## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degrees, Minors and Certificates Offered</td>
<td>88</td>
</tr>
<tr>
<td>Administration</td>
<td>89</td>
</tr>
<tr>
<td>General Information</td>
<td>89</td>
</tr>
<tr>
<td>Accreditations and Affiliations</td>
<td>89</td>
</tr>
<tr>
<td>Degrees, Minors and Certificates</td>
<td>89</td>
</tr>
<tr>
<td>Certificate Programs</td>
<td>90</td>
</tr>
<tr>
<td>Advising</td>
<td>90</td>
</tr>
<tr>
<td>Undergraduate Programs</td>
<td>90</td>
</tr>
<tr>
<td>Requirements for Undergraduate Degrees from the Colleges of Arts and Sciences</td>
<td>91</td>
</tr>
<tr>
<td>UH Mānoa General Education Core Requirements</td>
<td>91</td>
</tr>
<tr>
<td>UH Mānoa Graduation Requirements</td>
<td>91</td>
</tr>
<tr>
<td>A&amp;S Degree Requirements</td>
<td>91</td>
</tr>
<tr>
<td>A&amp;S Major Requirements</td>
<td>91</td>
</tr>
<tr>
<td>Requirements That May Be Double-Dipped</td>
<td>92</td>
</tr>
<tr>
<td>Second or Multiple Majors and Minors</td>
<td>92</td>
</tr>
<tr>
<td>Second Baccalaureate Degree</td>
<td>92</td>
</tr>
<tr>
<td>Professional Programs</td>
<td>93</td>
</tr>
<tr>
<td>Graduate Programs</td>
<td>93</td>
</tr>
<tr>
<td>Student Organizations</td>
<td>93</td>
</tr>
<tr>
<td>Honors and Awards</td>
<td>93</td>
</tr>
<tr>
<td>Instructional and Research Centers</td>
<td>93</td>
</tr>
<tr>
<td>Center for Biographical Research</td>
<td>93</td>
</tr>
<tr>
<td>Center for Interpretation and Translation Studies</td>
<td>93</td>
</tr>
<tr>
<td>Center for Language and Technology</td>
<td>94</td>
</tr>
<tr>
<td>National Foreign Language Resource Center</td>
<td>94</td>
</tr>
<tr>
<td>Academy for Creative Media</td>
<td>94</td>
</tr>
<tr>
<td>American Studies</td>
<td>95</td>
</tr>
<tr>
<td>Anthropology</td>
<td>97</td>
</tr>
<tr>
<td>Art and Art History</td>
<td>100</td>
</tr>
<tr>
<td>Astronomy</td>
<td>103</td>
</tr>
<tr>
<td>Biology</td>
<td>105</td>
</tr>
<tr>
<td>Marine Option Program</td>
<td>107</td>
</tr>
<tr>
<td>Botany</td>
<td>107</td>
</tr>
<tr>
<td>Chemistry</td>
<td>110</td>
</tr>
<tr>
<td>Communication</td>
<td>112</td>
</tr>
<tr>
<td>Communicology</td>
<td>113</td>
</tr>
<tr>
<td>East Asian Languages and Literatures</td>
<td>115</td>
</tr>
<tr>
<td>Economics</td>
<td>117</td>
</tr>
<tr>
<td>English</td>
<td>120</td>
</tr>
<tr>
<td>Environmental Studies</td>
<td>122</td>
</tr>
<tr>
<td>Ethnic Studies</td>
<td>123</td>
</tr>
<tr>
<td>Geography</td>
<td>124</td>
</tr>
<tr>
<td>History</td>
<td>126</td>
</tr>
<tr>
<td>Indo-Pacific Languages and Literatures</td>
<td>128</td>
</tr>
<tr>
<td>Information and Computer Sciences</td>
<td>129</td>
</tr>
<tr>
<td>Journalism</td>
<td>132</td>
</tr>
<tr>
<td>Languages and Literatures of Europe and the Americas</td>
<td>132</td>
</tr>
<tr>
<td>Library and Information Science</td>
<td>135</td>
</tr>
<tr>
<td>Linguistics</td>
<td>137</td>
</tr>
<tr>
<td>Marine Biology</td>
<td>138</td>
</tr>
<tr>
<td>Mathematics</td>
<td>139</td>
</tr>
<tr>
<td>Microbiology</td>
<td>141</td>
</tr>
<tr>
<td>Music</td>
<td>143</td>
</tr>
<tr>
<td>Peace Studies (Spark Matsunaga Institute for Peace and Conflict Resolution)</td>
<td>146</td>
</tr>
<tr>
<td>Philosophy</td>
<td>149</td>
</tr>
<tr>
<td>Physics</td>
<td>151</td>
</tr>
<tr>
<td>Political Science</td>
<td>153</td>
</tr>
<tr>
<td>Psychology</td>
<td>154</td>
</tr>
<tr>
<td>Public Administration</td>
<td>156</td>
</tr>
<tr>
<td>Public Policy Center</td>
<td>157</td>
</tr>
<tr>
<td>Religion</td>
<td>158</td>
</tr>
<tr>
<td>Second Language Studies</td>
<td>160</td>
</tr>
<tr>
<td>English Language Institute</td>
<td>163</td>
</tr>
<tr>
<td>Hawai’i English Language Program</td>
<td>164</td>
</tr>
<tr>
<td>Sociology</td>
<td>164</td>
</tr>
<tr>
<td>Theatre and Dance</td>
<td>166</td>
</tr>
<tr>
<td>Urban and Regional Planning</td>
<td>171</td>
</tr>
<tr>
<td>Women’s Studies</td>
<td>174</td>
</tr>
<tr>
<td>Zoology</td>
<td>176</td>
</tr>
</tbody>
</table>
### 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 2014 may not be reflected in this listing.

