Albertini, DPhil—Renaissance and early modern philosophy, Islamic philosophy, feminist issues in philosophy
- *R. T. Ames, PhD—Daoist philosophy, Confucian philosophy, American philosophy, philosophy of culture, comparative philosophy
- *R. Bontekoe, PhD—hermeneutics, epistemology, philosophy of law
- *A. Chakrabarti, DPhil—Indian philosophy, philosophy of language, philosophy of mind
- *C. Y. Cheng, PhD—philosophy of language and logic, American philosophy, classical Chinese philosophy, Neo-Confucian philosophy
- *V. Dalmiya, PhD—epistemology, feminist philosophy
- T. Jackson, PhD—specialist, director of philosophy in the schools; logic, comparative philosophy, philosophy for children
- *K. Kipnis, PhD—philosophy of law, social and political philosophy, ethics
- *S. Odin, PhD—Japanese philosophy, comparative philosophy, American philosophy
- *G. R. Parkes, PhD—comparative philosophy (continental European, Chinese, and Japanese), environmental philosophies, philosophies of culture
- *R. W. Perrett, PhD—Buddhist philosophy, Indian philosophy, moral and political philosophy, metaphysics, philosophy of religion
- *J. E. Tiles, DPhil—ancient philosophy, American philosophy, philosophical logic, philosophy of science
- *M. E. Tiles, PhD—history and philosophy of mathematics, contemporary French philosophy of science, science and technology

Cooperating Graduate Faculty

R. A. Amundson, PhD—philosophy of science
P. T. Manicas, PhD—political, social philosophy

Degrees Offered: BA (including minor) in philosophy, MA in philosophy, PhD in philosophy

The Academic Program

Philosophy (PHIL) is an open inquiry that involves the disciplined examination of our most comprehensive goals, standards, and criteria. For example: how should we conduct ourselves in our relations with one another? (ethics); what standards should we use to assess our institutions? (social and political theory); how may we achieve knowledge and understanding of the world around us? (epistemology, philosophy of science); what are the most general structures

of thought and reality? (philosophy of logic and language, metaphysics); and what place does art have, or what place should it have, in human life? (aesthetics). In pursuing these questions, philosophy is often led to confront issues about the ultimate nature of reality and value or to consider possible limitations on our ability to answer or even to ask such questions. Philosophy proceeds with its task in part through contributing to ongoing discussions and debates within disciplines and traditions and also by cross-disciplinary and cross-cultural comparisons.

Students majoring in philosophy work to develop for themselves a comprehensive view of the aspirations and achievements of human culture and in the process are encouraged to acquire the skills of careful reading and interpretation of texts, of writing that conveys clearly their understanding of some issue, and of responding critically to ideas that other people advance. The Department of Philosophy's faculty has expertise in an unusually diverse range of philosophic traditions. The faculty includes specialists in Chinese, Japanese, Indian, Buddhist, and Islamic thought, as well as in many of the important Western traditions. The department as a whole has long been recognized internationally for its comparative work between philosophic traditions.

Undergraduate Study

Bachelor's Degree

Requirements

Students must complete 30 credit hours of philosophy courses, including required courses:

- PHIL 110 or 111
- PHIL 449
- Two courses from PHIL 211, 212, 213, or 414 (Alpha)
- One course from PHIL 300 to 318
- One course from PHIL 330 to 380
- Four additional courses above the 100 level (electives)

Minor

Requirements

Students must complete 15 credit hours of philosophy above the 100 level. A minor will have any one of the following themes: Asian philosophy; religion and metaphysics; ethics and law; science, technology and values; humanities and the arts, and history of philosophy.

For details of which courses fall under these themes, students should consult the department undergraduate advisor.

Graduate Study

The department offers graduate training leading to the MA and PhD degrees. Students with BA degrees may apply to the MA program. Students are accepted directly into the PhD program only if they have already received the MA degree or the equivalent from an accredited institution and have met any other departmental requirements.

Specific requirements for all graduate degrees are detailed in a brochure available from the department upon request.

Whatever their field of specialization, graduate students in philosophy must acquire a thorough knowledge of the history and problems of Western philosophy. On the basis of this foundation, students may further specialize in one of three areas of study: Western philosophy, Asian philosophy, or comparative philosophy.

Although the Western philosophical tradition remains the fundamental frame of reference for the department, the opportunity provided for specialization in the area of Asian philosophy is unique in that the UH is the only institution of higher learning in the U.S. with a regular program leading to the PhD degree with areas of specialization in Islamic, Indian, Buddhist, Chinese, Japanese, and comparative philosophy. The area of comparative philosophy is the most demanding; at the PhD level its requirements include proficiency in both the Western and Asian fields. The candidate is expected to gain a mastery of some specific topic that can be approached through the contexts of two or more philosophic traditions.

All graduate students shall develop their course of study in consultation with the chair of the graduate program.

The MA and PhD in Asian philosophy are recognized Western Interstate Commission for Higher Education (WICHE) regional graduate programs. Residents of Alaska, Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, Utah, Washington, and Wyoming are eligible, on admission, to enroll at Hawai'i-resident tuition rates.

Master's Degree

The MA program can be completed either entirely through course work or through a combination of course work and thesis preparation.

Admission Requirements

Students seeking admission must have a BA degree, including the equivalent of 30 credit hours in philosophy. Students who lack this preparation must make up deficiencies either before or during graduate study. In the latter case, students will be admitted only conditionally, pending removal of the deficiencies. Deficiencies may also be designated in cases where a student's background does not include a sufficient number and range of courses in Western philosophy. The GRE General Test is required of all program applicants to whom it is accessible.

Degree Requirements

To be eligible for conferral of the MA degree, a student must maintain a minimum GPA of 3.3 while completing at least 30 credit hours of course work, at least 18 of which must be in courses numbered 600 and above. In addition, students submit three papers for a culminating exam, which includes an oral component. Also required for the MA degree are four semesters (or the demonstrated equivalent) of at least one philosophically significant language other than English: typically classical Greek, Latin, French, German, Arabic, classical Chinese, Japanese, Sanskrit, or Pali.

Doctoral Degree

The doctoral program consists of two stages. The first stage is that leading to admission to candidacy; the second, to the awarding of the degree. Normally the first involves at least two years of course work beyond the MA in preparation for departmental and language examinations. The second stage involves writing a dissertation and passing an oral examination in its defense. Students must attain certification for PhD candidacy—that is, fulfill all the requirements for the PhD except for the writing and oral defense of the dissertation—within four years of admission to the PhD program.

Admission Requirements

Students seeking admission must hold an MA degree or the equivalent in philosophy and have earned a minimum GPA of 3.3 in courses taken for the MA. Students may be required to make up deficiencies upon entry into the PhD program (see requirements for MA degree above). The GRE General Test is required of all program applicants to whom it is accessible.

Degree Requirements

To be eligible for conferral of the doctor of philosophy degree, a student must maintain a minimum GPA of 3.3 while completing at least 30 credit hours of course work beyond the requirements for the MA. A minimum of 18 of these credit hours must be taken at or above the 600 level. Students are required to demonstrate competence in each of three general areas: 1) history of philosophy; 2) metaphysics, epistemology, logic, and philosophy of science; and 3) ethics, aesthetics, social and political philosophy, and philosophy of law. Course listings made available each semester will indicate the general area or areas within which each course fits. Students are required to pass two examinations in an area related to the subject matter of their prospective dissertation, to complete an original dissertation, and to pass a final oral dissertation defense. In addition, students shall demonstrate proficiency in at least one (and where deemed necessary two) philosophically significant language(s) other than English: typically classical Greek, Latin, French, German, Arabic, classical Chinese, Japanese, Sanskrit or Pali. Language proficiency examinations will be conducted through the Graduate Division and the department of UH Mānoa responsible for teaching that language.

Physics

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Web: www.phys.hawaii.edu/

Faculty

- *M. W. Peters, PhD (Chair)—elementary particles, experiment
- *T. Browder, PhD—elementary particles, experiment
- *L. Elias, PhD—free electron laser physics
- *A. Feldman, PhD—physics education
- *J. Gaines, PhD—condensed matter, experiment
- *P. Gorham, PhD—elementary particles, experiment
- *F. Harris, PhD—elementary particles, experiment
- *C. Hayes, PhD—condensed matter, experiment
- *M. D. Jones, PhD—elementary particles, experiment
- *P. K. Lam, PhD—condensed matter, theory
- *J. G. Learned, PhD—particle astrophysics
- *J. M. J. Madey, PhD—free electron laser physics
- *K. V. Melnikov, PhD—elementary particles, theory
- *S. Olsen, PhD—elementary particles, experiment
- *S. Pakvasa, PhD—elementary particles, theory
- *K. Sattler, PhD—condensed matter, experiment
- *E. B. Szarmes, PhD—free electron laser physics
- *X. R. Tata, PhD—elementary particles, theory
- *G. Varner, PhD—elementary particles, experiment
- *C. Vause III, PhD—condensed matter, theory

Affiliate Graduate Faculty

- A. Barger, PhD—cosmology, observational
- S. Dye, PhD—particle astrophysics
- S. Ohnuma, PhD—elementary particles, experiment
- W. Simmons, PhD—elementary particles, theory

Degrees Offered: BA (including minor) in physics, BS in physics, MS in physics, PhD in physics

The Academic Program

Physics (PHYS) is the study of matter and energy and how they interact at the most basic levels. Areas include mechanics, optics and lasers, thermodynamics, electricity, magnetism, nuclear phenomena, condensed matter, and elementary particles. Physics is widely regarded as the most basic of all the sciences. UH Mānoa offers both the Bachelor of Arts and Bachelor of Science degrees in physics. Faculty members who teach physics courses are at the forefront of research in physics both in experiment and in theory. In the field of elementary particles, faculty members currently perform experiments in Hawai'i, in Japan and in Antarctica to study neutrinos and high-energy gamma rays coming from the stars. Others are involved in experiments at the BES accelerator in China and

at the KEK accelerator in Japan, studying particle production and decay and the violation of particle/anti-particle symmetry. In condensed-matter physics, they investigate nano-materials and use a scanning tunneling microscope to take pictures of individual atoms. Two free electron lasers are being installed in the physics department. These devices will allow faculty to carry out forefront spectroscopic research in chemistry, material science, fundamental physics and medicine. Often, undergraduate physics majors work on these projects along with graduate students and the faculty.

Advising

Academic advising is mandatory for all undergraduate physics majors. Contact the department office for assignment to an advisor. Note that in order to complete the program in 4 years, a physics student must begin the study of calculus in either the first or the second semester of the freshman year.

Undergraduate Study

BA Degree

Requirements

Students must complete 40 credit hours in PHYS courses, including:

- PHYS 170/170L, 272/272L, 274/274L, 310, 350, 400, 430, 450, 480, and 480L
- One course from PHYS 440, 481, or 490
- Two courses from PHYS 305, 475, or 481L
- CHEM 161/161L and 162/162L or 171/171L or 181/181L
- MATH 241, 242, 243, 244, and 311. (MATH 251A, 252A, 253A, may be substituted for MATH 241, 242, 243, 244. MATH 215, 216, may be substituted for MATH 241, 242, with consent from physics advisor.)
- Grade of C (not C-) or better in above courses

Upon approval of a physics department advisor and chair, the PHYS 170 through 272L requirements may be satisfied by PHYS 151 through 152L.

BS Degree

Requirements

Students must complete 46 credit hours in physics courses, including:

- PHYS 170/170L, 272/272L, 274/274L, 310, 311, 350, 400, 430, 450, 480, 480L, and 481
- One course from PHYS 440, 460, or 490
- Two courses from PHYS 305, 475, or 481L
- CHEM 161/161L and 162/162L or 171/171L or 181/181L
- MATH 241, 242, 243, 244, and 311 (MATH 251A, 252A, 253A, may be substituted for MATH 241, 242, 243, 244. MATH 215, 216, may be substituted for MATH 241, 242, with consent from physics advisor.)
- Grade of C (not C-) or better in above courses

Upon approval of a physics department advisor and chair, the PHYS 170 through 272L requirements may be satisfied by PHYS 151 through 152L; and requirements for PHYS 450, 480, 480L, 305 (or 475 or 481L) and 440 (or 460 or 490) may be modified so as to accommodate special emphasis or interdisciplinary programs for which the major in physics is appropriate.

Minor

Requirements

- PHYS 151/151L and 152/152L or PHYS 170/170L and 272/272L
- PHYS 274 (lab not necessary)
- 15 additional upper division credit hours, including PHYS 310, 350, and 480
- Grade of C (not C-) or better in the above courses

Upon recommendation of a physics department advisor and chair, requirements for PHYS 310, 350, and 480 may be modified if an equivalent course is taken in another department.

Graduate Study

This program offers opportunities for study and research leading to the MS and PhD degrees in physics. The staff and facilities are especially aimed toward experimental and theoretical work in elementary particle physics, nanophysics and free electron laser physics and applications.

Intended candidates for the MS or PhD in physics must present a minimum of 35 undergraduate credit hours in physics, including atomic and nuclear physics, electromagnetism, mechanics, quantum mechanics, and thermodynamics. Courses in general chemistry and differential equations are also required. Official scores of the GRE General Test and the subject test in physics must be submitted prior to admission.

At least one year of experience as a teaching assistant is required of all MS or PhD candidates. All graduate students are required to attend the weekly departmental seminar.

Master's Degree

Students wishing to terminate their formal education with the MS degree generally select Plan A (thesis) so as to gain some research experience, as well as formal class work. These students are prepared to enter teaching positions at the community college level or industrial and civil service positions at the junior scientist and engineer level.

Students planning advanced graduate work generally complete the Plan B (non-thesis) or Plan C (examination) requirements for the MS degree. At this point most of their formal class work has been completed and further work consists mainly of seminars, directed research, and the dissertation.

Requirements

For the MS Plan A, students must complete 30 credit hours of course work, including (a) a minimum of 18 credit hours of physics courses numbered 600 to 798, including PHYS

610, 650, 670, and 690; (b) minimum of 6 credit hours of thesis; and (c) approved electives, which may be selected from PHYS 699 for a maximum of 2 credit hours and courses in mathematics, chemistry, meteorology, engineering, and philosophy. Other courses can be included on a case-by-case basis at the discretion of the department chair. A final oral examination covers the thesis and related areas and completes the Plan A requirements.

For the MS Plan B, students must complete 30 credit hours of course work, including (a) a minimum of 18 credit hours of physics courses numbered 600 to 798, including PHYS 610, 650, 670, and 690; and (b) approved electives, as in Plan A. A written qualifying examination completes the Plan B requirements.

For the MS Plan C, there is no credit hour requirement but a minimum residency requirement must be satisfied. MS Plan C is intended for students who had completed equivalent course requirements at another institution. Admission to Plan C requires the approval of the physics graduate program advisory committee. A written qualifying examination and a final oral examination complete the requirements for Plan C.

Doctoral Degree

The PhD degree is essentially a research degree. Students complete an original and significant piece of research and are at the forefront of one area of physics. Students are expected to enter the academic world in a teaching and research capacity or industrial and government research laboratories as senior scientists.

Requirements

To be admitted to the PhD program, students must perform satisfactorily on a written qualifying examination followed by an advancement to candidacy oral examination. A student is allowed two attempts to pass the written qualifying examination within the student's first six semesters as a regular classified graduate student. The student's first attempt must be within the student's first four semesters as a regular classified graduate student. Students who fail twice cannot continue in the graduate program.

In addition to the courses required for the MS degree, students are responsible for the material covered in PHYS 651 and 671. A scholarly dissertation must be written, and a final oral examination in defense of the dissertation completes the requirements for the PhD.

Political Science

College of Social Sciences

Saunders Hall 640

2424 Maile Way

Honolulu, HI 96822

Tel: (808) 956-8357

Fax: (808) 956-6877

E-mail: polisci@hawaii.edu

Web: www.politicalscience.hawaii.edu

Faculty

- *J. Goldberg-Hiller, PhD (Chair)—law and politics, public policy, social theory
- *N. Soguk, PhD (Graduate Chair)—international relations, international organizations, migration, human rights, Middle East
- *I. S. Rohter, PhD (Undergraduate Chair)—political ecology, Hawai'i politics, green politics
- *B. Aquino, PhD—Southeast Asian and Philippine politics, women and politics
- *J. Byrd, PhD—indigenous politics, postcolonial theory, literatures of North American, Caribbean, Pacific peoples
- *R. Chadwick, PhD—international relations, global modeling, methodology
- *J. A. Dator, PhD—political futures, media, Asian politics
- *K. Ferguson, PhD—feminist theory, political theory, organizational theory
- *P. Flowers, PhD—Japanese politics, international law, international relations
- *M. Henningsen, PhD—political theory, European politics, genocide/Holocaust
- K. Heyer, PhD—disability studies, law and politics, comparative law
- *G. Kent, PhD—international relations, development, food and nutrition, children, pedagogy
- *S. Krishna, PhD—comparative politics, international political economy, South Asia
- *N. Milner, PhD—law and politics, public policy, conflict studies
- *L. Nitz, PhD—political economy, public policy, methodology
- J. Seo, PhD—Chinese nationalism, Korean politics, social theory
- *M. J. Shapiro, PhD—political theory, media, politics of culture
- *N. Silva, PhD—Hawaiian politics, indigenous politics
- *J. Spencer, PhD—political economy, public policy analysis, history and evaluation of antipoverty programs, racial/ethnic dynamics, Southeast Asia, research methods
- *C. M. Stephenson, PhD—international organization, security, environment, peace studies
- *J. Wilson, PhD—political philosophy, American politics
- *K. Zhou, PhD—comparative politics, Chinese politics, women and development

Cooperating Graduate Faculty

- *S. Charusheela, PhD—feminist theory, transnational and global feminism, feminist political economy, Marxist theory, social theory
- F. Farhi, PhD—Middle East politics, comparative politics
- K. O. Kane, PhD—philosophy and theory, pedagogy, film and media studies, women's studies
- M. Steger, PhD—globalization studies, political theory, theories of nonviolence

Affiliate Graduate Faculty

- *O. Lee, PhD—Chinese foreign policy, U.S.-China relations
- *C. Morrison, PhD—Southeast Asian international relations
- *S. Pooley, PhD—fishery economics

Degrees Offered: Undergraduate Certificate in Political Economy, BA (including minor) in political science, MA in political science, PhD in political science

The Academic Program

Political science (POLS) examines politics not only in government and among nations but also in private organizations, businesses, universities, families, language, and daily life.

Various methods are used to do this, ranging from the interpretive and historical to the quantitative and statistical. Political science graduates enter numerous professions: journalism, foreign service, social services, government, law, law enforcement, teaching, civil service, business, librarianship, and research. Undergraduate majors have done all of these and more. So have the department's graduate students, many of whom come from abroad and return to their home countries to become leaders in their fields. The Department of Political Science provides a sound undergraduate education that helps prepare people to think critically and constructively about the world and to be active, concerned citizens in whatever walk of life they choose. Its internship program permits undergraduates to earn academic credit while working in community or governmental institutions and processes.

At the graduate level, the department stands out in the fields of international relations, political theory, comparative studies, Asian politics, futures studies, and policy analysis. The department is an open, informal place where students, staff, and faculty alike are encouraged to participate in departmental affairs and governance. For further information, call (808) 956-8357 or write to the department.