<table>
<thead>
<tr>
<th>Field</th>
<th>Degree or Certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Studies (p. 95)</td>
<td>Min, BA, MA, PhD</td>
</tr>
<tr>
<td>Anthropology (p. 97)</td>
<td>Min, BA, MA, PhD</td>
</tr>
<tr>
<td>Art and Art History (p. 100)</td>
<td>Min, BA, BFA, MA, MFA</td>
</tr>
<tr>
<td>Astronomy (p. 103)</td>
<td>Min, BA, MS, PhD</td>
</tr>
<tr>
<td>Astrophysics (p. 103)</td>
<td>Min, BS</td>
</tr>
<tr>
<td>Biochemistry (p. 110)</td>
<td>BA, BS, MA, PhD</td>
</tr>
<tr>
<td>Biology (p. 105)</td>
<td>Min, BA, BS, MA, PhD</td>
</tr>
<tr>
<td>Botany (p. 107)</td>
<td>Min, BA, BS, MS, PhD</td>
</tr>
<tr>
<td>Chemistry (p. 110)</td>
<td>Min, BA, BS, MA, PhD</td>
</tr>
<tr>
<td>Chinese (p. 115)</td>
<td>U Cert, Min, BA, MA, PhD</td>
</tr>
<tr>
<td>Classics (p. 134)</td>
<td>U Cert, BA</td>
</tr>
<tr>
<td>Clinical Psychology (p. 154)</td>
<td>G Cert, BA</td>
</tr>
<tr>
<td>Communication (p. 112)</td>
<td>BA, MA, G Cert, PhD</td>
</tr>
<tr>
<td>Communicology (p. 113)</td>
<td>Min, BA, MA, PhD</td>
</tr>
<tr>
<td>Computer Science (p. 129)</td>
<td>Min, BS, MS, PhD</td>
</tr>
<tr>
<td>Conflict Resolution (p. 146)</td>
<td>G Cert, Creative Media (p. 94)</td>
</tr>
<tr>
<td>Dance (p. 166)</td>
<td>Min, BA, BFA, MA, MFA</td>
</tr>
<tr>
<td>Disaster Management and Humanitarian Assistance (p. 171)</td>
<td>G Cert, BA</td>
</tr>
<tr>
<td>East Asian Languages and Literatures (p. 115)</td>
<td>MA, PhD</td>
</tr>
<tr>
<td>Economics (p. 117)</td>
<td>Min, BA, MA, G Cert, PhD</td>
</tr>
<tr>
<td>English (p. 120)</td>
<td>Min, BA, MA, PhD</td>
</tr>
<tr>
<td>Environmental Studies (p. 122)</td>
<td>U Cert, BA</td>
</tr>
<tr>
<td>Ethnic Studies (p. 123)</td>
<td>U Cert, BA</td>
</tr>
<tr>
<td>Ethnobotany (p. 107)</td>
<td>BS</td>
</tr>
<tr>
<td>Filipino (p. 128)</td>
<td>U Cert, Min, BA</td>
</tr>
<tr>
<td>French (p. 132)</td>
<td>U Cert, BA, MA</td>
</tr>
<tr>
<td>Geography (p. 124)</td>
<td>Min, BA, MA, PhD</td>
</tr>
<tr>
<td>German (p. 132)</td>
<td>U Cert, BA</td>
</tr>
<tr>
<td>Hindi (p. 128)</td>
<td>U Cert, BA</td>
</tr>
<tr>
<td>Historic Preservation (p. 95)</td>
<td>G Cert</td>
</tr>
<tr>
<td>History (p. 126)</td>
<td>Min, BA, MA, PhD</td>
</tr>
<tr>
<td>Ilokano (p. 128)</td>
<td>U Cert, Min, BA</td>
</tr>
<tr>
<td>Indonesian (p. 128)</td>
<td>U Cert, BA</td>
</tr>
<tr>
<td>Indo-Pacific Languages (p. 128)</td>
<td>U Cert, BA</td>
</tr>
<tr>
<td>Information and Computer Sciences (p. 129)</td>
<td>BA</td>
</tr>
<tr>
<td>Islamic Studies (p. 100, 126, 153, 160)</td>
<td>U Cert, BA, MA, PhD</td>
</tr>
<tr>
<td>Japanese (p. 115)</td>
<td>U Cert, Min, BA, MA, PhD</td>
</tr>
<tr>
<td>Journalism (p. 132)</td>
<td>BA, Khmer (Cambodian) (p. 128)</td>
</tr>
<tr>
<td>Korean (p. 115)</td>
<td>U Cert, Min, BA, MA, PhD</td>
</tr>
<tr>
<td>Languages and Literatures of Europe and the Americas (p. 132)</td>
<td>MA</td>
</tr>
<tr>
<td>Latin America and Iberian Studies (p. 132)</td>
<td>U Cert, Law and Society (p. 21)</td>
</tr>
<tr>
<td>Library and Information Science (p. 135)</td>
<td>G Cert, MLISc</td>
</tr>
<tr>
<td>Linguistics (p. 137)</td>
<td>BA, MA, PhD</td>
</tr>
<tr>
<td>Marine Biology (p. 138)</td>
<td>BS, MS, PhD</td>
</tr>
<tr>
<td>Marine Option Program (p. 107)</td>
<td>U Cert, Mathematics (p. 139)</td>
</tr>
<tr>
<td>Mathematical Biology (p. 105, 139)</td>
<td>Min, BA, BS, MA, PhD</td>
</tr>
<tr>
<td>Microbiology (p. 141)</td>
<td>Min, BA, MS, PhD</td>
</tr>
<tr>
<td>Molecular Cell Biology (p. 141)</td>
<td>BS</td>
</tr>
<tr>
<td>Museum Studies (p. 95)</td>
<td>G Cert, Music (p. 143)</td>
</tr>
<tr>
<td>Ocean Policy (p. 117)</td>
<td>U Cert, Min, BA, BEd, BMus, MA, MMus, PhD</td>
</tr>
<tr>
<td>Peace Studies (p. 146)</td>
<td>U Cert, BA, G Cert</td>
</tr>
<tr>
<td>Philosophy (p. 149)</td>
<td>Min, BA, MA, PhD</td>
</tr>
<tr>
<td>Political Science (p. 153)</td>
<td>Min, BA, BS, MS, PhD</td>
</tr>
<tr>
<td>Planning Studies (p. 171)</td>
<td>G Cert, Psychology (p. 154)</td>
</tr>
<tr>
<td>Public Administration (p. 156)</td>
<td>BA, MA, G Cert</td>
</tr>
<tr>
<td>Public Affairs and Policy Studies (p. 157)</td>
<td>BA</td>
</tr>
<tr>
<td>Religion (p. 158)</td>
<td>Min, BA, MA</td>
</tr>
<tr>
<td>Russian (p. 132)</td>
<td>U Cert, BA</td>
</tr>
<tr>
<td>Samoan (p. 128)</td>
<td>U Cert, BA</td>
</tr>
<tr>
<td>Sanskrit (p. 128)</td>
<td>U Cert, BA</td>
</tr>
<tr>
<td>Second Language Studies (p. 160)</td>
<td>BA, MA, G Cert, PhD</td>
</tr>
<tr>
<td>Sociology (p. 164)</td>
<td>Min, BA, MA, G Cert, PhD</td>
</tr>
<tr>
<td>Spanish (p. 132)</td>
<td>U Cert, BA, MA, MA</td>
</tr>
<tr>
<td>Tahitian (p. 128)</td>
<td>U Cert, BA</td>
</tr>
<tr>
<td>Telecommunications Information Resource Management (p. 112)</td>
<td>G Cert, Thai (p. 128)</td>
</tr>
<tr>
<td>Theatre (p. 166)</td>
<td>U Cert, BA</td>
</tr>
<tr>
<td>Urban and Regional Planning (p. 171)</td>
<td>G Cert, MURP, PhD</td>
</tr>
<tr>
<td>Vietnamese (p. 128)</td>
<td>U Cert, BA</td>
</tr>
<tr>
<td>Women’s Studies (p. 174)</td>
<td>U Cert, BA, G Cert, Zoology (p. 176)</td>
</tr>
</tbody>
</table>

1. The MS and PhD in botanical sciences are offered in botany.
2. The MA and PhD in East Asian languages and literatures are offered in Chinese, Japanese, and Korean.
3. The MA in Languages and Literatures of Europe and the Americas is offered in French and Spanish.
4. Students can receive a BA in interdisciplinary studies in environmental studies, European cultural studies, Indo-Pacific languages, linguistics, peace studies, and public affairs and policy studies. In addition, students can design their own majors utilizing this program.
5. The BA in interdisciplinary studies for Indo-Pacific languages has several concentrations: Hindi, Indonesian, Samoan, Sanskrit, Thai, and Vietnamese.
6. The Certificate in Indo-Pacific Languages is offered in Filipino, Hindi, Ilokano, Indonesian, Khmer, Samoan, Sanskrit, Tahitian, Thai, and Vietnamese.
7. BA in Philippine Language and Literature with concentration in Filipino or Ilokano
8. The Department of Economics coordinates the Graduate Certificate in Ocean Policy.
9. The Undergraduate Certificate in Korean in East Asian Languages and Literatures and BA in Korean in East Asian Languages and Literatures also has a concentration in Korean for Professionals.
10. There is no admittance to the BA and BS in Zoology degrees effective Spring 2013.
11. The MS and PhD in marine biology are offered in the Marine Biology Graduate Program (College of Natural Science/SEEST).