Advising

Students may write to, or make appointments to see, either the graduate chair or the undergraduate chair, who will discuss the options available and assign students, if necessary, to a faculty member who specializes in a field of study.

Undergraduate Study

Undergraduate Certificate in Political Economy

For information about applying to this certificate program and a list of approved courses, see the undergraduate advisor in political science or in the designated department. Completion of this certificate will satisfy the Depth requirements to graduate with a Bachelor of Arts from the Colleges of Arts and Sciences.

This certificate is designed to give students a grasp of the ways in which political, economic and sociological forces interact in the shaping of public policy. The certificate includes substantial study of the central analytical approaches in political science, sociology and economics and seeks to surmount

the sometimes artificial barriers of specialization that may characterize individual disciplines.

Requirements

The requirements are designed to conform to criteria specified for undergraduate certificates for UH Mānoa and also to meet the diversification graduate requirement in the Colleges of Arts and Sciences (Option 2, Depth). The requirements for the Certificate in Political Economy are:

- 15 credit hours of five courses. Courses cannot be double-counted for the academic major.
- grade of C (not C-) or better and an overall GPA of 2.5 or better in those courses
- courses must be taken from a minimum of three different academic departments
- One course from ECON 130 or POLS 110

Interdisciplinary Certificate in Human Resources/Organizational Management

The purpose of this certificate is to prepare students intending to enter careers in human relations and management in business, non-profit agencies and public agencies. Such careers require a broad range of knowledge and skills. Understanding finances is fundamental to the life of an organization. In addition, management requires an understanding of cultural styles of communication, modes of resolving conflict, principles of psychological motivation and interpersonal influence. Public relations is also important in reaching the public and communicating with constituencies. Organizations also must operate in an environment of complex legal regulations. Courses have been approved for the certificate which provide background in these domains. A more complete description and the requirements are described under the Department of Sociology.

Interdisciplinary Certificate in Social Science and Health

The purpose of this certificate is to supplement the disciplinary major of students who wish to pursue careers in the field of health and health care by enhancing the breadth, quality and coherence of their education through taking health-related courses in a variety of different academic disciplines. A more complete description and the requirements are described under the Department of Sociology.

Bachelor's Degree

Requirements

Students must complete 27 credit hours, including:

- a prerequisite introductory course at the 100 or 200 level
- 9 credit hours from courses distributed as follows: POLS 335; either POLS 305 or 315; and either POLS 375 or 385
- POLS 390 (Political Inquiry and Analysis)
- 9 credit hours from other 300 level courses, including 3x5 courses
- 3-6 credit hours from 400 level courses

Minor

Requirements

Students must complete 15 credit hours from the 300 level or above, including one course from POLS 305, 315, 335, 375 or 385.

Students should choose one of the 100 or 200 level political science courses as part of their General Education Core in social sciences, since a 100 or 200 level course is prerequisite for 300 level courses.

Graduate Study

The department has three different graduate degree programs: master's degree Plan A, for which a master's thesis is required; master's degree Plan B, for which a culminating experience is required; and the doctor of philosophy (PhD) program. The department offers specializations in alternative futures, Asian and Pacific politics, comparative politics, international relations, political theory, and public policy.

A completed application includes a statement of purpose from the applicant, three letters of recommendation, and transcripts. A paper or some other work that indicates the applicant's writing and analytical abilities is required. Further information regarding the requirements for all three programs is available on the internet at www.politicalscience.hawaii.edu. Write to the graduate secretary for the brochure as well as application information and forms.

The application deadline is **February 1** for admission in the fall semester. No spring semester admissions are taken.

Graduates in political science have entered careers in teaching, research, and service in non-governmental organizations and various levels of government.

Master's Degree

The department offers MA Plan A (thesis) and Plan B (culminating experience) degrees that can be tailored to a student's interests and needs. The MA program invites applicants who are prepared to think critically and constructively about political phenomena. All MA students are required to take three of the following courses regardless of program (Plan A or Plan B): POLS 610, 620, 630, 640, 650, 660, 670, and 680.

Doctoral Degree

The department's PhD program encourages students to pursue specialized interests as well as to broaden their understanding of political phenomena. The department looks for students who are prepared to construct a successful course of study based on their individual interests, in conjunction with appropriate advising and course work. We encourage applicants who approach political questions in a critical and creative manner and who combine work from different specializations and disciplines to pursue their own particular projects.

Honors and Awards

Undergraduate

Thomas Hamilton Memorial Scholarship—\$150 for a student with outstanding scholarship and all-around performance who has completed at least two courses in political theory.

Philip E. Jacob Award—\$500 for the outstanding graduating senior in political science.

Carl Knobloch Prize Fund—\$100 for a student with an excellent academic record who also has an outstanding record of community and/or UH service.

Richard Kosaki Student Assistance Fund—\$250, first prize; \$150, second prize; \$100, third prize, for excellence in research, based on papers written as part of political science course work.

Graduate

Norman Meller Award—\$1,500 for fall semester to a graduate student with an outstanding academic record.

Werner Levi Award—\$1,500 for spring semester to a graduate student for meritorious academic achievement.

Harry J. Friedman Memorial Scholarship—\$250 for outstanding work in comparative politics.

Population Studies

College of Social Sciences
Saunders Hall 716
2424 Maile Way
Honolulu, HI 96822
Tel: (808) 944-7433
Fax: (808) 944-6870
E-mail: popstudy@hawaii.edu
Web: www.populationstudies.hawaii.edu

Graduate Faculty

A. Mason, PhD (director)—economics
A. Dellis, PhD—economics
C.M. Douglas, PhD—urban and regional planning
N. Etkin, PhD—anthropology
T. Halliday, PhD—economics
S. J. La Croix, PhD—economics
H. R. Lee, PhD—speech
S. H. Lee, PhD—economics
Y. J. Lee, PhD—sociology
J. Maddock, PhD—public health sciences and epidemiology
S. Millman—sociology
G. Russo, PhD—economics
C. Stephenson, PhD—political sciences

Affiliate Graduate Faculty

T. Brown, PhD—population studies
J. Chen, PhD—population studies

L. J. Cho, PhD—sociology and economics
A. Onaka, PhD—population studies
R. Retherford, PhD—sociology
P. Xenos, PhD—sociology

Certificate Offered: Graduate Certificate in Population Studies

The Academic Program

The graduate program addresses the relationships between population processes—fertility, mortality, migration, population growth, and aging—and social, political, environmental, and economic change in the contemporary world. The subject matter is addressed from a multi-disciplinary perspective with an emphasis on policy-oriented study and research. Given the location of the UH Mānoa and the expertise of its faculty, the graduate program emphasizes policies and issues of contemporary importance in the Asia-Pacific region.

The program's curriculum draws on the strengths of its interdisciplinary faculty who are drawn from sociology, economics, public health, geography, anthropology, political science, urban planning, and communication. Their current research and teaching interests include, among others, high-risk behavior among youth, change in marriage and the family, reproductive health, health policy, the emergence of HIV/AIDS and other infectious disease, the implications of aging and slowing population growth, and migration and urbanization.

Certificate in Population Studies

Requirements

The interdisciplinary graduate Certificate in Population Studies consists of 16 credits of course work, earned with a grade of more than B- in any course, and a capstone project. Specific requirements are:

- A core of three courses (7 credits), Faculty Seminar Series (PPST 649), Introduction to Human Population (PPST 650), and Methods of Demographic Analysis (PPST 691).
- Three courses (9 credits) numbered 600 or above selected from any of the thematic clusters in population (demographic methods; health and development, population and the environment; population and economics; aging; social mobility and spatial dynamics; marriage, family, and fertility). On petition, the program director may accept 600-level courses or above that are not listed within any of the five thematic clusters but have significant population content. On petition, the program director may also accept up to 3 credits of 400 level course. Courses taken for credit may be applied to both a graduate degree and the interdisciplinary certificate. Students may choose to enroll for Directed Reading and Research (PPST 699) when undertaking their capstone project. Up to 3 credits of PPST 699 can be applied to the 9-credit requirement
- A capstone project. Either a research paper of publishable quality on a population topic, a grant proposal with the student as principal author, or other capstone project with the prior written approval of the director of the program. At the end of their project, students must present their results in a seminar. It is the responsibility of the student to identify an appropriate faculty member. The Program Director

appoints the faculty advisor in consultation with the student and the proposed faculty advisor. The capstone project will be evaluated by a three-member assessment committee consisting of the faculty advisor and two additional faculty members.

Each year, the program director appoints a committee of three faculty members to both administer the comprehensive examination and assess completed research papers. Four of six questions must be answered in the comprehensive examination, which will be written and followed by an oral discussion. It will be broad in scope and assume basic knowledge of the concepts, substance, and techniques of population. Questions will be concerned with the integration of material, plausible argument, and reflective statement. Research papers must be of publishable quality, and a student choosing this option will have a faculty advisor who is not a member of the assessment committee.

Thematic Clusters in Population Studies

Population Studies consists of a core of basic information and themes or key issues in population inquiry: marriage, family and fertility; health and development; aging; social mobility and spatial dynamics; population and environment; population and economics; and demographic methods. Each of these is conceived as an overlapping circle to emphasize the exchange of information and ideas about human populations, based on courses and seminars drawn from population studies, the social sciences, and the health sciences. Seven themes are emphasized:

Marriage, Family and Fertility The institutions of marriage, the family and the household are crucial in demographic processes and are at the center of broader social and economic change as well. This module examines these key institutions from economic, sociological and other perspectives, with particular attention to their roles in shaping demographic systems. Families and households allocate resources among its members and across time. In so doing, they influence the level and distribution of mortality and morbidity, education, and other components of well-being. The family is central to reproduction and the replacement of populations. The module considers factors underlying levels of reproduction in technologically less-developed societies and societies with modern demographic regimes, and examines the place of these institutions in recognized variations in long-term transitions from one to the other. These institutions are also central to the recent trend in many societies toward very low fertility. The same institutions are important to our understanding of migration patterns. Attention is given to ways that families and households influence the residential changes of individuals.

Health and Development focuses on trends in morbidity and mortality and their relationship to political, social and economic change. The module emphasizes behavioral determinants of health, the effects of income and education, gender and race, and health policy. In addition, it addresses the effects of illness on individual outcomes, e.g., educational attainment and earnings, and on aggregate development, e.g., urbanization and growth on GDP. An important topic is the emergence of HIV/AIDS and other infectious diseases, the possible course of epidemics, and their development

ramifications. Various policy prescriptions are considered including improving health care delivery systems, implementing vaccination campaigns, improving education and transferring cash to the poor. Close attention is paid to the importance of reproductive health in lowering fertility and infant mortality rates as well as in thwarting the spread of sexually-transmitted diseases. The module also emphasizes the important role that women play in improving health in the developing world. A final emphasis of the module is the disparities in health outcomes: across rich and poor individuals, across the developed and developing world, as well as across races and genders.

Aging addresses the processes of individual aging and population aging. The first of the two foci considers the evolution of health, employment, earnings and assets, living arrangements, and other individual characteristics that vary with age. Close attention is paid to the inter-relationships among these characteristics, differences in these processes both across countries and across demographic groups within countries, and the implications of public policy, e.g., retirement and pension policy. The second of the module's two foci discusses how societies are affected by and cope with an aging population. It discusses how societies look after the financial and personal well-being of their retired and disabled constituents as well as how societies provide medical care to their citizens as their health atrophies. A particular emphasis is on the systems of support, both public and private, that provide housing, consumption and medical care for the elderly and disabled and how systems vary across the developed and developing worlds.

Social Mobility and Spatial Dynamics focuses on the spatial dynamics of societies with particular attention to issues of internal and international migration and the size and other characteristics of places from the village community to the mega-urban region. Population movement within and between countries consists of a variety of forms of mobility associated with physical resource endowments, historical social and economic development, demographic systems, and public policy. The literatures of demography and other social sciences also consider the characteristics of migrants and migrant streams.

Population and Environment considers the relationship between population and the natural environment. Major themes include the debate over 'sustainable development' and the impact of population growth on land use, marine resources, air quality, water, and climate in both rural and urban environments. The effect of environmental change on population variables is also an important issue. The health effects of environmental degradation and the impact of the environment on migration are of particular interest.

Population and Economics addresses the connections between population change and the economy at both the aggregate and individual level. What are the implications for slowing population growth and changing age structure for economic growth, poverty, and other macroeconomic variables? How are marriage, childbearing, living arrangements, and other demographic behaviors responding to and influencing economic circumstances? How are labor force decisions by

women, retirement behavior, and other employment decisions influenced by demographic factors?

Demographic Methods provides additional training in the concepts and techniques of demographic analysis. Courses cover (1) methods of collecting valid and reliable information about population, such as survey design and sampling method, and (2) methods of analyzing data which are available in the field of demography, such as survival analysis, multi-stage/multi-regional demography, and other state-of-the-art statistical techniques for data analysis.

Psychology

College of Social Sciences

Gartley 110

2430 Campus Road

Honolulu, HI 96822

Tel: (808) 956-8414

Fax: (808) 956-4700

E-mail: psych@hawaii.edu

Web: www.psychology.hawaii.edu

Faculty

- *S. N. Haynes, PhD (Chair)—clinical, medical, psychopathology, assessment
- *D. B. Altschul, PhD—culture and delivery, outcome effectiveness
- *R. J. Blanchard, PhD—behavioral neuroscience, aggression, emotion, fear and anxiety
- *B. F. Chorpita, PhD—clinical childhood anxiety disorders
- *E. P. Chronicle, PhD—cognitive, human problem solving, pathophysiology of migraine, transcranial magnetic stimulation
- K. H. J. Claypoole, PhD—adult mental illness
- *P. A. Couvillon, PhD—behavioral neuroscience, animal learning
- *R. A. Dubanoski, PhD—developmental, environmental toxins/sensitivities (on leave—Dean of College of Social Sciences)
- *E. H. Hatfield, PhD—social, emotions, social-psychophysiology
- *K. Hayashi, PhD—quantitative psychology and psychometrics
- *E. M. Heiby, PhD—clinical depression, compliance assessment, integrated behavioral theory
- *L. M. Herman, PhD—animal behavior/cognition; whales, dolphins
- *L. A. James, PhD—social-personality, library skills, psycholinguistics
- *V. A. Kameoka, PhD—culture and mental health, quantitative methods and measurements, research
- J. Latner, PhD—understanding and treatment of obesity and eating disorders
- *D. L. Lieberman, PhD—social psychology, evolutionary psychology, information-processing mechanisms, close genetic relatives, developmental
- *A. E. Maynard, PhD—developmental, siblings and socialization
- *K. A. Minke, PhD—human learning, paradigmatic behaviorism, statistics and methodology
- *C. W. Mueller, PhD—child clinical, social, HIV, and health
- *C. R. O'Donnell, PhD—community, crime, social ecology
- *J. E. Schiffman, PhD—child clinical, correlates of schizophrenia spectrum disorder
- *S. I. Shapiro, PhD—psychology of knowledge and wisdom, Asian psychology, transpersonal psychology

*C. H. Sophian, PhD—developmental, cognitive development in children

*J. J. Steffen, PhD—psychosocial disorders, severe behavioral disorders

*L. K. Takahashi, PhD—behavioral neuroscience

*K. M. Vitousek, PhD—clinical, cognitive behavioral approaches, eating disorders, caloric restriction for longevity

*Y. Xu, PhD—children's social development and culture

Cooperating Graduate Faculty

D. Bhawuk, PhD—culture and community

R. W. Brislin, PhD—social-personality

A. Crisanti, PhD—clinical

B. D. DeBaryshe, PhD—social development, parent-child relations, stress and resilience

P. W. Dowrick, PhD—video research

C. C. Gotay, PhD—gerontology, cancer research

M. T. Hanson—social cognition

E. S. Hishinuma—health, cross-cultural

M. L. Martini, PhD—developmental

J. R. Mobley, PhD—animal cognition

P. E. Nachtigall, PhD—marine mammal behavior

K. A. Tokuno, PhD—developmental, teaching, learning, and cognition

A. M. Wyllie, PhD—clinical

Affiliate Graduate Faculty

J. S. Annon, PhD—clinical

H. S. Bracha, MD—stress, neuropsychiatry

E. Kubany, PhD—clinical

A. Pack, PhD—marine mammal behavior

C. W. Stephan, PhD—social psychology

W. G. Stephan, PhD—social psychology

W. T. Tsushima, PhD—neuropsychology

Degrees and Certificate Offered: BA in psychology, MA in psychology, PhD in psychology, Certificate in Clinical Psychology (Respecialization)

The Academic Program

Psychology (PSY) can be defined as the science of mind and behavior. Some psychology majors are preparing to enter graduate school, where they will be trained to become professional psychologists and scholars. Others use psychology as a pre-professional major for other fields, such as law or medicine. The majority of psychology majors, however, are using psychology as a general interdisciplinary arts major. Psychology is qualified as a discipline for this purpose. An understanding of the spectrum of psychological knowledge, methods, and concepts facilitates and enhances productivity in virtually every area of human endeavor. This understanding also promotes interpersonal skills and sensitivities, as well as critical thinking skills. Collectively, these understandings foster a respect for others, which is a core element of the curriculum of the psychology department.

UH Mānoa is fortunate in having a psychology department composed of an unusually large number of internationally recognized figures in the field. Not only do students get to learn from these scholars in the classroom, but many receive direct training in cutting-edge research and the application of psychological knowledge. Areas of concentration include

behavioral neuroscience; clinical studies (APA accredited); community and cultural psychology; developmental psychology; experimental psychopathology; social-personality; and cognition.

Undergraduate Study

Bachelor's Degree

Requirements

Students must complete 36 credit hours, including:

- 15 credits at the upper division level (300 level and above)
- One course in statistics (PSY 210 or SOCS 225)
- One course in methodology (PSY 212)
- One course from three of these four sets:
 - Experimental (PSY X2X courses), e.g., PSY 220, 322, 324
 - Psychobiology (PSY X3X courses), e.g., PSY 230, 331, 332
 - Developmental (PSY X4X courses), e.g., PSY 240, 341, 342
 - Social or Personality (PSY X5X or PSY X6X courses), e.g., PSY 250, 260, 352
- 3 credit hours in the advanced seminar series (PSY 4X9, many 4X9 courses are designated as Writing Intensive), excluding PSY 499)

A minimum GPA of 2.5 in psychology and related requirements (e.g. SOCS 225) must be maintained for graduation. PSY 100 is prerequisite to all other courses except PSY 170 and may be counted toward the major or the diversification social sciences (DS) core requirement, but not both. No more than a combined total of 15 credits of practicum (PSY 407), teaching (PSY 408), and directed research (PSY 499) may be counted for the major; no more than 9 credit hours in PSY 499 may be counted. Only 3 credit hours in PSY 499 can be used to fulfill the requirement of 15 credit hours at the upper division level. Nevertheless, students intending to do graduate work are encouraged to enroll in PSY 499 and in PSY 408 or 478.

New majors should seek assistance from the Undergraduate Advising Office in Gartley 14 (psychadv@hawaii.edu) or consult with Lorey K. Takahashi, Chair of Undergraduate Studies (LKT@hawaii.edu), as soon as possible for advising. Transfer students must earn at least 15 psychology credit hours at the UH Mānoa campus. Additional information can be found at www.psychology.hawaii.edu.

Graduate Study

The graduate program in psychology is designed to provide students with a strong background in theory, research methodology, and psychological issues. Currently, there are 7 concentrations in which students can receive specialized training: behavioral neuroscience; clinical studies; community and cultural psychology; developmental psychology; experimental psychopathology; social-personality; and cognition. Specific details concerning each of the concentrations, their requirements, and faculty research

interests may be obtained in one of four ways: (a) by writing to the Department of Psychology, University of Hawai'i, 2430 Campus Road, Honolulu, HI 96822; (b) by faxing your request to (808) 956-4700; (c) by sending an e-mail communication to Edward P. Chronicle, Chair of Graduate Studies (chronicl@hawaii.edu); or (d) by accessing the department's website at www.psychology.hawaii.edu.

Applications are considered only for the fall semester. Applicants should normally possess a bachelor's degree, have a minimum of 24 credit hours of undergraduate work in psychology (including courses in basic psychology such as research methodology, statistics, and learning, abnormal, social, developmental, personality, cognition, and physiological psychology), a cumulative grade point average of at least 3.0, strong letters of recommendation from professors, competitive general GRE scores (past applicants admitted as graduate students in the department tend to score at or above the 600 level on the various sub-domains of the GRE), and preferably one to two years of research experience.

One can apply online at apply.hawaii.edu/ or obtain materials relevant to the application process at www.hawaii.edu/graduate/download/list.htm. Completed applications must be received by the Graduate Division no later than **January 1** each year, with the exception of GRE scores (which can arrive during the month of January).

Master's Degree

The master's degree program includes a thesis and at least 30 credit hours of courses specified by the department and specific area of concentration. Detailed descriptions of specific requirements for each area of concentration are contained in the department webpage. The department does not offer a terminal master's degree program in psychology. Only students interested in pursuing a PhD degree are considered for admission. Students with a BA degree are admitted to the master's program and, upon successful completion, petition for entry into the doctoral program.

Doctoral Degree

Students must complete their master's degree (from UH or another accredited institution of higher learning) prior to entering the doctoral program in psychology at UH. Specific course work and other relevant departmental and concentration specific classes are required for the doctoral degree. Students must pass comprehensive examinations before proceeding to the dissertation.

Certificate Program in Clinical Psychology (Respecialization)

The Clinical Studies Respecialization Program provides clinical training for individuals holding a PhD in a basic area of psychology from a regionally accredited university (or foreign equivalent). Individuals who are already licensed in psychology or who hold an applied degree (e.g., EdD, PsyD) are not appropriate for this program. Upon satisfactory completion of core clinical courses, practica, and internship, the Respecialization student receives a certificate from the UH Graduate Division and is competitive for clinical research and teaching positions as well as eligible to sit for licensure in

most states. The Clinical Studies Program is APA-approved and follows a scientist-practitioner, broadly-behavioral, dual specialty approach to training in which it is encouraged of all graduate and respecialization students to integrate the literatures of a basic area of psychology with related clinical phenomena.

Clinical Training

Respecialization students are enrolled in practicum courses in their first year whenever possible. Students receive training offered at a variety of settings in Honolulu such as the state hospital, mental health centers, schools, hospitals and medical centers, a veterans outpatient clinic, the Department of Corrections, the Department of Health, and mental health clinics. Each student will be affiliated with a clinical training center for 10-20 hours per week for at least two academic years, although extensive summer training is sometimes possible. These centers provide experiences with a variety of populations and behavior problems such as children, families, veterans, outpatient and inpatient adults, substance abuse, eating disorders, medical/psychological disorders (e.g., pain, headaches, hypertension, smoking), school behavior problems, depression, and marital and family distress.

Requirements

The required clinical core courses are as follows and typically require two years of on-campus training in the conceptual, practical, and empirical bases of clinical psychology:

- PSY 670 Introduction to Clinical Psychology
- PSY 671 Introduction to Assessment I
- PSY 672 Introduction to Assessment II
- PSY 674 Child Psychopathology
- PSY 675 Treatment Research
- PSY 677 Child Practicum and/or 678 Adult Practicum (total of four semesters)
- PSY 773 Seminar in Psychopathology
- PSY 774 Seminar in Clinical Psychology

In addition, the Respecialization student is required to complete a 2000-hour APA-approved internship in clinical psychology. The number of APA-approved internships in Hawai'i is extremely limited and individuals should be prepared to go elsewhere for this aspect of training.

Admission Procedures

Admission to the Clinical Studies Respecialization Program is competitive. An application form may be obtained online at www.hawaii.edu/graduate or by writing the Graduate Division, Spalding Hall 353, 2540 Maile Way, Honolulu, HI 96822. Individuals should apply as a Special Nondegree Student.

Public Administration

College of Social Sciences
Saunders Hall 631
2424 Maile Way
Honolulu, HI 96822
Tel: (808) 956-8260/(808) 956-3687
Fax: (808) 956-9571
Web: www.puba.hawaii.edu

Faculty

- *R. Pratt, PhD (Director)—political science
- *J. Ady, PhD—communication studies
- *C. Grandy, PhD—economics
- *M. Kumaran, PhD—urban and public affairs

Cooperating Graduate Faculty

- T. Brislin—Academy for Creative Media
- J. Dator—Department of Political Science
- D. Foley—Urban and Regional Planning
- A. Singh, PhD—construction management

Adjunct Faculty

- J. Guben, JD
- P. Martin, JD
- V. Johnston, PhD—political science

Degree and Certificate Offered: MPA, Graduate Certificate in Public Administration

The Academic Program

The Public Administration Program (PUBA) builds leadership in public service in Hawai'i and the Asia-Pacific region. Located in the College of Social Sciences, it offers a 30-credit master's degree and a 15-credit certificate. The program's format emphasizes interdisciplinary learning, collaborative teaching, and the development of close relationships among participants. It creates an environment in which many of the complex issues facing those with public responsibilities are addressed while also giving participants specific skills useful to their work.

Financial support for the degree and the certificate is available through the Herman S. Doi Fellowship and the Pacific Island Health Administration Scholarship. For further information, contact the program office in Saunders Hall 631 or call (808) 956-8260 or (808) 956-3687. Applicants may also apply to the East-West Center.

Graduate Study

Master's Degree

The master's degree consists of a core year, an individuated concentration, a practicum experience, and a capstone. The core year and capstone must be taken first and last in the program, respectively. Once the Program begins in the fall, new admissions are not made until the following year.

The core year is an integrated, collaboratively taught curriculum offered in a format that balances lecture and discussion sessions. The curriculum is highly interdisciplinary and integrates a series of perspectives and skills important to effective work in public service. These include communications, the political context of public institutions, economic processes, public ethics, budget and policy processes, administrative law, bureaucratic structure and organizational change, and the role of personal and organizational culture.

The individuated concentration is intended to balance the common work of the core year. It allows each student to design a program of study built around a theme of special personal and professional interest. The concentration is satisfied by completion of 9 credit hours in course work, directed reading, or directed research. Themes are created by the student working in conjunction with a faculty advisor. Anyone electing the thesis (Plan A) option may substitute thesis work for concentration credits with approval of the faculty advisor.

The practicum is designed to place individuals in a setting where they may compare organizational structure and processes, study leadership styles, understand community dynamics, gain an international perspective, or develop specific skills. The location of the practicum varies according to the student's learning goals. In some cases placement in one organization may be modified to become work on a project that takes place across several organizations. Students are encouraged to undertake a practicum that will have the greatest personal and professional benefits.

The capstone consists of a 1-credit planning seminar, taken during the semester preceding that in which graduation will occur, and the concluding 3-credit seminar itself. The focus of the capstone is on group analysis of a public issue of importance in Hawai'i and the Asia-Pacific region.

The Program welcomes a diversity of professional and educational backgrounds and sees these as contributing to the learning environment. The course work is compatible with the schedules of people working full-time.

Requirements

MPA candidates must complete 14 credit hours of core requirements, 9 credit hours of individual concentration, 3 credit hours of practicum, and 4 credit hours of capstone. The student must earn at least a grade of "B" in the practicum and both capstone courses. The thesis option may be selected to replace some or all of the concentration credits.

Other

Up to nine credits of the MPA degree can be counted toward graduate certificates in related fields. Call the program for additional information.

Certificate in Public Administration

The certificate is designed for people with experience in public service work, or who may not wish to obtain a degree.

Those enrolled in the certificate program participate in the core year, at the end of which they create a professional development seminar series. The seminar allows a deeper focus on issues of special interest. There is also the option of arranging a practicum as an additional learning experience.

Requirements

The program is composed of 15 credit hours, 14 of which are taken in the core year and 1 in the professional development seminar series.

Religion

College of Arts and Humanities

Sakamaki A-311

2530 Dole Street

Honolulu, HI 96822

Tel: (808) 956-8299

Fax: (808) 956-9894

Web: www.hawaii.edu/religion/

Faculty

*H. J. Baroni, PhD (Chair)—Japanese and East Asian religions

*P. Andersen, PhD—Taoism, Chinese Religions

*J. P. Charlot, DTh—Polynesian/Hawaiian religions

*S. C. Crawford, ThD—Asian and Christian ethics, religion and medicine

*A. Crislip, PhD—Ancient Christianity, New Testament, Judaism

*R. Lamb, PhD—South Asian religions, Asian Monasticism

*L. A. Siegel, PhD—Indian religions

*G. Tanabe, PhD—Buddhism, Japanese religions

Cooperating Graduate Faculty

G. D. Panisnick, PhD—Western religions

Degrees and Certificate Offered: BA (including minor) in religion, MA in religion, Graduate Certificate in Religion

The Academic Program

In keeping with the goals of UH Mānoa, the Department of Religion takes advantage of the state's strong social and cultural ties with Asia and the Pacific and seeks to enhance those ties. Within this extraordinary multicultural milieu, the Department of Religion serves as a link between the academic community and the many Asian and Pacific religious communities that flourish in Hawai'i. Most of the major religious traditions—Buddhism, Christianity, Confucianism, Hinduism, Islam, Judaism, Shinto, Taoism, as well as Hawaiian and Polynesian religions—are represented and make Hawai'i an ideal site and context for a study of Asian and Pacific religious communities and activities.

The Department of Religion is dedicated to the cultivation of a humanistic understanding of a wide range of religious traditions, ritual practices, philosophical speculations, ethical imperatives, and institutional histories. Its investigative approach is interdisciplinary and intercultural.

Undergraduate Study

Bachelor's Degree

Undergraduate education in religion includes survey courses in Western, Asian, and Pacific religions. There are also thematic

courses dealing with such issues as sexuality and death, politics and ethics, and the relationship between religion and other disciplines, such as anthropology, medicine, political science and sociology.

Requirements

Students must complete 27 credit hours at the 200 level and above, including at least 9 credit hours in 300- and 400-level courses. Required course: REL 300.

Minor

Requirements

Students must complete 15 credit hours at the 300 level and above. Required course: REL 300.

Graduate Study

Master's Degree

The department has developed two graduate program plans leading to the MA degree: a thesis-based MA program (Plan A) and a non-thesis track (Plan B). Both Plans A and B are two-year programs. A one-year graduate certificate program is also available for those who wish to pursue graduate religious studies but do not wish to complete a degree program.

Admission Requirements

Applicants to the MA program in religion must hold a bachelor's degree from an accredited U.S. college, university, or its equivalent from a recognized foreign institution of higher learning. Applicants should include in the Statement of Objectives an explanation of how their academic background has prepared them for study in the religion MA program.

Plan A

The thesis program provides students with an opportunity for graduate study in Asian or Polynesian religions. 30 credits are required.

Master's Plan A Student Progress Forms

Form I—Advancement to Candidacy: A report based on a preliminary conference with the graduate chair during the first or second semester, listing an advisor, and completion of the foreign language requirement. Candidacy may be granted after the first semester after completing 9 graduate credits plus REL 600 with a GPA of 3.0 or better (total 12 credits).

Form II—Advancement to Thesis Stage: The thesis committee should consist of the committee chair and two other members, one of whom must be from another department. The thesis committee approves thesis topic prior to student registering for Thesis 700 for the next academic semester.

Form III—Final Examination and Approval of Thesis: The thesis committee reports the satisfactory completion of the oral examination. After all revisions, as determined by the thesis committee, have been incorporated and the thesis is in final form, the majority of the committee, including the chairperson, passes the student for the master's degree.

Progress Forms I and II must be completed and submitted to Graduate Division before students can register for REL 700.

Required courses (9 credits)

- REL 600 History and Theory of the Study of Religion (3)
- REL 700 Thesis Research (3, 3)

Area requirements (9 credits minimum)

Students must take at least three 600-level courses in their area of specialization (Asian or Polynesian).

Electives

Electives consist of any Religion course (400 level and above), other than those that fulfill program and area requirements. Two complementary graduate courses (3 credits each) from other disciplines may be accepted at the discretion of the thesis advisor and graduate chair. No more than two 400-level courses may be used to satisfy this requirement.

Language

To achieve a mastery of language at the second-year level, students are required to complete two years of a language appropriate to their field of specialization (e.g., Sanskrit, Hindi, Chinese, Japanese, Hawaiian, Samoan, Tahitian, or another Asian or Polynesian language approved by the area advisor) with a minimum B-minus grade in the fourth semester of class.

This language requirement will be waived for students demonstrating language proficiency by an equivalency exam. These exams will be set by the student's thesis advisor and assessed by two faculty readers (one from the Religion Department and one from the department in which the language is taught).

Language courses will not count towards the 30 credits required for an MA in religion.

Thesis (REL 700)

A maximum of 3 credits per semester for a total of 6 credits of REL 700 over two semesters is required. Students must be admitted to candidacy (see PF I) and must complete 12 credits before they can register for REL 700.

Completion of an original thesis, demonstrating a mastery of advanced research, analytic, and discursive skills, is required of all students in Plan A.

Each candidate must form a committee of three members of the Graduate Faculty, one of whom is from outside the department. Faculty reserve the right not to serve on a thesis committee.

After submission of a completed thesis to the committee for its consideration, the candidate must be present for the final oral examination on the subject of the thesis. A candidate who fails may be re-examined once, provided it is done within one calendar year of the initial examination.

After a candidate has taken 6 credits of 700, the candidate must register for 1 credit of 700 in subsequent semesters and in the semester of graduation.

One bound copy of the approved thesis, including the signature page, shall go on file in the department office and must be submitted to the department office at the same time the final thesis is deposited with the Graduate Division office.

Plan B

Non-thesis degree program provides students with an opportunity for graduate study in Asian or Polynesian religions. 30 credits are required.

Master's Plan B Procedures

1. Preliminary conference with the graduate chair for the purpose of determining an advisor, proposed courses to fulfill the requirements, and the foreign language for the degree.
2. Candidacy for Plan B students requires a memo from the graduate chair indicating that all deficiencies have been removed and that 12 credits have been taken with a 3.0 GPA or better.
3. A portfolio with three research papers with a minimum of B grades from Religion 600 level courses is to be submitted to the graduate chair. One of these papers will be presented at a public forum during the student's final semester. The portfolio must be submitted to the graduate chair prior to the deadline for the Plan B final exam date.

Required courses (3 credits). REL 600 History and Theory of the Study of Religion (3)

Area requirements (9 credits). Students must take at least three 600 level courses in Asian or Polynesian religions.

Electives (18 credits). Twelve credits must be earned in 600 level courses. The remaining credits may include religion 400 level and above courses. Two complementary graduate courses from other disciplines may be accepted at the discretion of the graduate chair and the student's advisor.

Language. To achieve mastery of a language at the second-year level, students are required to complete two years of a language appropriate to their area of specialization (e.g., Sanskrit, Hindi, Chinese, Japanese, Hawaiian, Samoan, Tahitian, or another Asian or Polynesian language approved by the area advisor) with a minimum B-minus grade in the fourth semester of class.

This language requirement will be waived for students demonstrating language proficiency by an equivalency exam. These exams will be set by the student's thesis advisor and assessed by two faculty readers (one from the religion department and one from the department in which the language is taught).

Language courses will not count toward the 30 credits required for an MA in religion.

Certificate in Religion

Application requirements are the same as those for the MA degree program. This is a two-semester non-degree certificate program for students who want to pursue graduate study in religion but do not need or want a master's degree. Students who have completed the certificate are ineligible for admission to the master's program.

Fifteen (15) graduate credits are required of which a maximum of 6 credits may be in the 400-level courses.

Requirements (3 credits):

- REL 600 History and Theory of the Study of Religion (3)

Electives (9 credits per option):

- Option 1: World Religions—one graduate-level course in each area:
 - East Asia: 661B, 661C, 661D
 - South Asia: 662B, 662D
 - Polynesia: 663B, 663C

- Option 2: Area—three graduate level courses in one area:
 - Asia: 661B, 661C, 661D, 662B, 662D
 - Polynesia (repeatable courses): 663B, 663C

Russian Studies

College of Languages, Linguistics and Literature

Moore 458

1890 East-West Road

Honolulu, HI 96822

Tel: (808) 956-4167

Certificate Offered: Undergraduate Certificate in Russian Area Studies

To receive a Certificate in Russian Area Studies, a student must complete certain requirements in addition to a regular major. These are advanced reading and conversation courses in Russian, equivalent to at least the third-year level, and 9 credit hours of work, exclusive of courses taken as part of the major, chosen from an approved list of courses. For more information, contact Professor James E. Brown, Department of Languages and Literatures of Europe and the Americas, 458 Moore Hall, (808) 956-4167.