<table>
<thead>
<tr>
<th>Field</th>
<th>Degree or Certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA—bachelor of arts</td>
<td>BFA—bachelor of fine arts</td>
</tr>
<tr>
<td>BMus—bachelor of music</td>
<td>BS—bachelor of science</td>
</tr>
<tr>
<td>G Cert—graduate certificate</td>
<td>MA—master of arts</td>
</tr>
<tr>
<td>MFA—master of fine arts</td>
<td>Min—minor</td>
</tr>
<tr>
<td>MLISc—master of library and information science</td>
<td>MMus—master of music</td>
</tr>
<tr>
<td>MPA—master of public administration</td>
<td>MS—master of science</td>
</tr>
<tr>
<td>MURP—master of urban and regional planning</td>
<td>PhD—doctor of philosophy</td>
</tr>
<tr>
<td>U Cert—undergraduate certificate</td>
<td></td>
</tr>
</tbody>
</table>
Administration

College of Arts and Humanities
Hawai‘i Hall 314
2500 Campus Road
Honolulu, HI 96822
Tel: (808) 956-6460
Fax: (808) 956-9085
Web: www.hawaii.edu/arthum/
Dean: Peter J. Arnade
Interim Associate Dean: Thomas Brislin
Departments and programs: Academy for Creative Media, American Studies, Art and Art History, Communicology, Historic Preservation, History, Museum Studies, Music, Philosophy, Religion, Theatre and Dance

College of Languages, Linguistics & Literature
Bilger 101
2545 McCarthy Mall
Honolulu, HI 96822
Tel: (808) 956-8516
Fax: (808) 956-9071
Web: www.lll.hawaii.edu/
Interim Dean: Jeffrey Carroll
Interim Associate Dean: Kimi Kondo-Brown
Departments and Centers: East Asian Languages and Literatures, English, Indo-Pacific Languages and Literatures, Languages and Literatures of Europe and the Americas, Linguistics, Second Language Studies, Center for Biographical Research, Center for Interpretation & Translation Studies, Center for Language & Technology, National Foreign Language Resource Center

College of Natural Sciences
Bilger 102
2545 McCarthy Mall
Honolulu, HI 96822
Tel: (808) 956-6451
Fax: (808) 956-9111
Web: www.hawaii.edu/natsci/
Dean: William L. Ditto
Interim Associate Dean: Steven Robinow
Departments and programs: Biology, Botany, Chemistry, Information and Computer Sciences, Library and Information Science, Marine Option Program, Mathematics, Microbiology, Physics and Astronomy, Zoology

College of Social Sciences
Hawai‘i Hall 310
2500 Campus Road
Honolulu, HI 96822
Tel: (808) 956-6570
Fax: (808) 956-2340
Web: socialsciences.hawaii.edu/
Dean: Denise E. Konan
Interim Associate Dean: Ross A. Sutherland
Departments, schools, and programs: Anthropology, Communications, Economics, Ethnic Studies, Geography, Journalism, Peace Studies, Political Science, Psychology, Public Administration, Public Policy Center, Social Science Research Institute, Sociology, Urban and Regional Planning, Women’s Studies

General Information

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

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 many of their first UH Mānoa 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 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 an ideal education, based in the liberal arts, prepares students for productive lives and careers, enlightened citizenship, and lifelong learning. The colleges enhance students’ learning opportunities by promoting active 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 also accredited or certified 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. 88.

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)

**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 at 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 88 for a complete listing of certificate programs offered by the Colleges of Arts and Sciences.

**Advising**
Student Academic Services Office
QLCSS 113
Honolulu, HI 96822
Tel: (808) 956-8755
Fax: (808) 956-9796
Email: advising@hawaii.edu
Web: www.advising.hawaii.edu/artsci/

Within the context of a liberal arts education, the Colleges of Arts and Sciences Student Academic Services (CASSAS) assist students in clarifying their life and career goals, developing meaningful educational plans, and preparing for productive lives, enlightened citizenship, and life-long learning.

Students at UH Mānoa have exceptional freedom in crafting their college experience. Students are able to explore connections between fields, engage in co-curricular activities, and develop unique combinations of majors, minors, and certificates. Students are expected to be active partners in the advising process by initiating contact with both their major department and CASSAS and should come to all advising sessions prepared.

CASSAS has developed learning outcomes for Arts and Sciences majors based on current programs and services. The level of achievement for each of these outcomes becomes increasingly more complex throughout a student’s college career. As an active participant in the CASSAS advising partnership, students are able to:
- Identify and explain their interests, strengths, values, and career/life goals;
- Develop and implement an academic and educational plan; and
- Explain how the A&S degree prepares them for success in their personal, academic, and professional lives.

In addition to meeting all mandatory advising initiatives required by their major departments, declared Arts and Sciences majors meet with their CASSAS advisors throughout their career at UH Mānoa for clarification of degree requirements and for resolution of complex academic issues and individual concerns.

**Incoming Students and Freshmen**
Through group advising at New Student Orientation and individual appointments during their first year, new students begin their educational planning process with CASSAS advisors and meet with an advisor in their major department (see department listing).

**Sophomores**
Sophomores continue to seek the advice of both major and college-level advisors in order to clarify their goals, interests, and strengths. Sophomores reflect on their academic and co-curricular activities to ensure that they have chosen the appropriate major and are making progress toward graduation. The educational planning begun in their first year expands to include curricular and co-curricular courses and events.

**Juniors**
Juniors research the prerequisites for their future academic and/or professional lives (i.e., application materials, essential skills). Juniors prepare for graduation by filing for graduation and creating an educational plan that accounts for remaining course work and activities applicable toward their degree and future goals.

**Seniors**
Seniors finalize their educational plan to ensure it covers all academic and co-curricular components necessary for graduation. Students reflect on the meaning of their undergraduate education in the context of their goals, interests and strengths, and use this understanding to plan and take concrete steps towards post-graduation life.

**Undergraduate Programs**
The Colleges of Arts and Sciences offer Bachelor of Arts (BA), Bachelor of Fine Arts (BFA), Bachelor of Music (BMus), and Bachelor of Science (BS) degrees in 55 different majors. In addition, the Colleges of Arts and Sciences offer 29 minors and 37 different certificates. Detailed program information is available at the Student Academic Services office (QLCSS 113) or at www.advising.hawaii.edu/artsci/

Throughout their time at UH Mānoa, A&S students should meet with both their college and major advisors to discuss their educational plans.

Students interested in an A&S major should declare their major at least by the end of their sophomore year by submitting a Declaration of Major form to the A&S Student Academic Services office. Some majors, such as those in the performing arts, languages, and the sciences, should be declared as soon as possible, preferably during the freshman year, because they require courses that must be taken in a specific order. Information on specific majors, minors, and certificates is available through the respective academic departments and their websites.
Admission Requirements

Admission requirements for the Colleges of Arts and Sciences are the same as those for UH Mānoa.

Some majors and programs, however, have specific admission requirements (see departments’ sections).

Steps to Graduation

1. Complete the four requirement areas for undergraduate degrees as described in the following section and remain in good academic standing (see “UH Mānoa Graduation Requirements” under “GPA”).
2. File for graduation one to three semesters in advance by completing an Online Grad session available on the CASSAS website.
3. Pay the UH Mānoa diploma fee in order to receive a diploma.

Requirements for Undergraduate Degrees from the Colleges of Arts and Sciences

A&S degrees and a liberal arts education offer a broad-based and integrated perspective on the world and human experiences; better self-understanding; societal, civic, and global knowledge; an independent and inquiring mind; a desire and capacity for life-long learning; and valuable transferable skills.

Students are encouraged to explore connections between disciplinary fields, engage in co-curricular activities, and develop unique combinations of majors, minors, certificates, and electives.

A&S students must fulfill the following five areas of requirement: UH Mānoa General Education Core; UH Mānoa Graduation; A&S Degree; A&S College; and A&S Major. Students should refer to their respective Program Requirement Sheets, on the CASSAS website or on the OVCAA bachelor degree program sheets website, to assist them in selecting courses that integrate requirements.

UH Mānoa General Education Core Requirements

A&S students must fulfill the UH Mānoa General Education Core, which consists of Foundations and Diversification requirements. Some of the courses that fulfill these Core requirements may be double dipped with other requirements (see “General Education”).

The minimum course grade to fulfill Core requirements is a D (not D-). These requirements must be taken for a letter grade, unless the course is offered only with the CR/NC grade option.

UH Mānoa Graduation Requirements

A&S students must fulfill the UH Mānoa Graduation requirements, which consist of Focus, Hawaiian or Second Language (HSL), credit, and grade point average (GPA) requirements (see “General Education” and “Undergraduate Education”).

The minimum course grade to fulfill Focus and HSL requirements is a D (not D-). These requirements must be taken for a letter grade, unless the course is offered only with the CR/NC grade option.

BMus students concentrating in voice may fulfill the HSL requirement by completing the first years of two different languages. This substitution must be approved by the department chair. All other A&S students must meet the stated HSL requirement.

Credits

- Students must earn a minimum of 120 total applicable credits, of which at least 45 credits must be upper division (300-level and above) and at least 30 credits must be completed in residence at UH Mānoa. Natural Sciences majors should contact CASSAS for exceptions to the upper division requirement.
- Students must complete their academic work and apply for a degree in a timely manner (see “Excess Credit Policy”).