Second Language Acquisition

College of Languages, Linguistics and Literature

Department of Second Language Studies

Moore 570

1890 East-West Road

Honolulu, HI 96822

Tel: (808) 956-8610

Fax: (808) 956-2802

Web: www.hawaii.edu/sls

Faculty

- *C. Chaudron, PhD (Chair)—psycholinguistics, discourse analysis, second language reading and writing, classroom research, and research methods
- *D. Ashworth, PhD—Japanese, second language acquisition and pedagogy, dialectology and sociolinguistics
- *F. Bail, PhD—human learning and development, instructional formats
- *A. Bayer, PhD—language and literacy in education
- *J. Bilmes, PhD—discourse analysis, Thai sociolinguistics and pragmatics, conversational analysis
- *R. Bley-Vroman, PhD—second language analysis, interlanguage syntax, formal models of second language acquisition
- *J. D. Brown, PhD—second language testing, research methods, curriculum design
- *H. Cook, PhD—Japanese sociolinguistics, discourse analysis, language socialization and pragmatics
- *G. Crookes, PhD—classroom teaching, classroom-centered research, materials and syllabus design, discourse analysis, methodology of science

- *K. Davis, PhD—qualitative research, language policy and planning, literacy, bilingual education
- *R. Day, PhD—second language pedagogy, learning and use, classroom research, discourse analysis, teacher training, pedagogical grammar
- *M. Forman, PhD—ethnographic linguistics, Philippine studies
- *T. Hudson, PhD—language testing, reading, methods and materials, ESP, research methods
- *K. Kanno, PhD—Japanese second language acquisition, pedagogical grammar, language analysis
- *G. Kasper, PhD—second language curriculum, discourse analysis, interlanguage pragmatics, qualitative second language research methods
- *Y. C. Li, PhD—Chinese syntax and semantics, second language learning and testing
- *J. Norris, PhD—instructed SL acquisition, SL pedagogy and task-based teaching, language program evaluation, language assessment, testing, measurement, research methods, research synthesis and meta-analysis
- *W. O'Grady, PhD—syntax, language acquisition, Korean
- *L. Ortega, PhD—SL acquisition, SL writing, foreign language education, research methods
- *A. Peters, PhD—child first- and second-language acquisition, language socialization, biological foundations of language
- *T. Ramos, PhD—Philippine linguistics, second language learning and teaching, child language acquisition, multilingualism, sociolinguistics
- *K. Reh, PhD—phonology, bilingual education, Micronesian linguistics
- *R. Schmidt, PhD—second language learning, sociolinguistics and ESL, second language phonology, Arabic, Portuguese
- *B. Schwartz, PhD—linguistic theory and SL acquisition and analysis, Universal Grammar, child second language acquisition
- *K. Wolfe-Quintero, PhD—interlanguage analysis, writing pedagogy
- *S. Zhang, PhD—research methodology, design and statistics, computer applications, Chinese-English translation and interpretation

Degree Offered: PhD in second language acquisition

Academic Program

The PhD program in second language acquisition (SLA) is administered by the Department of Second Language Studies. The graduate faculty of the program is interdisciplinary—drawn not only from the SLS department but also from faculty in the Departments of East Asian Languages and Literatures, Educational Psychology, Hawaiian and Indo-Pacific Languages and Literatures, and Linguistics. The SLA PhD is a WICHE approved program. UH Mānoa also offers an MA in ESL (see the “Second Language Studies” section within the Colleges of Arts and Sciences for more information).

The courses in the program are organized into four areas of specialization:

1. Second Language Analysis—Structural analysis of learners' language development; comparison of native and nonnative languages; second-language varieties; differences arising from social and geographical contexts; phonological, grammatical, and discoursal properties; typological factors; putative universals.
2. Second Language Learning—Studies of the biological, psychological, social, and cultural factors in the language-learning process; the role of universals; interlanguages; the processes of comprehension and production.
3. Second Language Use—Studies of the social functions of second and foreign languages; pidgins, creoles, and dialect variation; roles of social and geographical contexts; pragmatics; discourse analysis; cross-cultural and inter-ethnic communication; sociopolitical factors.
4. Second Language Pedagogy—Research into language-learner needs (including immigrant needs); formulation of needs-based curriculum objectives and syllabi; computer-aided instruction; program administration; evaluation and language assessment.

Graduate Study

Doctoral Degree

The basic requirement for admission into the PhD program is the completion of an MA in ESL, applied linguistics, or second- or foreign-language education. Applicants with graduate degrees in such related disciplines as anthropology, education, English, modern languages, linguistics, and psychology are also welcome. In addition to the admission requirements of the Graduate Division, the SLA PhD program requires (a) letters of recommendation (three of which should be from academic sources); (b) copies of an MA thesis, publications, or other research; (c) a statement of research interests; (d) a brief description of relevant professional experience and language skills; and (e) GRE General Test scores (for both native and nonnative speakers of English). Applicants whose native language is not English must score at least 600 (620 preferred) on the Test of English as a Foreign Language (TOEFL).

Students are normally admitted for the fall semester, but spring admission is possible in special cases. Candidates are encouraged to apply early. There are various sources of financial aid. The program strives to provide financial support for the best qualified doctoral students throughout their course of studies by means of research and teaching assistantships. Write to the Graduate Chair of the SLS department for additional information.

Requirements

Students work closely with their advisors and doctoral committees in defining their individualized programs. In order to establish a common core of expertise among students, specific courses are designated according to the background of each student. The basic preparation expected as part of their MA training is at least one graduate-level course in each of the four areas of specialization comparable to the courses indicated as such below. Beyond basic preparation, each doctoral student's program must include a minimum of two graduate-level courses in each of three of the subfields of specialization and a minimum of two graduate-level courses in research methods. At least two courses must be at the 700 level.

Doctoral candidates must pass a comprehensive examination before the dissertation and a final oral examination defending the dissertation.

Students must also demonstrate competence in two languages other than their native language. The languages chosen should be relevant to their program or professional plans. This requirement may be satisfied by course work or examination. Reading knowledge is required for one language. This part of the requirement must be satisfied before advancement to candidacy. For the second language, either reading competence or oral proficiency will fulfill the requirement, which must be satisfied before the comprehensive examination is taken. Alternatively, specific course work in language typology or contrastive language studies (such as SLS 642) may be used to fulfill the requirement. Where the doctoral committee considers it appropriate for specific programs, additional language requirements may be imposed.

The following is a partial listing of courses available in each of the four subfields of second language acquisition. These are listed to indicate the range of offerings at UH Mānoa and to guide students and their doctoral committees in designing plans of study. The courses listed do not constitute a closed list; other courses may be approved by students' doctoral committees. In addition, the majority of the 600- and 700-level courses listed have prerequisites, which students may be required to take in the appropriate departments.

Second Language Analysis

- SLS 640 English Syntax (3) (basic preparation)
- SLS 642 Comparative Grammar and Second Language Acquisition (3)
- SLS 680N Second Language Analysis (3)
- CHN 641 Contrastive Analysis of Mandarin and English (3)
- CHN 642 Contrastive Analysis of Mandarin and English (3)
- CHN 750C Research Seminar in Chinese Language: Structure (3)
- ENG 702 Seminar in English Language (3)
- JPN 634 Advanced Japanese Syntax and Semantics (3)
- JPN 650C Topics in Japanese Linguistics: Japanese/English Contrastive Analysis (3)
- LING 651 Advanced Linguistic Analysis (3)
- LLEA 681(Alpha) Topics in Language (3)

Second Language Learning

- SLS 650 Second Language Acquisition (3) (basic preparation)
- SLS 673 Applied Psycholinguistics and Second Language Acquisition (3)
- SLS 680E Second Language Learning (3)
- SLS 750 Seminar in Second Language Acquisition (3)
- EDEP 768C Seminar in Educational Psychology: Learning (3)
- LING 670 Developmental Linguistics (3)
- LING 750Q Seminar: Language Acquisition (3)
- PSY 726 Seminar in Cognitive Science (3)

Second Language Use

- SLS 660 Sociolinguistics and Second Languages (3) (basic preparation)
- SLS 680U Second Language Use (3)
- SLS 760 Seminar in Second Language Use (3)
- CHN 750E Research Seminar in Chinese Language: Sociolinguistics (3)
- JPN 633 Japanese Sociolinguistics (3)
- LING 635 Language Variation (3)
- LING 750S Seminar: Sociolinguistics (3)

Second Language Pedagogy

- SLS 613 Second Language Listening and Speaking (3)
- SLS 614 Second Language Writing (3)
- SLS 620 Second Language Reading (3)
- SLS 630 Second Language Program Development (3)
- SLS 671 Research in Language Testing (3)
- SLS 680P Second Language Pedagogy (3)
- SLS 710 Teaching Second Languages (3) (basic preparation)
- SLS 730 Seminar in Second Language Pedagogy (3)
- CHN 750B Research Seminar in Chinese Language: Teaching Methods (3)
- EALL 601 Method of Teaching East Asian Languages (3)
- EDEP 768G Seminar in Educational Psychology: Educational Evaluation (3)
- ENG 605 Theory and Practice of Teaching Composition (3)
- ENG 705 Seminar in Composition Studies (3)
- JPN 650P Topics in Japanese Linguistics: Pedagogy (3)
- EDCS 641(Alpha) Seminar in Foreign Language (3)
- EDCS 667(Alpha) Seminar in Curriculum (3)

Research Methods

- SLS 670 Second Language Quantitative Research (3)
- SLS 672 Second Language Classroom Research (3)
- SLS 675 Second Language Interpretive Qualitative Research (3)
- SLS 678 Discourse Analysis in Second Language Research (3)
- SLS 680R Second Language Research Methodology (3)
- SLS 775 Seminar in Second Language Qualitative Research: Methods (3)
- EALL 603 (Alpha) Bibliographical and Research Methods (3)
- EDEP 602 Computer Analysis of Data (3)
- EDEP 604 Multiple Regression in Behavioral Research (3)
- EDEP 768H Seminar in Educational Psychology: Research Methodology (3)
- LLEA 630 (Alpha) Seminar in Research Methods (V)
- LING 630 Field Methods (3)

Second Language Studies

College of Languages, Linguistics and Literature

Moore 570

1890 East-West Road

Honolulu, HI 96822

Tel: (808) 956-8610

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Web: www.hawaii.edu/sls

Faculty

- *R. Gibson, PhD (Chair)—second language learning and teaching, classroom research, teacher training, bilingual education, Pacific languages and literacy, program administration
- *R. Bley-Vroman, PhD—English syntax, second-language analysis, formal models of language acquisition
- *C. Chaudron, PhD (Graduate Chair)—classroom-centered research, discourse analysis, psycholinguistics, research methods, second-language acquisition
- *J. D. Brown, PhD—language testing, research methods, curriculum design
- *G. Crookes, PhD—classroom teaching, classroom-centered research, materials and syllabus design, discourse analysis, methodology of science
- *K. Davis, PhD—qualitative research methods, language policy and planning, literacy, bilingual education
- *R. Day, PhD—teacher education, teaching of reading and listening/speaking, vocabulary, global issues and language teaching
- *C. Higgins, PhD—macro- and micro-sociolinguistics, qualitative research methods, conversational analysis, code-switching
- *T. Hudson, PhD—language testing, reading, methods and materials, English for specific purposes, research methods
- *G. Kasper, PhD—second-language discourse analysis, pragmatics, learning strategies, qualitative research methods
- *J. Norris, PhD—instructed SL acquisition, SL pedagogy and task-based language teaching, language program evaluation, language assessment, testing, measurement, research methods, research synthesis and meta-analysis
- *L. Ortega, PhD—SL acquisition, SL writing, foreign language education, research methods
- *R. Schmidt, PhD—sociolinguistics, psycholinguistics, second-language acquisition
- *B. Schwartz, PhD—linguistic theory and SL acquisition and analysis, Universal Grammar, child second language acquisition
- *K. Wolfe-Quintero, PhD—second-language analysis and acquisition, comparative grammar, pedagogic grammar, writing

Cooperating Graduate Faculty

- D. Ashworth, PhD—adult second-language acquisition, language-teaching methodology, computer-assisted language instruction
- M. Forman, PhD—sociolinguistics, pidgins and creoles, children's speech
- A. Peters, PhD—child language acquisition, language socialization
- K. Rehg, PhD—second-language phonology

Degrees Offered: BA in interdisciplinary studies (English as a second language), MA in second language studies, PhD in second language acquisition (interdisciplinary), Graduate Certificate in Second Language Studies

The Academic Program

Formerly called the Department of English as a Second Language, the faculty and course work in the Department of Second Language Studies (SLS) have evolved toward a wider view of the study of second- and foreign-language learning and teaching in general. The department's programs train students for professional careers in second-/foreign-language education, which includes teaching, teacher training, materials preparation, curriculum/syllabus design, language assessment, and research. Through course work and independent research, students acquire a broad knowledge base and familiarity with the conduct of research, as well as a sense of professionalism in second-language studies.

Employment opportunities in this field have been expanding rapidly, both nationally and internationally, in all types of educational and occupational institutions (e.g., elementary, secondary, and tertiary levels; publishing; test development for international agencies; language-training programs for businesses).

The department, whose MA program dates back to 1961, is frequently referred to as the best such program in the world. It includes a wide range of general and specialized courses. It has the largest faculty with specialization in second-language studies of any institution in the world. Its faculty members are well respected nationally and internationally through their involvement in scholarly research and publishing projects, including editorship of books or editorial advisory status on major journals, as well as extensive authorship of journal articles and books. The department enjoys advanced technical support facilities and excellent library resources. It attracts top-quality students and maintains a variety of services and activities that stimulate a high level of student satisfaction and collaboration, including post-graduation employment advice and assistance.

Affiliations

The department is affiliated with (institutional member of) the American Association for Applied Linguistics and the Teachers of English to Speakers of Other Languages. SLS faculty members (J. D. Brown, C. Chaudron, and R. Schmidt) have served on the executive boards of these organizations. Department faculty are also editors of the international journals *Applied Linguistics* (G. Kasper) and *Reading in a Foreign Language* (R. Day, T. Hudson), and have been actively involved in the organizing boards of the Second Language Research Forum and the Pacific Second Language Research Forum.

Undergraduate Study

Bachelor's Degree

The equivalent of an undergraduate major in ESL is available in the BA program in interdisciplinary studies. For information regarding this degree, contact the SLS chair or the department's interdisciplinary studies advisor.

Graduate Study

The department offers the MA degree in Second Language Studies and the Advanced Graduate Certificate in Second

Language Studies. The UH offers the PhD degree in second language acquisition, an interdisciplinary program administered by the SLS department. See the “Second Language Acquisition” section within the Colleges of Arts and Sciences, for a description of the PhD program.

Master’s Degree

The main goal of the MA program is to serve the needs of prospective and practicing teachers, administrators, and researchers in the area of teaching English to speakers of other languages. Attention is given to the areas of second- and foreign-language acquisition, applied psycholinguistics, second-language use, second-language classroom research, bilingual education, curriculum development, and teacher education.

The program emphasizes theory as well as practice. In addition to the courses dealing with approaches to language teaching, materials, and testing, core courses are concerned with the linguistic, psychological, and sociological aspects of language. These latter courses, which are primarily theoretical, are designed to provide an essential foundation on which the more practically oriented ones can build. The emphasis on theory in certain core courses should be kept in mind by potential applicants.

The MA in SLS does not result in a teaching credential. Contact the College of Education for more information regarding State of Hawai‘i teacher certification.

Entry into the MA program is possible in the fall semester only. The GRE General Test is required of all native English speakers. Scores should be sent to the department. Students whose native language is not English are required to have a minimum TOEFL score of 600, 620 preferred.

Two to three letters of recommendation are also required; forms are available from the department.

Applicants must submit a statement of purpose, outlining their objectives in graduate study and reasons for applying. This maximum five-page essay should focus on their experiences and training in languages, language learning, and/or language teaching, and how these relate to their long-term goals as professionals in the field of second-language learning and teaching.

Students admitted conditionally are placed on academic probation for their first semester. Students admitted as regular students whose cumulative GPA fails to meet the minimum requirements after completing at least 12 credit hours or two semesters of course work will be placed on academic probation in the following semester for the duration of the semester.

All students in the MA program, whether Plan A, Plan B, or Plan C, are expected to have undergone second- or foreign-language learning (two years of college study or equivalent). Students who have not had such experience before entering the program are required to take at least a semester of language study, which does not count toward the 39-credit-hour MA requirement.

Plan A (Thesis) Requirements

- Four core courses (12 credits): SLS 441, 600, 650, 660
- One graduate seminar: SLS 730, 750, 760, or 775
- Six electives (18 credits) approved by the advisor
- SLS 700 Thesis (6 credits)

Plan B (Non-thesis) Requirements

- Four core courses (12 credits): SLS 441, 600, 650, 660
- One graduate seminar: SLS 730, 750, 760, or 775
- Eight electives (24 credits) approved by the advisor
- Submission of an acceptable scholarly paper

Plan C Requirements

Plan C is a special program individually planned for each student. It is intended for established language scholars who wish to pursue additional studies and receive academic credit. Typically, Plan C scholars already have an MA or PhD degree in a foreign language, applied linguistics, or a closely related field.

Plan C students are exempt from the specific core requirements of the other plans. Plan C students take a qualifying examination (written) and a final examination (written and oral). A Plan C scholarly paper is required. In addition, Plan C students must meet the Graduate Division residence requirements of two semesters of full-time work or a period of enrollment that is equivalent in credits.

Admissibility to Plan C is determined by the department’s admissions committee or within the first semester after arrival. At that time a committee is established to recommend courses and supervise the student’s course plan. Scholars accepted for Plan C generally have the following qualifications:

1. No less than five years of full-time experience working in the field of second- or foreign language education;
2. At least two years of administrative, teacher-training, or materials-development responsibility; and
3. An outstanding academic record and a high performance on the GRE.

Additional information concerning the program and its requirements is contained in the SLS program brochure. The topics covered include financial aid, transfer of credit, and requirements such as the scholarly paper. Prospective applicants are urged to obtain this brochure from the graduate chair. Applications for graduate assistantships and tuition waivers are also available.

Specializations. As an additional option to the basic MA in SLS, the 39-credit program allows for students to concentrate in a particular area of “specialization,” each of which has additional requirements and expectations in course selection. Each specialization requires a distinct selection of seminar, as well as four more required courses taken from among various subsets of the courses possible as “electives” in the basic MA in SLS. Further numbers of electives are chosen, depending on program plan (A, B, or C). At the present time, five areas of specialization have been elaborated: “Critical second language studies,” “Language assessment, measurement, and program evaluation,” “Language teaching (English as a possible sub-specialization),” “Language and social interaction,” and “Second language acquisition.” The department should be contacted for more information about these specializations.

Advanced Graduate Certificate

The Advanced Graduate Certificate in Second Language Studies provides advanced training to those who already have graduate degrees (master’s, doctorate) in applied linguistics, foreign languages, ESL, or related fields. The program is

specifically aimed at those who wish to re-specialize or to update their training to include recent developments in the field. Graduate students enrolled in other programs at UH are also permitted to apply for the certificate while they concurrently are completing another graduate degree.

The course of study typically lasts about two semesters and includes 15 credits (five courses) and a research paper (scholarly paper) to be produced during the program. Up to 9 credits of course work may be transferred from a prior program. Students who complete the certificate in SLS will have obtained current knowledge and skills in second language studies, including a knowledge base in second language analysis, learning, pedagogy, and use, in utilization of research findings and application of research methods.

Applicants must have completed an MA or PhD degree in an appropriate field, or they must be a continuing student in an MA or PhD program in an appropriate field at UH, by the time they begin study for the Certificate. Other application procedures are similar to those for the MA in ESL; contact the Graduate Chair for specific information and guidelines on application.

As a culminating activity in the program, students are required to submit a paper which demonstrates the student's ability to conduct independent scholarly research of high quality. This paper must be **new** research (i.e. different from prior MA level work) conducted under supervision of the program's faculty.

The graduate faculty of second language acquisition is in charge of the program; see the listing under "Second Language Acquisition."

Doctoral Degree

See the "Second Language Acquisition" section within the Colleges of Arts and Sciences, for information regarding the interdisciplinary PhD in second language acquisition.

English Language Institute

College of Languages, Linguistics and Literature
Moore 570
1890 East-West Road
Honolulu, HI 96822
Tel: (808) 956-8479
Fax: (808) 956-2802
E-mail: uhmeli@hawaii.edu
Web: www.hawaii.edu/eli

The English Language Institute (ELI) is located in the Department of Second Language Studies. The ELI's primary purpose is to provide English instruction for international and immigrant students, or others, whose native language is not English so as to facilitate their academic studies at the UH. The ELI program is only for students who have been admitted to the UH.

All international and immigrant students admitted to the UH are referred to the ELI to determine if they must take the ELI placement test before registering for UH courses. If a student does not fulfill this obligation, the ELI will place a hold on the student's registration. The ELI placement test is

generally offered three times at the beginning of each semester. Information about the testing dates and times can be found on the ELI website or the UH Mānoa Registration Homepage. Students can sign up for ELI placement tests online or in person at Moore 570 prior to the testing date.

ELI Exemptions

Students are exempt from taking the ELI placement test if they meet any of the following conditions: (a) the student is a native speaker of English; (b) the student has received a score of 100 or better on the internet-based TOEFL, or a score of 600 or better on the paper-based TOEFL; (c) the student has received a score of 460 or better on the verbal section of the GRE; (d) the student has received a score of 540 or better on the critical reading section if taken in March 2005 or thereafter; (e) the student has received a combined score of 48 on the reading and English sections of the ACT and neither subscore (reading or English sections) is lower than 21; (f) the student has an Associate of Arts degree from a community college within the UH system; (g) the student has obtained the equivalent of 60 transferable semester credits with a GPA of 2.0 or better, all earned in classroom settings at regionally accredited colleges or universities in the U.S., or from colleges or universities whose academic standing is recognized by the UH and where English is the primary language of instruction; or (h) the student has completed six years of full-time schooling with English as the medium of instruction at a middle school, high school, college, or university in Australia, Canada (except Quebec), Ireland, New Zealand, the United Kingdom, or the U.S. Documentation of all six years is required.

These exemption criteria apply at the time students are admitted to the UH. An exemption on the basis of one of these criteria may be automatically granted by the UH, or it may be granted by the ELI office if the student can provide the appropriate documentation, including official transcripts or test results.

Assignment to ELI Courses

All other international or immigrant students who have been admitted to the UH must take the ELI placement test before they can register for courses. Placement into ELI courses or exemption from ELI courses will be based on the test results. Students pursuing online degrees should contact the ELI Assistant Director for further information. All ELI courses must be completed within the first year of study at the UH. Students who do not complete ELI coursework as planned may not be allowed to graduate.

Relationship to Other Course Work

ELI courses are equivalent to 3-credit courses when considering a student's course load. Students placed into ELI courses need to reduce the number of additional credit courses they can take and should expect to make slower progress in their regular UH studies. This is an especially important factor in some graduate programs and should be considered carefully by students whose time or financial support is limited.

Hawai'i English Language Program

College of Languages, Linguistics and Literature
Makai Campus 13-1
1395 Lower Campus Road
Honolulu, HI 96822
Tel: (808) 956-6636
Fax: (808) 956-5100
E-mail: eslhelp@hawaii.edu
Web: www.hawaii.edu/eslhelp

The Hawai'i English Language Program (HELP), administered by the Department of SLS, is a noncredit, comprehensive, intensive ESL program for students who wish to improve their English language proficiency for academic, business, or professional pursuits. Most students in the program are preparing to enter an American college or university, although many are studying English for other reasons. In addition to TOEFL and TOEIC preparation courses, HELP offers a fully integrated, content-based curriculum to prepare students for success in academic study. Admission to HELP is open to individuals 17 or older who have completed high school or its equivalent. There are four 8-week sessions each year beginning in January, April, August, and October. HELP also offers two 4-week summer programs in mid-June and mid-July. For an application packet and information, go to www.hawaii.edu/eslhelp.

Sociology

College of Social Sciences
Saunders Hall 247
2424 Maile Way
Honolulu, HI 96822
Tel: (808) 956-7693
Fax: (808) 956-3707
E-mail: socdept@hawaii.edu
Web: www2.soc.hawaii.edu/soc

Faculty

- *P. G. Steinhoff, PhD (Chair)—collective behavior/social movements, comparative sociology (Japan), political sociology
- *S. K. Chai, PhD (Graduate Chair)—social theory, economic development, comparative sociology (Asia)
- *R. A. Baldoz, PhD—race and ethnic relations, work and labor markets, political economy
- *H. R. Barringer, PhD—race and ethnic relations, comparative sociology (Korea), quantitative methodology
- *C. M. Endo, PhD—social stratification and mobility, social research methodology
- K. Irwin, PhD—criminology, deviance and social control, qualitative methodology
- *D. T. Johnson, PhD—criminal justice, comparative sociology (Japan), law and society
- *H. Koo, PhD—comparative sociology (Korea), social stratification, development
- *Y. J. Lee, PhD—quantitative methodology, demography, gender stratification, aging and health

- *P. T. Manicas, PhD—social theory, race and ethnic relations, political economy
- *A. B. Robillard, PhD—ethnomethodology, medical sociology, comparative (Pacific Islands), disability
- *L. O. Ruch, PhD—medical sociology, mental health, sex and gender, formal organizations
- *D. W. Swift, PhD—sociology of the arts, science and technology
- *E. L. Wegner, PhD—medical sociology, social psychology, aging/social gerontology
- *M. G. Weinstein, PhD—qualitative methodology, community, sociology of knowledge
- *D. W. Wood, PhD—medical sociology, evaluation research, quantitative methodology, substance abuse treatment
- *G. Yang, PhD—collective behavior/social movements, cultural sociology, social theory
- *S. Yeh, PhD—urban sociology, population studies, family

Cooperating Graduate Faculty

- M. Chesney-Lind, PhD—criminology, gender and women's issues
- J. Chinen, PhD—women and work, race, class and gender, race and ethnic relations
- M. Delucchi—sociology of education

Affiliate Graduate Faculty

- C. T. Hayashida, PhD—gerontology, medical sociology, health services and policy
- S. Kanaiaupuni, PhD—demography, education, Native Hawaiians
- J. Leon, PhD—family, survey research, evaluation research, race and ethnic relations
- V. K. Mishra, PhD—demography, environmental sociology, population and health, comparative (Asia)
- R. D. Retherford, PhD—population, social change (Asia)
- P. S. Xenos, PhD—demography, family relations and youth, sexuality, comparative (Asia)

Adjunct Faculty

- P. Adler, PhD—conflict management, community studies
- J. Dannenberg, JD—law and society
- J. Manis, PhD—social psychology, social problems

Degrees Offered: Certificates in Human Resources/Organizational Management, Political Economy, and Social Science and Health; BA (including minor) in sociology; MA in sociology; PhD in sociology

The Academic Program

Sociology (SOC) is the study of how society organizes itself and how various groups interact with each other and the consequences of these processes. Sociology's subject matter includes marriage and family patterns, race and ethnic relations, demography, social change, class structure, formal organizations including bureaucracies, value systems, conflict, deviant behavior, and the people and institutions of other societies.

Sociology uses a range of research techniques for studying social phenomena that can be applied to many areas, whether one is interested in the incidence of crime, client satisfaction, policy evaluations, or demographic trends. In addition to preparing people as professional sociologists in academic settings, sociology is an excellent background for careers

in law, social work, public health, urban planning, public administration, and other fields. The graduate program provides students with a foundation in basic theory and methods of research. In addition, faculty and advanced graduate students are involved in several broad areas of sociological interest: the comparative sociology of Asia; population studies; the study of crime, law, deviance, and human services in the U.S.; aging and medical sociology; and race and ethnic relations.

Undergraduate Study

Bachelor's Degree

Requirements

Students must complete a prerequisite introductory sociology course and 30 credit hours of upper division courses, including:

- 9 credit hours at the 400 level
- SOC 300 and 321
- One course from SOC 475, 476, 478, or SOCS 225 (Note: SOCS 225 is a lower division course and cannot be counted toward required upper division credit hours)

Consult the department for graduate and career opportunities.

Minor

Requirements

Students must complete a prerequisite introductory-level sociology course and 15 credit hours, including:

- SOC 300
- One 400-level course
- Three other upper division sociology courses
- SOC 100 or any 200-level course is a prerequisite for all 300-level courses; SOC 300 is a prerequisite for all 400-level courses
- To fulfill major or minor requirements, courses must be passed with a grade of C (not C-) or better

Undergraduate Certificates

For information about applying for one of the following certificate programs and a list of the available courses, please see the undergraduate advisor in Sociology or in the designated department.

Interdisciplinary Certificate in Human Resources/Organizational Management

The purpose of this certificate is to provide a set of courses from departments in the College of Social Sciences for students who intend to enter careers in human relations and management in business, non-profit agencies and public agencies. Such careers require a broad range of knowledge and skills. Understanding finances is fundamental to the life of an organization. In addition, management requires an understanding of cultural styles of communication, modes of resolving conflict, principles of psychological motivation and interpersonal influence. Public relations is also important in

reaching the public and communicating with constituencies. Organizations also must operate in an environment of complex legal regulations. Courses have been approved for the certificate which provide background in these domains.

Requirements

The requirements are designed to conform to criteria specified for undergraduate certificates for UH Mānoa and also to meet the diversification graduate requirement in the Colleges of Arts and Sciences. The requirements are:

- 15 credit hours of five courses. Courses cannot be double-counted for an academic major. However, a student can count a course from the same department as their major, but it cannot then be used to satisfy the major requirement.
- 2.5 GPA or better in courses
- courses must be taken from a minimum of three different academic departments
- One course from COM 320 or SOC 313

Interdisciplinary Certificate in Political Economy

The Certificate in Political Economy is designed to give students a grasp of the ways in which political, economic and sociological forces interact in the shaping of public policy. The certificate may be helpful to students interested in careers in public policy as well as to students who wish to pursue graduate degrees in economics, political science or sociology by enabling them to see the connections between these disciplines. A more complete description and the requirements are described under the Department of Political Science.

Interdisciplinary Certificate in Social Science and Health

The purpose of this certificate is to supplement the disciplinary major of students who wish to pursue careers in the field of health and health care by enhancing the breadth, quality and coherence of their education through taking health-related courses in a variety of different academic disciplines.

Requirements

The requirements are designed to conform to criteria specified for undergraduate certificates for UH Mānoa and also to meet the diversification graduate requirement in the Colleges of Arts and Sciences (Option 2, Depth). The requirements are:

- 15 credit hours of five courses. Courses cannot be double-counted for an academic major. However, a student can count a course from the same department as their major, but it cannot then be used to satisfy the major requirement.
- 2.5 GPA or better in courses
- courses must be taken from a minimum of three different academic departments
- One course from ANTH 425 or ECON 434 or SOC 354

Graduate Study

Two programs of graduate study in sociology are offered: a PhD program, intended to provide a professional basis for research and university teaching, and an MA program, designed to offer a general sociology curriculum and specialized areas of study relevant to career lines other than university scholarship. The following are brief descriptions; the department provides a

more complete statement of its graduate degree programs and requirements on its website at www.sociology.hawaii.edu. All requirements specified by the Graduate Division also apply.

Applicants for graduate study in the department must specify which program they wish to enter. Letters of recommendation and GRE General Test scores are required of all applicants. Scores for the GRE subject test in sociology are not required but are recommended. A sample of written work is also required of applicants to the PhD program. An undergraduate major in sociology is not required for admission, but some sociology background is recommended. Makeup course work may be required in some cases. Applications will be accepted for either fall term or spring term admission. The application deadline for admission is **February 1** for the fall semester and **September 1** for the spring semester.

Master's Degree

The department offers the MA Plan A (thesis) and MA Plan B (non-thesis).

Plan A (Thesis) Requirements

The general MA curriculum in sociology (Plan A) should prepare the student for possible positions in government and private industry, especially in research activities. In addition, preparatory training is provided to those who aspire to a doctoral degree, but the general MA candidate cannot assume that satisfactory completion of this curriculum will automatically lead to placement in the department's PhD program.

The Plan A program aims to provide the student with a firm foundation in sociological theory, methods of social research (including statistics), and the application of theory and methods to various areas of study.

A minimum of 30 credit hours of sociology-related course work is required for this program, as well as the successful completion of an MA thesis. All candidates are required to take at least one course each in the core areas of sociological theory, research methodology, and social statistics, as well as five substantive courses, of which four must be at the 600 level or higher. In addition, students should take 6 credits of thesis writing (SOC 700) or directed reading (SOC 699), depending on when their thesis proposals are approved. All courses credited toward the 30-credit hour minimum required for the MA degree must be passed with a grade of B or better, and a 3.0 GPA must be maintained.

The first semester's work is planned in consultation with the graduate chair or an interim advisor appointed by the graduate chair. During the first semester, under the guidance of the graduate chair or the interim advisor, the student prepares a statement outlining a study plan that reflects his or her special interests and meets the credit requirements of the program. Also, the graduate chair or the interim advisor assists in forming the student's three-member thesis committee. One member of the thesis committee may, but need not, be from outside the department. The thesis committee approves the thesis topic,

supervises thesis work, conducts the final oral examination in defense of the thesis, and certifies the completion of the thesis, after which the student is certified as having completed the MA degree program in sociology.

Plan B (Non-thesis) Requirements

A Plan B (non-thesis) MA is offered. It is generally for those students who have no intention of later moving into a PhD program, but would like to acquire a specialized set of sociological skills for use in applied settings. Details regarding this area may be obtained from the department website.

Doctoral Degree

This is an academic-oriented program. It is designed to provide the student with a firm foundation in sociological theory, methods, and research so the student is prepared to engage in professional research and university teaching.

The first phase of the PhD program provides basic training in theory, methods, and research. The requirement in this phase is to complete the five core courses in theory and methods and 15 additional course credits consisting of substantive courses and up to three credits of SOC 699. For most students, it is recommended that SOC 699 be taken for three of those credits, and that the rest comprise substantive courses at the 600 level or above. By the end of this phase of work, the student submits two papers for their courses for a qualifying review. After passing this qualifying review, the student is allowed to proceed to the second phase of the PhD program.

This second phase provides advanced training in areas of concentration and dissertation research. The course requirement in this phase is—if the student has not completed it in Phase I—to take 15 credits (five courses) of substantive courses at the 600 level or above. In addition, the student is required to, in sequence, write a research paper suitable for publication in a professional journal, take a written and oral comprehensive examination on two selected areas of concentration, write a dissertation proposal, finish writing a PhD dissertation, and orally defend the PhD dissertation.

All courses that count towards PhD requirements must be passed with a grade of B (not B-) or above, and the student must maintain a 3.0 GPA. Substantive courses are defined as UH Mānoa classes at the 400 level or above that focus on specific areas of empirical study in sociology. The minimum total number of course credits necessary for graduation is 30, but most PhD students are recommended to take more than the minimum in order to gain adequate knowledge. Completing non-course requirements (QR, research paper, comprehensive, dissertation) generally takes more time than course requirements. Please consult the department website for more specifics regarding each of the stages in the PhD degree.

Speech

College of Arts and Humanities
George 326
2560 Campus Road
Honolulu, HI 96822
Tel: (808) 956-8202
Fax: (808) 956-3947
Web: www.hawaii.edu/speech

Faculty

- *K. S. Aune, PhD (Chair)—relational management, emotion
- *M. S. Kim, PhD (Graduate Chair)—intercultural/international communication, persuasion and social influence
- *W. F. Sharkey, PhD (Undergraduate Chair)—family communication, interpersonal and social relations
- *R. K. Aune, PhD—message and information processing, encoding and decoding in relational communication and social influence, research methods
- *R. E. Cambra, PhD—interpersonal and instructional strategies, negotiation, intercultural
- *A. S. E. Hubbard, PhD—nonverbal communication, conflict and relational management, research methods
- C. Kulp, PhD—interpersonal communication, close relationships
- H. Lee, PhD—health and political communication, campaigns
- M. Mazur, PhD—interpersonal and computer mediated communication

Cooperating Graduate Faculty

- J. H. Bentley, PhD—critical methods
- R. Brislin, PhD—cross-cultural communication
- T. Hilgers, PhD—discourse evaluation, language production, comparison of written and oral communication

Degrees Offered: BA (including minor) in speech, MA in speech

The Academic Program

The Department of Speech (SP) has as its primary objectives the development of knowledge in and instruction concerning the process of speech communication. This involves three fundamental areas of emphasis. The first area is human message processing, which involves understanding the function and structure of the various codes, verbal and nonverbal, used to form messages in speech communication, as well as examining the encoding and decoding processes involved in speech communication. The second is relational communication, which focuses on factors that influence growth, maintenance, and termination of relationships. The third is social influence, dealing with the processing of beliefs, attitudes, and behavioral modification, including gaining compliance, conflict resolution, persuasive campaigns, and propaganda.

Speech is predominantly a discipline of systematic, purposeful thinking and communicating. Students obtain a liberal education of considerable breadth and depth in regard to speech communication theory. Furthermore, they are afforded ample opportunity to develop their communicative skills by applying theory in such diverse activities as

interviewing, group discussion, organizational communication, intercultural communication, public speaking, interpersonal communication, debate, and performance of literature. Indeed, the basic philosophy of this department—and it is stressed in every course and co-curricular program offered—is that there is no surer preparation for professional life and participation in society than an education that enhances the ability of the individual to maintain lifelong learning and the skills to communicate effectively.

Undergraduate Study

Bachelor's Degree

Requirements

Students must complete 33 credit hours, including:

- SP 301, 251, 302, 381, 364
- SP 370 or 470

SP 301 and 302 should be taken no later than the semester after the major is declared. In residence policy: A minimum of 15 credit hours which includes SP 302, must be taken in the Department of Speech at UH Mānoa. Introductory courses do not count as electives. Electives must have a prerequisite or be numbered 300 or above.

SP 151 and 200 do not count toward the 33-credit-hour minimum.

Minor

Requirements

Students must complete 15 credit hours of speech, including:

- SP 381 and 364
- SP 370 or 470
- 6 credit hours of non-introductory elective courses
- Introductory courses and SP 499 **do not** count toward the minor. Electives must have a prerequisite or be numbered 300 or above and cover a specific content area.

Graduate Study

Master's Degree

The Department of Speech offers an innovative MA program emphasizing the central processes and functions of human communication. To that end, course work, seminars, and student research develop a cross-situational understanding of theory and research in the three areas central to the discipline: message processing, relational communication, and social influence.

All applicants for the MA program in speech must supplement the application and transcripts required by the Graduate Division with three letters of recommendation (preferably from professors with whom the applicant has worked), a one-page statement of goals, and the GRE General Test scores. These supplementary items should be sent directly to the department.

Intended candidates for the MA should have a strong undergraduate preparation in speech or a closely allied discipline. Students who lack this preparation must make up deficiencies either before or during graduate study. In the latter case, the student will be admitted conditionally, pending removal of the deficiencies.

Further details on the program and the faculty, as well as any changes in course offerings, may be requested from the department.

Requirements

The department offers both Plan A (thesis) and Plan B (non-thesis: comprehensive exams or applied project) programs. Plan A requires a minimum of 33 credit hours of graduate work, at least 27 of which must be in speech courses numbered 600 and above, including 6 credit hours of SP 700 Thesis Research. Plan B requires a minimum of 33 credit hours of graduate work in speech courses numbered 600 and above. Speech courses numbered 400 to 499 and courses from allied disciplines may be counted toward the degree only with prior consent of the graduate chair. SP 601 and 602 are required for both Plan A and Plan B programs. Plan A also requires SP 702.