Grade Point Average (GPA)

- To graduate, students must be earn at least a 2.0 GPA (C average) for all UH Mānoa registered credits and must not be on academic action (i.e., probation, suspension, dismissal).
- Some majors or programs have specific GPA requirements (see department’s sections). Students with a cumulative GPA lower than 2.0 will be placed on academic action.

A&S Degree Requirements

The Colleges of Arts and Sciences offer Bachelor of Arts (BA), Bachelor of Fine Arts (BFA), Bachelor of Music (BMus), and Bachelor of Science (BS) degrees, each of which has specific requirements as listed below. Courses used to fulfill these requirements can double dip with UH Mānoa General Education Core, UH Mānoa Graduation, and A&S Major requirements.

Bachelor of Arts (BA), Bachelor of Fine Arts (BFA) and Bachelor of Music (BMus)

- One of the following (these courses may also satisfy the UH Mānoa General Education Core “FS” requirement when designated as “FS” courses):
  - BUS 250, ICS 141, 241, MATH 100, 112, 140, 161, 203, 215, 241, 251A, NREM 203, PHIL 110, 110A, 111, or SOCS 150

Bachelor of Science (BS)

- Calculus I: MATH 215, 241, or 251A (these courses also satisfy the UH Mānoa General Education Core “FS” requirement)
- Calculus II: MATH 216, 242, or 252A
- Chemistry: CHEM 161/161L and 162/162L or 171/171L or 181A/181L
- Physics: PHYS 151/151L and 152/152L or 170/170L and 272/272L

(These Chemistry and Physics lecture courses also satisfy the UH Mānoa General Education Core “DP” requirement, and these lab courses also satisfy the UH Mānoa General Education Core “DY” requirement.)

Note: Many introductory science and mathematics courses require an assessment examination to determine appropriate placement. Information about assessment exams appears each semester in UH Mānoa’s Registration Guide or on the website at www.hawaii.edu/myuh/manoa/.

A&S Major Requirements

A&S major requirements further develop liberal arts skills and offer students specialization in an academic field of study.
Major requirements contribute to the ideal liberal arts education, which prepares students for productive lives and careers, enlightened citizenship, and lifelong learning.

Major requirements are explained in the department sections in this Catalog, in the online Catalog, and on the department websites.

The minimum course grade to fulfill major requirements is a C (not C-). These requirements must be taken for a letter grade, unless the course is offered only with the CR/NC grade option.

A&S students should meet regularly with both their major advisor in their department office and with an A&S college advisor in the Student Academic Services office (QLCSS 113).

Multiple Majors/Degrees and Minors

A&S students are encouraged to consider applying for additional majors/degrees, minors, or a combination. Pursuing additional academic fields of study can benefit students in many 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.

To be eligible, applicants for multiple majors/degrees and minors must be:

- enrolled as a classified Arts and Sciences student;
- in good academic standing (have a cumulative GPA of 2.0 or higher); and
- able to complete all requirements and still graduate in a timely manner.

To add a minor, students submit a “Certification of Minor” form. The colleges offer minors in 27 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.

To apply for multiple majors/degrees, students submit the following:

- Application to pursue multiple majors/degrees;
- An academic plan showing timely graduation; and
- A brief formal, written statement explaining motivation.

Second Major Option

Students who have already completed a baccalaureate degree and wish to add another major (rather than a complete second baccalaureate degree) should enroll as a Post-Baccalaureate Unclassified (PBU) student. Students interested in pursuing the post-baccalaureate Second Major Option should meet with an undergraduate advisor in the relevant department to request permission and to identify remaining requirements for the major.

Second Baccalaureate Degree

Priority for admission into any Arts and Sciences baccalaureate program is given to students seeking their first undergraduate degree. Applications must be received by the Office of Admissions by the established deadlines.

Applicants must meet all admission requirements for the degree program to which they are applying. 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. Course work used towards a major/minor/certificate in the first degree cannot be used to satisfy major/minor/certificate requirements in the second degree, unless specific courses are required in both. Second degree students must earn a minimum of 30 credits in courses taken at UH Mānoa after 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 Arts and Sciences Student Academic Services website, www.advising.hawaii.edu/artsci/.
Professional Programs

Pre-professional students, i.e., students who plan to pursue careers in professional fields such as Education, Engineering, Law, Medicine, Social Work, etc., often need extra course work, extracurricular activities, exams, and preparation and should seek academic advising as early as possible.

For almost all professional schools, a liberal arts education such as that offered in the Colleges of Arts and Sciences provides an essential foundation. Some professional schools admit undergraduate students in transfer; others require that students complete a baccalaureate degree before being admitted. Most professional schools also have specific prerequisites that students must complete before applying.

Pre-professional students should consult both the recommendations set by the appropriate national organization and the specific prerequisites of the professional schools they hope to attend.