Successful completion of Plan A requires each candidate to present an acceptable thesis and pass a final oral examination based on the thesis. Plan B requires each student either complete an applied research project or pass written comprehensive exams. Plan B candidates must also pass a final oral examination based on either the research project or the comprehensive exams.

Theatre and Dance

College of Arts and Humanities
Kennedy Theatre 115
1770 East-West Road
Honolulu, HI 96822
Tel: (808) 956-7677
Fax: (808) 956-4234
Web: www.hawaii.edu/theatre

Faculty

- *G. Lizenbery, BFA (Chair and Director of Dance)—modern dance, kinesiology, movement analysis
- *W. D. Carroll, PhD (Director of Theatre)—playwriting, directing, theory
- *P. Gaither Adams, MFA—modern dance, choreography
- *D. Anteau, MFA—lighting, technical theatre
- *G. Cannon, AB—acting, directing, TV/film
- *J. Dodd, MFA—scene design
- *S. Finney, MA—costume design
- *E. Fisher, DAD—modern techniques, dance history, choreography
- *J. Iezzi, PhD—Asian theater
- *T. Montgomery, PhD—theater for children, puppetry, creative drama
- *L. O'Malley, PhD—theater history, dramatic literature
- *K. Pauka, PhD—Asian theater
- *J. Van Zile, MA—dance ethnology, notation
- *M. Wessendorf, PhD—dramatic literature, theory
- *E. Wichmann-Walczak, PhD—Asian theater

Affiliate Graduate Faculty

- M. Cristofori, MA, MBA—theory and dance history
- H. Glass, MA—improvisation, choreography
- P. Leong, MA—Asian theater, movement
- M. Wong, MA—modern dance, choreography

Degrees Offered: BA (including minor) in dance, BA in theatre, BFA in dance theatre, MA in dance, MA in theatre, MFA in dance, MFA in theatre, PhD in theatre

The Academic Program

The Department of Theatre (THEA) and Dance (DNCE) is comprised of two separate but related disciplines.

Theatre includes the study of dramatic literature and theory; acting and directing; stage, costume, and lighting design; stagecraft; playwriting; and Asian and youth theater. Imaginative and creative individuals interested in the disciplined, practical application of classroom theory are suitable candidates as theater majors. Teaching and professional stage, film, and television work are typical professions of theater majors, but the analytical and practical skills, discipline and self-confidence, creativity, problem solving, and ability to work toward common production goals are applicable to all professions. The theater major will benefit from a comprehensive curriculum that includes the world's most noted Asian theater program and a nationally respected youth theater program.

Dance is the art of human motion. It encompasses the study of human movement as it relates to the physical sciences, music, theater performance and production, history, cultural context, education, visual design, and human expression. Dance majors find careers in the areas of performance, choreography, teaching, arts administration and production, therapy, history and criticism, and research. UH Mānoa's dance program offers comprehensive theory courses and a wide variety of dance techniques and styles. The program is considered unique with its offerings in dance ethnology and Asian and Pacific dance.

Affiliations

The department's Asian theater program is affiliated with the Association for Asian Performance.

The dance program is affiliated with the American College Dance Festival Association and the Council of Dance Administrators.

Advising

After being admitted as majors in the theater program, undergraduates must consult each semester with the theater undergraduate advisor. Newly admitted theater graduate students should consult each semester with the director of graduate studies in theater for initial advising. After one year of study, a graduate student is expected to select from the graduate faculty a permanent advisor well-versed in the area of the student's concentration.

In dance, undergraduate majors must consult with the dance undergraduate advisor every semester. Graduate students must consult with the director of graduate studies in dance each semester.

Undergraduate Study

BA in Theatre

Students must complete 42 credit hours, including:

- THEA 240, 311, 312, 411, and 412
- Two courses in Asian theater (one in theory/history/literature, one in performance)
- One course each in acting, voice/movement, directing, design, and youth theater
- 6 credits of theater workshop
- Recommended additional courses: ART 101, DNCE 150 or 255, MUS 106 or 107, and PHIL 200
- Graduation requirements include the submission of a portfolio of student work eight (8) weeks into the student's final semester, an exit interview, and a written assessment of the student's tenure at UH Mānoa.

BA in Dance

This degree is designed for students with a broad interest in dance and allows them maximum flexibility to satisfy requirements in greatest areas of interest.

Students must complete 40 credit hours: 29 credits of required courses and 11 of elective courses. BA majors are required to register for and attend a technique course each semester and must be involved in a UH dance production once each year. Elective credit hours are determined in consultation with an advisor and based on the student's desired focus within dance, such as children's dance, choreography, dance ethnology, or dance science.

Requirements

- DNCE 151, 255, 260, 360 or 361, 370 or 490, 452 or 453
- THEA 200
- 12 credits of dance technique at the 200 level or above, including:
 - 3 credits in ballet
 - 3 credits in modern dance
 - 3 credits from *two different* Asian/Pacific dance forms
- 11 credits of electives to be selected from:
 - DNCE 250, 360, 361, 362, 370, 371, 372, 452, 453, 459, 470, 471, 480, 490, 499, 660, 693
 - THEA 200

BA Dance students are required to participate in at least one (1) UH dance production per year (eg., student dance concerts, mainstage dance concerts, UH dance ensemble).

Graduation requirements include the submission of a portfolio of student work eight (8) weeks into the student's final semester, an exit interview, and a written assessment of the student's tenure at UH Mānoa.

BFA in Dance Theatre

This program is designed for students who wish to pursue professional careers as dancers, teachers, and/or choreographers. Admission to the program is by audition held annually. Interested students should notify the Department of Theatre and Dance as early as possible since the BFA requires 60 credit hours in dance, including advanced-level dance technique courses, plus 2 credit hours in theater practicum. Each semester

BFA majors are required to register for and attend a technique course and must be involved in a university dance production.

Requirements

Students must complete 62 credit hours, including:

- DNCE 151, 250, 360, 361, 362, 370, 371, 372, 452, 453
- 1 credit hour of DNCE 495
- 6 credit hours of DNCE 321
- 6 credit hours of DNCE 331
- 3 credit hours of DNCE 470 or 480
- 2 credit hours in two different Asian or Pacific dance performance courses
- 6 credit hours of ballet technique at the 300 level or higher (DNCE 321 or 421) or 6 credit hours of modern dance technique at the 300 level or higher (DNCE 331 or 431)
- 6 credit hours of DNCE 421 or 431
- 2 credit hours of THEA 200

Recommended courses

- DNCE 255, 490, 660, 693
- THEA 101, 221

BFA Dance students are required to participate in at least two (2) UH dance productions per year (eg., student dance concerts, mainstage dance concerts, UH dance ensemble).

Graduation requirements include the submission of a portfolio of student work eight (8) weeks into the student's final semester, an exit interview, and a written assessment of the student's tenure at UH Mānoa.

Minor in Dance

Requirements. Students must complete 15 credit hours numbered 200-level and above, including:

- 9 credit hours in courses numbered 300 or above
- Maximum of 9 credit hours from dance technique courses

Minor in Theatre

Requirements. Students must complete 15 credit hours in courses numbered 200 or above, including 9 credit hours in courses numbered 300 or above. Participation in two departmental productions is required. Theatre minors should consult with the undergraduate theatre advisor.

Graduate Study

Most graduates, especially those with PhD degrees, pursue teaching careers, but there are many career opportunities in community theaters, dance companies, radio, television, films, and professional theaters.

The degrees in Asian theater are recognized Western Interstate Commission for Higher Education (WICHE) regional graduate programs. Residents of Alaska, Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, Utah, Washington, and Wyoming are eligible, upon admission, to enroll at Hawai'i-resident tuition rates.

Master's Degrees in Theatre

Master's degrees in theatre offered are the MA Plan A (thesis) and Plan B (non-thesis) and the MFA Plan B (creative/performance). For the MA Plan A, the candidate does research

in theater history, theory, or dramatic literature; the thesis may be in Asian or Western theater. For the MA Plan B, a generalist degree, the candidate takes additional advanced course work in lieu of writing a thesis. The MFA Plan B emphasizes creative or performance work in six concentrations: acting, directing, design, and playwriting (each of these four may include Western, Asian, and youth theater work), Asian performance, and youth theater.

Applicants must present an adequate undergraduate background and submit three letters of recommendation, as well as official scores from the GRE General Test. The department expects that all incoming graduate students will have taken at least two courses in dramatic literature and one course in each of the following four areas: acting, directing, design or technical theater, and theater history. If such courses have not been taken, they will be made up as undergraduate deficiencies while in residence for the master's program and will not count toward the credit accumulation for the master's degree. The TOEFL minimum score for foreign students is 600. Applicants for the MA Plan A degree are also expected to submit a major paper; those seeking the MFA degree should present appropriate supplementary materials such as slides, photographs, video, or play scripts.

Application deadline for the fall semester is **February 1** (January 15 for foreign applicants). Spring semester application deadline is **September 1** (August 1 for foreign applicants). Upon the successful completion of 12 graduate credit hours within the department, the elimination of any undergraduate deficiencies, and (for MFA students) the presentation of an acceptable qualifying creative project, the student may be admitted to candidacy.

Students pursuing an MA in theatre develop, with an advisor, a program appropriate for their interests (minimum of 39 credit hours). The program must include 3 credit hours in each of the following areas: research methods (THEA 600); Asian theater theory/history; Western theater theory/history; and graduate theater workshop (THEA 690), in which students receive 1 or 2 credit hours (depending upon extent of involvement) for working on a single Kennedy Theatre production. MA (Thesis) students take an additional 6 credit hours in theatre history or theory; 3 credit hours in a creative area. MA (Non-Thesis) students take 3 credit hours each of youth theater, creative drama, creative movement, or Western puppetry; Asian or Western acting or directing; design/technical theater. A minimum of 18 credit hours must be in courses numbered 600 to 798 (excluding 699 and 700); a minimum of 6 credit hours must be in Asian theater (excluding 690); credit for 699 may not exceed 9 credit hours. In addition, MA (Thesis) students must complete 6 credit hours of THEA 700 Thesis Research. For both MA degrees, students will take a four-hour written comprehensive examination followed by an oral examination. MA (Thesis) students will have an additional oral comprehensive on the written thesis.

MFA students in all concentrations will take a minimum of 60 credit hours comprised of 12 credit hours of foundation courses (3 credits in research and 9 in history and/or theory); 39 credit hours of concentration courses, including enrollment in THEA 690 Graduate Theater Workshop, in which students receive 1 or 2 credit hours (depending upon extent

of involvement) for working on a single Kennedy Theatre production, and a culminating project for which the student will enroll in 6 credit hours of THEA 695 Creative Project; and 9 credit hours of electives. Of the total 60 credit hours, 30 must be at the 600 level or above. There is no written comprehensive examination for the MFA degree. However, the culminating project will include a written component that goes beyond the descriptive record of the project; the thesis committee, in conjunction with the candidate, will decide the nature, extent, and scope of the written component in each case. Additionally, each student will be given an oral examination on the culminating project.

To receive a list of specific recommended courses for meeting MA and MFA requirements, contact the departmental director of graduate studies. Students will select their elective courses (MA Plan A, 12 credits; MA Plan B, 18 credits; or MFA Plan B, 9 credits) in consultation with their advisors to reflect their special interests. Students with sufficient undergraduate preparation may take approved related graduate courses in other departments for credit toward their degree.

In consultation with an advisor, each MFA student develops a program appropriate for his or her interests within the specific requirements of one of the following concentrations:

Acting. For the concentration in acting, students must complete 3 credits in research; 9 credits in history and/or theory (minimum 3 credits in Asian and 3 credits in Western); 6 credits in voice; 6 credits in movement and/or dance; 12 credits in acting (minimum 3 credits in Asian and 3 credits in Western); 3 credits in additional creative/performance courses in above areas or in directing, design/technical theater, or playwriting; 6 credits of THEA 690 Graduate Theater Workshop (a minimum of 4 credits in acting and 1 credit in technical theater; 1 credit may be in design, directing, playwriting, etc.; a minimum of 2 credits in faculty-directed and 2 credits in student-directed shows); and 6 credits of THEA 695 Creative Project.

Design. For the concentration in design, students must complete 3 credits in research; 9 credits in history and/or theory, Asian and/or Western (minimum one 3-credit seminar); 3 credits in costume design or construction (400 level or above); 3 credits in lighting design (400 level or above); 3 credits in set design (400 level or above); 3 credits of THEA 657 Topics in Theater Design; 9 credits in additional design courses (costume, lighting, or set, 400 level or above); 6 credits in creative/performance courses (in at least two areas including acting, directing, dance, playwriting, puppetry, or theater management); 6 credits of THEA 690 Graduate Theater Workshop (minimum 4 credits in design; 2 credits may include acting, directing, playwriting, stage managing, etc.; minimum 2 credits in faculty-directed and 2 credits in student-directed shows); minimum 3 credits in Asian theater (excluding THEA 690); and 6 credits of THEA 695 Creative Project.

Directing. For the concentration in directing, students must complete 3 credits in research; 9 credits in history and/or theory (minimum 3 credits in Asian and 3 credits in Western, 3 credits of which must be in theory); 3 credits in script analysis; 12 credits in graduate-level directing (minimum 3 credits in Asian and 3 credits in Western); 6 credits in design/technical theater (in two areas— theater design, costume, lighting, or set); 6

credits in creative/performance courses (in at least two areas—acting, choreography, dance, movement, music, playwriting, puppetry, or voice); 6 credits of THEA 690 Graduate Theater Workshop (minimum 4 credits in directing including assistant directing and dramaturgy; 2 credits may include acting, design, playwriting, stage managing, etc.; minimum 2 credits in faculty-directed and 2 credits in student-directed shows); and 6 credits of THEA 695 Creative Project.

Playwriting. For the concentration in playwriting, students must complete 3 credits in research; 9 credits in history and/or theory (including 3 credits in Asian and 3 credits in Western, both at 600 level or above); 9 credits in playwriting (excluding THEA 318); 3 credits in script analysis; 3 credits in contemporary dramatic literature or theater history; 6 credits in design/technical theater (including 3 credits in lighting design); 3 credits in acting or directing (Asian or Western); 3 credits in movement, dance, or music (Asian or Western); 3 credits in puppetry or youth theater; 3 credits of THEA 690 Graduate Theater Workshop in dramaturgy; electives may include an additional 3 credits of THEA 690 (in acting, design, directing, playwriting, stage managing, etc.); and 6 credits of THEA 695 Creative Project.

Asian Performance. For the concentration in Asian performance, students must complete 3 credits in research; 9 credits in Asian theater history/theory; 9 credits in Asian acting; 6 credits in Asian/multicultural directing; 3 credits in Asian/Pacific music and dance (minimum 1 credit in music and 1 credit in dance); 3 credits in design/technical theater or playwriting; 6 credits of additional creative/performance courses in above areas or courses at the graduate level in Western acting or directing; 6 credits of THEA 690 Graduate Theater Workshop (minimum 4 credits in Asian performance—acting, directing, or puppetry; 2 credits may include other courses in acting, design, directing, playwriting, stage managing, etc.; minimum 2 credits in faculty-directed and 2 credits in student-directed shows); and 6 credits of THEA 695 Creative Project.

Youth Theater. For the concentration in youth theater, students must complete 3 credits in research; 9 credits in Asian and/or Western history and/or theory; 3 credits in creative drama; 3 credits in youth theater; 3 credits in puppetry; 3 credits of THEA 779 Seminar in Theater/Dance for Children; 21 credits in creative drama, creative movement, design, directing, playwriting, puppetry, and/or youth theater, including 1 to 6 credits of THEA 690 Graduate Theater Workshop in acting, design, directing, playwriting, stage managing, etc.; minimum 3 credits in Asian theater (excluding THEA 690); and 6 credits of THEA 695 Creative Project.

Master's Degrees in Dance

The department's graduate offerings in dance include the MA Plan A (two options), the MA Plan B, and the MFA Plan A. For admission to the master's in dance program the GRE is not required; for foreign students the minimum TOEFL score is 600. The MA Plan A requires a written thesis. In Plan B, the candidate takes additional course work in lieu of a thesis. The MFA Plan A requires a creative performance thesis with accompanying written documentation and video. Intended dance candidates for all degrees must present an adequate undergraduate background in dance or a related field

and submit three letters of recommendation. MFA candidates in dance must also submit a video (VHS format) of their choreography and performance. MA and MFA candidates must submit a sample of written work, such as a major paper. The application deadline for the fall semester is **February 1** (January 15 for foreign applicants). Spring semester application deadline is **September 1** (August 1 for foreign applicants). Upon the successful completion of 12 graduate credit hours within the department, the elimination of any undergraduate deficiencies, and (for MFA students) the presentation of an acceptable example of creative work (the qualifying dance) the student may be admitted to candidacy.

The MA Plan A emphasizes research in dance ethnology or other general areas. The MA Plan A, Option I (dance ethnology emphasis) requires a minimum of 36 credit hours, including DNCE 651, 652, 653, 661, 654 or 655, and 700 (6 credit hours); 3 credit hours in 400-level Asian or Pacific performance courses; related area electives (6 credit hours); dance electives (3 credit hours); and general electives (3 credit hours). All electives must relate to thesis research. Candidates must pass a reading or speaking proficiency exam in a foreign language relevant to their area of thesis research or must satisfactorily complete four semesters of a language relevant to their area of thesis research.

MA Plan A, Option II (general) requires a minimum of 36 credit hours, including DNCE 651, 652, and 700 (6 credit hours); 9 credit hours from DNCE 321, 331, 421 or 431; 600-level dance theory electives (6 credit hours); general electives (6 credit hours); and 3 credit hours in two different Asian or Pacific dance forms.

MA Plan B, Option I (dance education emphasis) requires a minimum of 36 credit hours, including DNCE 651, 652, 691, 693, and 659 or 699; 9 credit hours from 321, 331, 421, 431; 3 credit hours in 300- to 400-level Asian or Pacific dance courses; and 9 credit hours of electives (3 credits at the 600 level). A capstone project or paper is required.

MA Plan B, Option II (general) requires a minimum of 36 credit hours, including DNCE 651, 652, and 659 or 699; 9 credit hours from 321, 331, 421, 431; 3 credit hours from 300- to 400-level Asian or Pacific dance courses; 6 credit hours of 600-level dance theory electives; 3 credit hours of 600-level electives outside of the dance area; and 6 credit hours of general electives. A capstone project or paper is required.

The MFA Plan A emphasizes performance and choreography. The MFA Plan A requires a minimum of 60 credit hours, including DNCE 421 or 431 (18 credit hours); DNCE 651, 652, 660, 661, 671, and 672 (4 credit hours); DNCE 679 (2 credit hours), 691, and 700 (6 credit hours); 2 credit hours in two different Asian or Pacific dance forms; 3 credit hours in 600-level dance electives; 6 credit hours in non-dance electives; and 1 credit hour in a general elective. MFA candidates must participate in two dance productions a year and register for attend a technique course each semester.

The nature of the required performance in productions should be determined in consultation with the student's advisor.

MFA Plan A and MA Plan B require written comprehensive examinations and an oral defense of the examination. MA Plan A and MFA Plan A require an oral defense of the thesis.