Students interested in health and law careers should visit the Pre-Health/Pre-Law Advising Center (PAC), a walk-in resource center located in Sinclair Library 108. PAC is staffed by trained peer advisors who assist students in clarifying career goals, choosing a major, planning appropriate course work, finding opportunities to gain experience, and applying to schools.

Graduate Programs

Information regarding graduate programs and admission is in the “Graduate Education” section of the Catalog. Check each department’s section for information about their specific program(s) and 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 major department’s 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.

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 Honour 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 Centers

(housed in the College of Languages, Linguistics & Literature)

Center for Biographical Research
Web: www.hawaii.edu/biography

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, and awards the Biography Prize annually for work in life writing by a UH Mānoa graduate student. 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.

CBR publishes Biography: An Interdisciplinary Quarterly, the premier scholarly journal in the field. Appearing continuously since 1968, Biography explores the theoretical, historical, generic, and cultural dimensions of life writing. CBR also sponsors the Biography Monograph series, a book publishing enterprise 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 listserve and discussion forum for the International Auto/Biography Association.

Center for Interpretation and Translation Studies
Web: cits.hawaii.edu

The Center for Interpretation and Translation Studies (CITS) was established in 1988 at UH Mānoa within the College of Languages, Linguistics & Literature. The center’s primary goal is to provide basic training in translation and interpretation. Emphasis is on the sociolinguistic and communication skills and techniques needed to facilitate cultural, scientific, and technical exchanges in cross-cultural and multinational settings. These skills can be used at international conferences, as well as in medical, legal, and social service settings.

Given our commitment to the community, a number of CITS courses are made available to non-UH Mānoa students through Outreach College. Generic courses are conducted in English, and any language speaker is welcome. Language-specific courses...
may require proof of language proficiency before enrollment. Currently interested students can receive a BA in Translation and/or Interpretation through Interdisciplinary Studies.

The Center offers a six-week, non-credit Summer Intensive Interpreter Training program (SIIT) every other year through Outreach College. This high-level certificate training program is offered in English in combination with Japanese, Mandarin, Spanish, and Korean.

**Center for Language and Technology**
Web: clt.hawaii.edu

The mission of the Center for Language & Technology (CLT) is to support the informed use and integration of technology into instruction and research in the curriculum of the College of Languages, Linguistics & Literature.

The CLT fulfills its kuleana by: a) supporting the research and development of technology-based materials for language teaching and learning; b) providing faculty development opportunities for technology integration into the curricular areas of the college; c) providing professional enrichment opportunities to teaching assistants; d) providing expertise in media design, production and delivery; e) researching and supporting innovative technology tools and pedagogical approaches that are specific to the curricular areas of the College; and f) providing technology resources and services that are specific to the curricular areas of the college.

The CLT additionally provides leadership and guidance in the creation of online learning experiences. In the last few years, activities in this area have included the creation and implementation of a review process to assist online-teaching faculty in the development and maintenance of quality online courses. The CLT also supports faculty by providing expert feedback throughout the process as well as numerous opportunities for professional development in this area, with a particular emphasis on the academic areas of the college.

To fulfill its mission to support informed use of technology in instruction, the CLT provides flexible, technology-rich physical spaces that are designed with consideration of the specific academic areas of the college. Faculty can avail themselves of facilities such as broadcast-standard video and audio production suites, a state-of-the-art project development room, a high-end theater projection room, web-conferencing meeting rooms, and a smart classroom primarily intended for instructional research and special projects. Technologies available to instructors include physical and virtual technology tools. The former includes a variety of audio-visual equipment available for check out; the latter includes specialized technologies developed in-house.

The CLT regularly hosts local, national, and international events sponsored by various units in the college, collaborates with several campus units, and also conducts outreach activities to support Hawai’i’s language-teaching community.

**National Foreign Language Resource Center**
Web: nflrc.hawaii.edu

The National Foreign Language Resource Center (NFLRC) is one of 16 Language Resource Centers across the U.S and the only one to have been continuously funded since the inception of the original three centers established by the Department of Education in 1990. The ultimate mission of the NFLRC is to improve the learning and teaching of world languages while focusing primarily on the underserved populations of both teachers and students of the less commonly taught languages of Asia and the Pacific.

Taking advantage of Hawai’i’s geographic location and drawing on the rich expertise of the College of Languages, Linguistics & Literature, the NFLRC works to improve teaching through the production and dissemination of a broad range of resources, including instructional materials, scholarly books, and edited collections. Online resources include three e-journals, video and audio archives, and bibliographic databases.

NFLRC works closely with the Center for Language & Technology on a number of initiatives, for example, developing and researching instructional models that combine distance and face-to-face instruction and collaborating in the design and development of technologies that support those models. Throughout the year, the NFLRC hosts co-hosts local, national, and international conferences and workshops.