Doctoral Degree

The Doctor of Philosophy degree given for scholarship in theater history, theory, or criticism, not creative or artistic work, is offered in three areas: (a) Western theater, (b) Asian theater, and (c) comparative Asian-Western theater. The PhD degree is not conferred for the acquisition of academic credits. It is granted only to candidates who demonstrate outstanding ability to do imaginative research and who present the results in a cogent dissertation.

A candidate for the degree is required to successfully complete three semesters of full-time residence, required courses (detailed below), other courses as deemed necessary by the student's doctoral committee, examination in the research language(s) used in the student's dissertation research, a written and oral comprehensive examination and an oral defense of the student's dissertation. The minimum residence requirement is three semesters of full-time work or the equivalent in credits at the UH. At the end of the second semester in residence, the graduate faculty will provide the candidate with an assessment of her or his progress to date.

Required courses in the Western area are THEA 600, plus three other 600- to 700-level courses from a departmental list of approved courses; required courses in the Asian area are THEA 464, 465, and 466, as well as THEA 660 if the candidate's dissertation requires field research. The curriculum of the comparative Asian-Western theater area is determined by the student's doctoral committee. A high level of accomplishment in the foreign language or languages appropriate to the proposed area of research is required and will be determined by examination.

Proficiency in teaching, whether lecturing before large classes or teaching smaller classes and leading discussions, is considered part of the training of all PhD candidates, who should demonstrate this proficiency by giving several such lectures or by serving as teaching assistants.

Written comprehensive examinations and two hours of oral comprehensive examinations are required of all candidates before admission to candidacy. These are given after a student has completed the language requirement and before embarking on the dissertation. Written comprehensive exams shall consist of nine questions, one or more of which will specifically address the candidate's major area of research and one or more of which may be of a special nature at the discretion of the candidate's committee. The comprehensive includes questions on both Asian and Western drama and theater; further guidelines are available from the graduate advisor. The questions on the written portion are posed by the theater and dance graduate faculty and members of the student's committee. The doctoral committee consists of at least five graduate faculty, of whom a majority are from the Department of Theatre and Dance and at least one from another department.

Applicants for admission to the program must submit a detailed statement of the dissertation research they propose, three letters from those acquainted with their academic work, a sample of their research (such as a seminar paper or a master's thesis), and official GRE General Test scores. The application deadline for admission in the fall semester is **February 1** (January 15 for foreign applicants). Spring semester application deadline is **September 1** (August 1 for foreign applicants).

Requirements include a broad background in the humanities, a master's degree in theatre or its equivalent, and competence in dramatic production.

Candidates for the PhD who do not complete all requirements within seven years after admission into the doctoral program may be readmitted to candidacy only on the approval of the department's doctoral faculty and the Graduate Division.

Urban and Regional Planning

College of Social Sciences

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Faculty

- *K. E. Kim, PhD (Chair)—planning theory, planning methods, infrastructure planning, and alternative tourism planning
- *M. Douglass, PhD—regional and rural development planning, urbanization and national development, international and local development in Pacific rim and Asia
- *P. Flachsart, PhD—planning methods and models, environmental planning, energy, land use planning, and urban transportation planning
- *D. Foley, PhD—strategies of citizen participation, collaboration, nonprofit planning and management, community building, and community-based planning
- *R. Kwok, PhD—urbanization in China, East Asian development, spatial planning and urban design, development and regional economics
- *G. K. Lowry, PhD—alternative dispute resolution, coastal management, planning theory, and community-level planning
- *L. Minerbi, Dott Arch, MUP—comparative urbanism, settlement planning, environmental planning, urban design, community development, planning with indigenous people, and Pacific Island planning
- *J. Spencer, PhD—political economy and regional development, urban labor markets, environmental management, community development, policy analysis, methods
- *K. Umamoto, PhD—community planning, planning theory, social theory, social policy, community economic development, and race in ethnic relations

Cooperating Graduate Faculty

- D. L. Callies, JD—land use management and control, intergovernmental relations
- L. Cox, PhD—agricultural and resource economics
- *M. C. Jarman, PhD—environmental law, ocean law, legal writing
- M. McDonald, PhD—agricultural change, social theory, political geography, Japan
- L. H. Nitz, PhD—public policy and political economics
- C. Papacostas, PhD—transportation engineering and design

- K. Suryanata, PhD—political ecology, agriculture, rural development in Asia, environment and development, community-based resource management
- W. Wood, PhD—international public health planning
- S. Yeh, PhD—housing, urban sociology, development planning
- W. H. R. Yeh, MArch—architectural and urban design

Affiliate Graduate Faculty

- J. Fox, PhD—land use, forest resources and management, geographical information systems and spatial information technology, South and Southeast Asia
- S. Gon III, PhD—site and landscape planning
- M. Hamnett, PhD—anthropology

Degree and Certificates Offered: MURP, PhD, Certificate in Planning Studies, Professional Certificate in Urban and Regional Planning and the Certificate in Planning Studies

The Academic Program

Urban and regional planning (PLAN) is a dynamic field, that is still evolving. It emerged out of the convergence of two concerns: (1) the provision of urban infrastructure and (2) the initiation of social reform. While the underlying focus on community well-being continues, urban and regional planning today has broadened to include the development, implementation, and evaluation of a wide range of policies. Specifically, urban and regional planners, in both developing and developed countries, are concerned with the following:

1. The use of land in the city, in the suburbs, and in rural areas, particularly with the transition from one use to another;
2. The adverse impacts of human activities on the environment and the possible mitigation of those impacts;
3. The design of the city and the surrounding region so as to facilitate activities in which people need and want to engage;
4. The organization of settlement systems and the location of human activities in urban and regional space;
5. Identification of social needs and the design and provision of services and facilities to meet those needs;
6. The distribution of resources and of benefits and costs among people;
7. The anticipation of change and its impact on how people do and can live;
8. Participation of citizens in planning processes that affect their future; and
9. The way that choices are made, decisions implemented, and actions evaluated, and the means by which those processes can be improved in urban and regional areas.

The Department of Urban and Regional Planning takes a multidisciplinary approach to planning education, recognizing in particular the important contributions to planning that can be made by the social and natural sciences and by the architectural, public health, social work, and civil engineering professions; emphasizes extensive community involvement; engages in research that focuses on application of planning methodologies and implementation of planning endeavors; recognizes the close relationship between urban and regional planning and politics; acknowledges the difficulty of resolving the value differences that lie at the heart of most planning

problems; and appreciates both the importance and the elusiveness of critical concepts, such as “the public interest,” to urban and regional planning.

UH Master of Urban and Regional Planning (MURP) graduates, of whom there are about 323, hold planning and related positions in a variety of public agencies, academic institutions, nonprofit organizations, and private firms in Hawai‘i, on the continental U.S., and in the Asia Pacific region.

Accreditation

The department is accredited by the Planning Accreditation Board.

Graduate Study

The department offers a multidisciplinary approach to planning education. Students are provided with an opportunity to develop an individualized but integrated course of study drawing on this department and other departments and professional schools in UH Mānoa. Faculty and students engage in both funded and non-funded research and community service. The graduate curriculum focuses on theory, methodology, and practice in the following areas: community planning and social policy, environmental planning, urban and regional planning in Asia and the Pacific, and land use and infrastructure planning. Planning in the developing countries of Asia is emphasized.

For further information regarding the master’s degree or certificate programs, students should write to the department.

Master’s Degree

Students enter the MURP program from a variety of fields, usually the social sciences, architecture, engineering, public health, social work, and, increasingly, the natural sciences, but also from such diverse fields as philosophy, human development, and history. Students coming into the program are required to have an adequate background in descriptive and inferential statistics or to acquire this background prior to enrollment in PLAN 601.

Native speakers of English are required to take the GRE General Test. Others will be expected to have achieved adequate preparation in English as evaluated by the TOEFL. Each applicant should provide two letters of reference, preferably from individuals acquainted with the applicant academically or professionally. In addition, applicants must complete a self-assessment form and an express information form (available from the department). An interview with a member of the faculty, if feasible, is highly recommended. The deadline for application for admission is **March 1** for the fall semester and **September 1** for the spring semester.

Standards for a graduate with a MURP degree include the following:

1. Knowledge of the structure and the growth and transformation processes of human settlements;
2. Knowledge of planning theory, history, and ethics, including an understanding of the social and political nature of planning;
3. Knowledge of general methods and models appropriate to

urban and regional planning, including methods appropriate to a chosen area of concentration;

4. Knowledge of planning information systems and computer applications in planning;
5. Ability to structure and evaluate alternative plans and strategies for resolving or mitigating planning problems;
6. Ability to communicate, especially in written and oral form; and
7. Ability to plan with, rather than for, clients.

MURP graduates hold a variety of planning and related positions in public agencies, nonprofit organizations, and private firms. In Hawai'i these include the state Department of Business, Economic Development and Tourism; the Department of Health; the Land Use Commission; the Legislative auditor; the Department of Hawaiian Home Lands; the House Majority Research Office; the Hawai'i Community Development Authority; the Housing Finance and Development Corporation; the Department of Public Safety; the Department of Land and Natural Resources; the U.S. Department of Housing and Urban Development; the Honolulu City and County Departments of Planning and Permitting; Land Utilization, Housing and Community Development, and Parks and Recreation; the Office of the Managing Director; the Office of Council Services; the Planning Departments of the counties of Hawai'i, Kaua'i, and Maui; the Mediation Center of the Pacific; banks and trust companies; consulting firms; development corporations; real estate firms; university research and extension organizations; and community colleges.

On the continental U.S., graduates are city and county planners, program analysts in federal agencies (e.g., Office of Ocean and Coastal Management and Office of Management and Budget), and planning consultants. Other graduates include a planner for a nonprofit housing corporation, a lawyer-planner, and a law professor. Overseas positions include planners with regional planning, housing redevelopment and environmental agencies, the United Nations, and private development and consulting firms, as well as faculty in university programs. Several MURP graduates are pursuing doctoral degrees in planning, geography, political science, and economics, while others are seeking law degrees.

Requirements

The MURP degree is a two-year professional program that requires a minimum of 42 credit hours. It is designed to equip students to fill professional planning and policy analysis roles in public agencies, private firms, and community groups, particularly in Hawai'i, Asia, and the Pacific Basin. All students complete the core sequence (planning theory, planning methods, economic analysis for urban and regional planning, a 6-credit-hour practicum, and two of the following courses: PLAN 610, 620, 630, and 640). The remainder of the academic program, including a second methodology course, is individually designed with concentration in a specialized area of the student's own choosing (with the consent of his or her advisor), provided adequate academic resources are available in the department and at UH Mānoa. Grades of B or better are required in PLAN 600, 601, 603, and 605, and an average of

B or better must be earned in all courses counted toward the MURP degree. MURP students receiving a grade lower than a B will be allowed one additional opportunity to achieve a B or better in each core course.

Both Plan A (thesis) and Plan B (non-thesis) programs are available. All students are required to pass a final, which includes a successful defense of the thesis on the selected area of concentration, and to meet the program standards for graduation.

Doctoral Degree

The doctoral program provides training in advanced research in urban and regional planning. Graduates are expected to pursue academic appointments at institutions of higher education and to achieve higher levels of professional practice in the public and private sectors.

Admission Requirements

Admission to the PhD program requires a master's degree in planning. In exceptional circumstances candidates with either an advanced research background or exceptional professional experience, but who do not have an MA degree may be admitted. Admission may be granted with the understanding that some background courses or examinations may be required. Consideration for admission requires a GPA of at least a 3.5 in previous graduate work. Applicants are also required to submit Graduate Record Examination (GRE) scores for verbal, math and analytic sections. Non-native speakers of English are also required to submit the TOEFL; a score of 600 is required. Applicants are also expected to submit evidence of advanced work such as a research report or sole-authored plan.

Degree Requirements

Each PhD degree student is required to complete at least fifteen credits in advanced courses (in addition to any remedial courses designated at the time of admission):

- Advanced Methods (3 credits)
- Advanced Seminar in Planning (3 credits)

In addition to these two courses, PhD candidates are required to take six credits in an allied field (to be selected in consultation with the student's advisor). Students are also required to take one three-credit course in research design/proposal writing.

Prior to starting the dissertation, PhD candidates will sit for a comprehensive examination in planning theory and planning methods. Students will be required to form a PhD committee drawn primarily, although not exclusively from the department, to guide the student through the qualifying examination and the dissertation research. Under the direction of its chair, the committee will devise a qualifying examination covering both core topics in urban and regional planning and the student's substantive area of research. Upon successful completion of the qualifying examination, students will be required to present their dissertation proposal, to a department colloquium. When the student has successfully completed the examinations and presented the dissertation proposal the student will advance to candidacy. Each student is required to conduct original research and write and present a defense of a doctoral dissertation based

on the dissertation proposal. The dissertation research will be guided by the student's committee. Upon completion, the student will defend the dissertation before the committee. If successful, the candidate will be recommended for award of the PhD in Urban and Regional Planning by the UH.

Professional Certificate in Urban and Regional Planning

The Professional Certificate in Urban and Regional Planning is designed for practicing planners eligible for graduate admission who are not able to attend school for the two years required to earn a MURP degree.

Professional certificate candidates specialize in one of the following four fields: community planning and social policy, environmental planning, land use and infrastructure planning, or urban and regional planning in Asia and the Pacific.

Professional certificate candidates are required to earn 18 credit hours including PLAN 600, 603, and 601 or 605. Each candidate selects a field of interest in which he or she takes two courses including PLAN 610, 620, 630, or 640. The specific courses are selected in consultation with the candidate's faculty advisor.

Applicants for the professional certificate program should apply to the Graduate Division as special non-degree students. Two letters of reference should be sent to the department from people who are familiar with the applicant's academic or professional record. Applicants must have earned a BA, BS, or a professional degree; have maintained a minimum GPA of 3.0 in the four semesters prior to admission; and have had at least three years of professional practice prior to admission.

Certificate in Planning Studies

The Certificate in Planning Studies allows students pursuing a master's or doctoral degree in another area to become acquainted with planning skills and activities. Students enrolled in graduate programs in architecture, economics, engineering, geography, political science, public health, social work, and sociology are among those eligible. Students are encouraged to use the certificate program to increase their competence in planning as it relates to their major area of study.

Certificate students are required to take five courses offered by the department and complete the requirements for a master's degree in their area of study. The required courses are PLAN 600, 601 or 605, and 751. The remaining two courses are to be selected from among the following courses by the certificate student in consultation with the faculty member responsible for directing the planning studies certificate program: PLAN 601 or 605 (whichever was not taken as a required method course); 602 or 603; and one of 610, 620, 630, or 640, or one elective course.

Successful completion of the program leads to a graduate degree in the student's chosen field and a Certificate in Planning Studies. Consideration for admission to the certificate program requires filing of an application form available from the department.

Women's Studies

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Honolulu, HI 96822
Tel: (808) 956-7464
Fax: (808) 956-9616
Web: www.womenstudies.hawaii.edu

Faculty

- *S. Hippensteele, PhD (Director)—psychology, law, civil rights
- *S. Charusheela, PhD—feminist political economy, gender and development
- *M. Chesney-Lind, PhD—criminology, sociology of gender
- M. Das Gupta, PhD—feminist theory and methods, immigration, race relations in the U.S.
- *R. Dawson, PhD—women and literature
- *K. Ferguson, PhD—feminist theory and methods, political theory
- *M. Koikari, PhD—sociology, Asia-Pacific studies

Affiliate Faculty

- H. Aikau—political science
- B. Andaya—Asian Studies
- B. Aquino—political science
- C. Bacchilega—English
- C. Browne—social work
- J. Byrd—political science
- V. Dalmiya—philosophy
- L. Despain—English
- P. Flowers—political science
- R. Fong—social work
- C. Franklin—English
- M. Ghosh—librarian
- J. Goldberg-Hiller—political science
- M. Hara—English
- K. Heyer—political science
- R. Hsu—English
- K. Irwin—sociology
- K. Kane—Center for Teaching Excellence
- V. Kanuha—social work
- V. Kanuha—sociology
- B. Keever—journalism
- V. Lanzona—history
- N. Lewis—East-West Center and Geography
- L. Lyons—English
- K. Phillips—English
- S. Rai—Study Abroad Program
- K. Reynolds—Japanese
- L. Ruch—sociology
- J.-M. Seo—political science
- M. Sharma—Asian studies
- N. Silva—political science
- C. Sinavaiana—English
- A. Sloat—nursing
- K. Takara—interdisciplinary studies

K. Teaiwa—Pacific island studies
 T. K. Tengan—ethnic studies, anthropology
 H. Trask—Hawaiian studies
 K. Umemoto—urban and regional planning
 V. Wayne—English
 C. Yano—anthropology
 M. Yoshihara—American studies
 A. Yap—Study Abroad Program
 H. Young Leslie—anthropology
 M. Yue—Chinese literature
 K. Zhou—political science

Degree and Certificates Offered: Undergraduate Certificate in Women's Studies, BA in women's studies (through Interdisciplinary Studies), Graduate Certificate in Advanced Women's Studies

The Academic Program

The Women's Studies program offers an interdisciplinary approach to the study of women and gender issues. The purpose of the program is to provide a rigorous and integrated academic experience for students interested in feminist research and teaching, giving them a coherent program of study in contemporary scholarship in feminist and gender studies. With a faculty trained in a variety of fields, the program investigates the role of gender as it intersects with race, class, and other vectors of power in shaping the study of history, psychology, anthropology, economics, sociology, political science, philosophy, literature, language, art, drama, education, law, medicine, and biology.

Women and men from all colleges at UH Mānoa take Women's Studies courses because of their intellectual rigor, their political insight, and their interdisciplinary ties to other fields of study. Many courses are cross-listed with other departments. Women's Studies is a uniquely powerful avenue of self-understanding as well as a means of connecting research on women and gender to other academic fields of inquiry. Those who understand the workings of gender in personal lives and social orders can better pursue a variety of careers and life goals. Women's Studies offers a unique opportunity to study racial, economic, ethnic, sexual, regional, and global matters of interest among women in Hawai'i and around the world, past, present, and future.

Undergraduate Study

Bachelor's Degree

Women's Studies offers a flexible, self-designed major through the Interdisciplinary Studies program. Students work in close consultation with faculty to design and develop the academic experience that best fits their interests, goals, and needs. The aim of the self-designed major is to promote a coherent program of study in contemporary interdisciplinary scholarship in feminist and gender studies, while allowing students to pursue either a specialized course or a general course of study. A key purpose of the major is to provide an integrated academic experience for students interested in feminist

scholarship and gender issues, while offering flexibility and freedom in planning the degree.

Requirements

To obtain a major in Women's Studies, students must:

- Write a detailed and acceptable proposal explaining their plans, with adequate faculty counseling. Depending on their interests, students can propose a self-designed major that either has a *special concentration* within the field of Women's Studies, or has a more *general focus* on the broad field of Women's Studies.
- Ensure that the proposal satisfies the Interdisciplinary Studies guidelines for self-designed majors.
- Include Feminist Theory (WS 439/POLS 339), and one course on gender, race, and ethnicity in transnational perspective (list of courses available from program).

Students who opt for a broad Women's Studies major can take a maximum of three (3) general elective courses outside women's studies as part of their major, as long as they are chosen to strengthen the overall purpose for course design along interdisciplinary studies guidelines. Students who opt for a special sub-focus within a Women's Studies major can take a maximum of five (5) general elective courses outside Women's Studies, as long as they are chosen to strengthen the overall purpose for course design along Interdisciplinary Studies guidelines. For administrative purposes, any cross-listed course will be counted as a Women's Studies course regardless of the departmental designation under which students register for the course.

Advising

Students who plan to pursue the major through the Interdisciplinary Studies program should meet with the Interdisciplinary Studies program advisor. Interested students should refer to the "Interdisciplinary Studies" section within the Colleges of Arts and Sciences, or consult with the Interdisciplinary Studies program, Krauss 116, (808) 956-7297. In addition, students should meet with the Women's Studies undergraduate program advisor (currently Dr. Ruth Dawson) for help in choosing classes, defining their area of interest, creating and developing proposals, and finding the faculty advisor most suited to their areas of interest.

The Undergraduate Certificate

The Certificate in Women's Studies is designed to encourage all undergraduates to acquire a more thorough background in contemporary interdisciplinary scholarship in feminist and gender studies, and to incorporate feminist perspectives and issues into their major fields of specialization. Through this interdisciplinary option, students from various majors can study the specific achievements of women, examine the many factors that determine the status of women across cultures and through time, and analyze theories and assumptions about women that particularly relate to their majors.

The Certificate's practical value includes the enhancement of knowledge that develops students' abilities to think critically and constructively about their world and their lives. Further, it offers a credential that is applicable to a wide range of careers

including medicine, law, business, education, counseling, and social work. The Certificate can also provide the groundwork for advanced study of feminism and the graduate level application of feminist theories.

All registered students in good academic standing who are working towards a baccalaureate degree other than Women's Studies at UH Mānoa may apply for a Women's Studies Certificate.

Requirements

- Students must complete 15 credits in Women's Studies with a grade of C (not C-) or better.
- The 15 credits must include the following two requirements: a course in Feminist Theory (WS 439/POLS 339), and at least one course in gender, race, and ethnicity in transnational perspectives (list of courses available from the program).
- At least 9 credits must be at the 300 level or higher.

Students can count courses taken toward their major or toward core requirements for their Certificate in Women's Studies. For administrative purposes, any cross-listed course will be counted as a Women's Studies course regardless of the departmental designation under which students register for the course.

Graduate Study

Women's Studies offers a Graduate Certificate in Advanced Women's Studies (AdWS Certificate). This Certificate program provides a rigorous, integrated and relevant educational experience for students whose education and career objectives will be enhanced through creative and scholarly feminist analysis of women's lives and visions. The program guides students to: examine the factors that affect the status of women across cultures and through time; analyze theories and assumptions about women in various disciplines; contribute to the reformulation of social knowledge; explore institutionalizing social change that highlights and supports the achievements of women locally and internationally; and understand the usefulness of gender as an analytical tool in many fields.

Graduate studies leading to the AdWS Certificate are focused in four broad areas under the general rubric of gender studies.

- Feminist methods of inquiry and theoretical analysis. Students will explore sex/gender as an analytical category, asking what this category means, what purposes are served by the prevailing binary notions of gender, and how gender is constituted in past, current, and future social, biological, cultural, and economic contexts.
- Feminist knowledge. Students will learn about the pervasive impact of gender relations on thoughts, actions, and prevailing constructions of reality. They also will become acquainted with an array of feminist theories and arguments about such issues as political action, reproduction, and sexual orientation.

- Sex/gender and social-political categories of power and privilege. Students will examine the interaction of sex/gender with race/ethnicity, class, sexuality, and other primary vectors of power and privilege as relevant to nearly all domains of human experience. They will have opportunities to explore the dynamics of these interactions with emphasis on the evolving multicultural milieu of Hawai'i and the Asia/Pacific region.
- Sources of sex/gender differences. Students will examine both the empirical and philosophical debates concerning sameness and difference as these relate to the topic of gender. Sources of gender/sex differences as well as the significance of these also will be considered.

Recipients of the AdWS Certificate must be classified graduate students, and normally will be pursuing graduate degrees in other academic departments. The AdWS Certificate will help students learn to apply feminist methodologies, analysis and problem-solving to their other academic fields, and to integrate the rigors of the scholarship on gender into their chosen professions as a means of enhancing their professional lives and opportunities for advancement.

A brochure listing research interests and publications of the members of the Women's Studies graduate faculty, as well as describing admissions and program requirements, is available on request from the program; this information also is available online at www2.soc.hawaii.edu. The following sections summarize the admissions and program requirements, but the program brochure should be consulted for complete details.

Admissions

Students are admitted to the AdWS Certificate program in the fall and spring semesters. Applicants to the AdWS Certificate Program must be classified graduate students at UH Mānoa. Candidates are required to submit their current and complete transcripts, three letters of recommendation, and the names of and full contact information for three additional references. Applicants also must submit a 4-5 page essay outlining their personal and professional goals as they relate to the AdWS Certificate program, and identifying potential research and/or community involvement projects they may wish to pursue as part of their AdWS Certificate work.

Requirements

The AdWS Certificate program consists of a minimum of 18 credits, at least 12 of which must be at the 600 level or higher. Nine of these credits must come from the following four Women's Studies courses: WS 610 (1 cr), Faculty Seminar Series; WS 613 (3 cr), Feminist Research and Methods of Inquiry; WS 615 (3 cr), Feminist Theory; WS 650 (2 cr), Research in Feminist Studies: Capstone Experience.

Remaining credits will be drawn from a list of courses approved by the Women's Studies graduate advisor (currently Dr. Meda Chesney-Lind). All students will work with a specific advisor to develop an AdWS Certificate curriculum based on their academic majors that best supports their academic and professional goals and objectives. Up to 6 credits towards the certificate may be taken in the student's home department

provided that department's curriculum includes courses approved by Women's Studies.

Each student enrolled in the AdWS Certificate program will design, develop, and complete a research and/or community involvement project to culminate in a publishable-quality work or comparable product, and a professional quality seminar presentation given in the student's final semester of the program.

Zoology

College of Natural Sciences

Edmondson 152

2538 McCarthy Mall

Honolulu, HI 96822

Tel: (808) 956-8617 / (808) 956-7315

Fax: (808) 956-9812

E-mail: zoology@hawaii.edu

Web: www.hawaii.edu/zoology

Faculty

*S. Conant, PhD (chair)—ornithology, ecology, behavior, conservation biology

*J. H. Bailey-Brock, PhD—invertebrate zoology, reef ecology, Polychaetes

*C. Birkeland, PhD—coral reef biology, fisheries

*D. Carlon, PhD—evolution population biology, invertebrate biology

*K. Cole, PhD—ichthyology, behavioral ecology, reproductive biology, morphology and morphogenesis, space biology

*I. M. Cooke, PhD—cellular neurophysiology, neurosecretion

*H. G. de Couet, PhD—molecular genetics and cytoskeleton

*L. A. Freed, PhD—evolutionary and behavioral ecology, ornithology, conservation biology

*T. Fukami, PhD—historical perspectives on communities and ecosystems

*M. G. Hadfield, PhD—reproduction and development of invertebrates

*R. A. Kinzie III, PhD—coral reef biology, marine ecology, limnology

*J. D. Parrish, PhD—community ecology, fishery biology

*S. Robinow, PhD—neurogenetics

*J. S. Stimson, PhD—population ecology, marine ecology

*A. D. Taylor, PhD—population, theoretical, and insect ecology

*T. Tricas, PhD—marine animal behavior

*A. Wikramanayake, PhD—developmental biology

*C. Womersley, PhD—environmental physiology, biochemical adaptation, parasitology

Cooperating Graduate Faculty

W. W. L. Au, PhD—marine bioacoustics and echolocation

B. Bowen, PhD—molecular genetics of marine vertebrates

R. Cowie, PhD—evolutionary biology, biogeography, ecological genetics, snails, termites

D. Duffy, PhD—conservation biology, sea birds

R. Gates, PhD—molecular biology, developmental genetics, cell biology, physiology and ecology of corals

E. G. Grau, PhD—comparative endocrinology, environmental physiology

D. K. Hartline, PhD—quantitative neurophysiology and simulation of simple networks

K. N. Holland, PhD—physiology, behavior, ecology of aquatic organisms

T. D. Humphreys, PhD—cellular, molecular, biochemical, developmental biology in marine organisms

C. L. Hunter, PhD—conservation biology, coral reef ecology, biology and ecology of marine invertebrates

P. J. Jokiel, PhD—coral reef biology, biogeography and ecology

K. Y. Kaneshiro, PhD—systematics, evolution, insect behavior

P. Lenz, PhD—neuroecology of zooplankton sensory systems

M. Q. Martindale, PhD—evolution of development

P. E. Nachtigall, PhD—behavior and sensory processes of marine mammals

R. Richmond, PhD—invertebrate zoology, conservation biology

E. Seaver, PhD—comparative developmental biology of marine annelids

R. Toonen, PhD—molecular genetics of marine organisms

Affiliate Graduate Faculty

A. Allison, PhD—vertebrate zoology

P. Banko, PhD—ecology, ornithology

S. E. Miller, PhD—invertebrate zoology, conservation biology

J. E. Randall, PhD—ichthyology

Degrees Offered: BA (including minor) in zoology, BS in zoology, MS in zoology, PhD in zoology

The Academic Program

The Department of Zoology at UH Mānoa offers undergraduate programs leading to bachelor of science and bachelor of arts degrees and a zoology minor, and graduate programs that offer master of science and PhD degrees. Of particular note is the department's emphasis on tropical marine biology and evolutionary biology. There are few places in the U.S. where these emphases can be pursued more productively or in a more practical setting. Students can acquire a broad background for a career in marine biology. The BS degree is particularly suited for students preparing for graduate training in zoology and related fields and for those seeking immediate employment in zoology-related research and application markets, providing the broadest scientific background at the undergraduate level. Students preparing for pre-professional programs (premedical, pre-dental, pre-physical therapy, pre-veterinary medical) should consider the BA degree. It provides greater flexibility in pursuing the broad liberal arts education encouraged by professional schools. The courses applied toward the zoology major may then be selected with those programs in mind.

Undergraduate Study

Prospective majors should consult a departmental advisor.

BA Degree

Requirements

- BIOL 172/172L
- BIOL 265/265L
- BIOL 275/275L
- CHEM 161/161L and 162/162L (or CHEM 171/171L)
- CHEM 272/272L and 273
- BIOC 441 or BIOL 405 (cross-listed CMB 405), or BIOL 402 (cross-listed PEPS 402 or MBBE 402) (biochemistry lab not required)
- MATH 215 or 241, or equivalent college-level calculus

Students must take an additional 20 credit hours, including:

- ZOOL 490
- Three laboratory courses from the following areas:
 - Developmental (ZOOL 420/420L)
 - Physiology (ZOOL 430/430L, BIOL 406/406L or 407/407L)
 - Ecology and Behavior (ZOOL 306/ 306L, 439/439L, or 470/470L)
 - Genetics (BIOL 375/375L)
 - Morphology and Taxonomy (ZOOL 320/320L, 340/340L, 416/416L, 465/465L, or 475/475L; PEPS 363 or 462)
- Non-laboratory courses applicable toward (20 credits): BIOL 490, ZOOL 399, ZOOL 499, ZOOL courses numbered 300 and above

Zoology courses at the 200 level carry no major credit. MATH 216 or 242 and a year of college physics are strongly recommended for students planning graduate study.

BS Degree

Requirements

Students must complete 78 to 82 credit hours, including:

- BIOL 172/172L
- BIOL 265/265L
- BIOL 275/275L
- BIOL 375/375L
- CHEM 161/161L and 162/162L
- CHEM 272/272L and 273
- BIOC 441 or BIOL 405 (cross-listed CMB 405), or BIOL 402 (cross-listed PEPS 402 or MBBE 402) (labs not required)
- PHYS 151/151L, 152/152L; or PHYS 170/170L, 272/272L
- MATH 215 and 216, or 241 and 242
- ZOOL 320/320L, or 475/475L, or PEPS 363
- ZOOL 430/430L
- ZOOL 490
- ZOOL 499 (4 credit hours)

Also required are 9 credits of zoology electives (300 level or above in ZOOL or approved BIOL courses), 6 credits in science electives (300 level or above in approved courses

in natural sciences), and one semester experience as an undergraduate teaching intern in an approved instructional laboratory.

Minor

Requirements

(At least 15 credits from the following courses, including 2 lab courses from 2 of the following 5 areas)

I. Development

- ZOOL 420/420L

II. Genetics

- BIOL 375/375L
- GENE 451 and 453

III. Physiology

- BIOL 275/275L
- BIOL 407/407L
- ZOOL 430/430L
- ZOOL 431
- ZOOL 432/432L

IV. Ecology and Behavior

- ZOOL 200/200L
- ZOOL 265/265L
- ZOOL 306/306L
- ZOOL 439/439L
- ZOOL 470/470L

V. Morphology and Taxonomy

- ZOOL 320/320L
- ZOOL 340/340L
- ZOOL 416/416L
- ZOOL 465/465L
- ZOOL 475/475L

Other Courses Applicable Toward Minor in Zoology

- BIOL 406
- BIOL 490
- Any ZOOL courses numbered 300 and above

Graduate Study

The department offers programs of graduate study and research leading to the MS and PhD degrees. The major strengths of the graduate program in zoology are in the areas of animal behavior; cellular, molecular, and developmental biology; and evolution and ecology. Especially strong programs have developed in areas that utilize the resources of Hawai'i's unique island setting, including developmental biology, marine biology, and ecology, evolution and conservation biology. Much of the research in the department emphasizes the animals of Hawai'i: marine invertebrates, terrestrial arthropods, fishes, and birds.

Graduate students in zoology may join three interdisciplinary graduate specializations: the Cellular and Molecular Biology (CMB); the Ecology, Evolution, and Conservation Biology (EECB) Program; and the Marine Biology (MB) Program. The department also hosts the Hawai'i Cooperative Fishery Research Unit and has active affiliations with the Hawai'i Institute of Marine Biology, the Kewalo Marine Laboratory, the Békésy Laboratory of Neurobiology, and the Center for Conservation Research and Training.

Recipients of the MS degree usually teach, pursue careers in research or government service, or pursue further graduate training. Those with the PhD ordinarily seek teaching positions in colleges and universities or research careers in university, government, or private laboratories.

A brochure listing research interests and publications of the members of the zoology graduate faculty, as well as summarizing admissions and program requirements and opportunities for financial aid, is available on request from the department; a separate graduate student handbook describes the details of program requirements and procedures. This information also is available on the Web at www.hawaii.edu/zoology. The following sections summarize the admissions and program requirements, but the department brochure and handbook should be consulted for complete details.

Admissions

Students are admitted to the graduate program only in the fall semester; the application deadline is **December 15**. Applicants must submit a completed graduate application form, the official record of performance on the GRE General Test, transcripts for all previous undergraduate and graduate studies; and letters of recommendation from three persons who can appraise the student's aptitude for graduate study. It is strongly recommended that students take the GRE Biology subject test, and include an official record of performance in their applications. An applicant also must be sponsored by a member of the graduate faculty who has indicated his or her willingness to advise the student; the applicant should communicate with prospective faculty sponsors well in advance of the application deadline.

Intended candidates for the MS or PhD degrees in zoology are expected to present a minimum of 18 credit hours of undergraduate course work in zoology and/or biology and to have completed at least three semesters of chemistry (inorganic and organic), one year of physics, and at least one course each in calculus and botany. Deficiencies in undergraduate preparation must be rectified within the first 2 years, without graduate credit, except that biochemistry or molecular biology may be taken for graduate credit if it is at the 400-700 level. A course in biochemistry or molecular biology is required of all students, but it may be taken for graduate credit.

General Requirements

To ensure that students have broad competence in zoology, they must take a diagnostic examination at the start of their first semester. This examination seeks evidence of competence at the level of the undergraduate major (for MS students) or the master's degree (for PhD students) in the areas of molecular-cellular, organismic, and supraorganismic zoology. Students scoring at the 90th percentile or higher on any of these sections of the GRE biology test are exempted from the corresponding section of the diagnostic exam. Students who do not perform satisfactorily on the diagnostic examination will be required to take remedial course work, which must be completed within two years.

All entering students are required to take ZOOL 691C. All graduate students are required to take at least one graduate seminar or topics course each year.

Master's Degrees

Thesis (Plan A) and non-thesis (Plan B) programs leading to the MS degree in zoology are available. In addition to the thesis, Plan A requires a minimum of 24 credit hours of course work and 6 credit hours of ZOOL 700 (thesis). The 24 credit hours must include at least 12 credit hours of 600- or higher-level course work. The 24 credit hours may include up to 6 credit hours from related departments and up to 2 credit hours of ZOOL 699.

Plan B is a non-thesis program and requires a minimum of 30 credit hours in 400- through 700-level courses. The 30 credit hours must include at least 6 but not more than 16 credit hours from related departments (excluding courses cross-listed in zoology or applicable to the zoology BA degree) at least 2 but not more than 5 credit hours of ZOOL 699, and at least 18 credit hours of 600 or higher level course work. A research paper based on original scientific work is required.

Doctoral Degree

Many applicants to the PhD program will have completed a master's degree, but well-qualified applicants without a master's degree may be admitted directly into the PhD program. Students enrolled in the master's program also may apply for, provided they clearly indicate they wish to do so in their application. Students currently enrolled in the master's program also may apply for admission into the PhD program without completing the master's degree.

Course Requirements

For students matriculating with a master's degree in Zoology (or equivalent), there are no course requirements for the PhD degree other than the general requirements (ZOOL 691C in the first year, and at least one graduate seminar or topics course each year), and any courses required by the student's dissertation committee.

For students matriculating with a bachelor's degree, general course requirements are very similar to the requirements for students receiving a Plan A Master's degree. A minimum of 24 credits are required in courses numbered 400-800. Additionally, 6 credits are required of ZOOL 800 (dissertation), for a total of 30 credit hours. Students are required to enroll in ZOOL 800 during the term in which their degree will be conferred. At least 12 of the 24 credits of required coursework should be in 600-700 level courses, not counting ZOOL 699. The Zoology Department requires that 1 of the 24 coursework credits include ZOOL 691C. Of the 24 required credit hours, student may include a maximum of 2 credit hours from ZOOL 699, and up to 6 of the 24 credits are allowed from courses in related departments. All courses cross-listed with Zoology, and all Biology courses which can be counted towards a Zoology BA or BS, are considered Zoology courses, not courses in a related department.

Other Requirements

An oral comprehensive examination must be passed within one year of admission to candidacy; this examination will emphasize the student's research area but may cover any facet of zoology.

The research project culminating in the dissertation is the most important part of the PhD degree program. The dissertation is to be an original contribution based on independent research, carried out under the guidance of the advisor and dissertation committee. The completed dissertation is defended at a public final examination, conducted by the dissertation committee and including a public research seminar by the candidate.

Further Information

Further information about the graduate program in zoology, including full details of admissions and program requirements, may be obtained from the department or at www.hawaii.edu/zoology. Other inquiries may be sent to zoology@hawaii.edu.