**Academy for Creative Media**

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

**Faculty**
A. Misawa, MFA (Chair)—cinematic and digital production
M. Booth, MFA—documentary, critical studies
D. Boulos, MEd—animation
T. Brislin, PhD—media ethics; critical studies
L. Flanary, MFA—screenwriting, indigenous filmmaking
V. Hereniko, PhD—critical studies, cinematic and digital productions, screenwriting
V. Mih, MFA—animation
J. Moffett, MFA—screenwriting, cinematic & digital production
K. Ng, PhD—critical studies
G. Wang, MFA—post production

**Degree Offered:** BA in creative media

**The Academic Program**

The Academy for Creative Media (ACM) emphasizes narrative, or storytelling, 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 original and authentic 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.

ACM offers a core curriculum and specialized courses in three tracks: Digital Cinema, Computer Animation, 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.

* Graduate Faculty
Undergraduate Study

Bachelor’s Degree

Students have the flexibility to design an academic program around a core of ACM courses and electives including a variety of UH Mānoa departments offering courses in film and media studies. Students work in close consultation with faculty to develop a program that reflects the development of academic, writing, creative, and critical thinking skills.

Requirements

To declare a major in Creative Media, students must:

- Have completed or be enrolled in ACM 255 Cinema and Digital Media, and have completed 12 or more credit hours with an overall 2.75 GPA;
- Be enrolled in the Colleges of Arts and Sciences.

To complete the creative media major, students must design a detailed and acceptable academic plan, under the guidance of an ACM faculty advisor, consisting of 36 credit hours that emphasizes one of the three ACM tracks, includes the required core of ACM courses, and is supplemented with elective courses. Six credit hours of electives may be taken from departments outside of ACM.

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

Required Courses

- ACM 255
- ACM 310 or 316
- ACM 350 or 355
- 9 credits from any of the following: ACM 352, 360, 380, 382, 385, 460, 480, 482, 485, and 490
- 12 credit hours from one of three ACM degree tracks

Computer Hardware and Software Requirements

The curriculum of the Academy for Creative Media requires students to have access to a laptop computer. Hardware and software specifications can be found at www.hawaii.edu/acm/computer.

Advising

Introductory information on the academy, including guidelines for academic planning, can be found at www.hawaii.edu/acm/acm. All students accepted for the major are assigned a faculty advisor. Advising is mandatory to design the student’s academic plan, and for any subsequent changes.

American Studies

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

Faculty

*D. Stannard, PhD (Chair)—social and cultural history, race and racism, colonialism and genocide
*W. Chapman, PhD—historic preservation
*E. Colwill, PhD—gender, slavery, and Revolution in the Atlantic world
*J. Eagle, PhD—film/media, gender studies, U.S. cultural history
*V. Gonzalez, PhD—American empire, tourism and militarism, gender and sexuality, ethnic and cultural studies
*N. Kahanu, JD—public humanities and Native Hawaiian programs
*K. Kosasa, PhD—visual and cultural studies, museum studies, critical pedagogy
*L. J. Mariano, PhD—Filipino American studies, diaspora studies, Asian American studies
*B. McDougall, PhD—indigenous studies, literary studies
*D. Ogawa, PhD—intercultural and Japanese American studies
*R. Perkinson, PhD—southern and western history, race and class, crime and punishment, American empire
*K. Sands, PhD—religion in America, religion and law, women in religion, Christian history, theory of religion
*J. Stanton, PhD—culture and arts
*M. Yoshihara, PhD—U.S. cultural history, U.S.-Asian relations, Asian American studies, literary and cultural studies, gender studies

Cooperating Graduate Faculty

K. Ng, PhD—religion in America, religion and law, Christian history, theory of religion

Affiliate Graduate Faculty

A. Kikumura-Yano, PhD—Japanese-American studies, Asian American studies, museum 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 differen-
states 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, American Association of Museums, Hawai‘i Museums 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 AMST upper division courses, including AMST 381, 382, 480, and 481 or 482 (one lower division course may now be counted)
  - 9 remaining credit hours may include upper division courses in either AMST courses and/or 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 or be listed in the "pre-approved" allied course list on the department website.

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

**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 Graduate Education, the applicant should have a copy of his or 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: **February 1** for fall; **January 15** for spring. Application deadlines for foreign applicants are: **August 1** for spring. There is no summer admission to advanced degree programs in Graduate Education. 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 another graduate course to be specified by the graduate chair 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 30 credit hours as follows:

**Plan A (Thesis)**
- 3 core courses, including AMST 600, 601, and another graduate course to be specified by the graduate chair
- 2 AMST graduate seminars
- 3 AMST graduate seminars or electives
- 2 Capstone (Thesis) AMST 700
- oral examination

**Plan B (Non-thesis)**
- 3 core courses, including AMST 600, 601, and another graduate course to be specified by the graduate chair
- 2 AMST graduate seminars
- 3 AMST graduate seminars or electives
- written and oral examinations

More specific requirements are detailed on the American studies website at: manoa.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 45 credit hours including:
  - 3 core courses, including AMST 600, 601, and another graduate course to be specified by the graduate chair
4 or more AMST graduate seminars
5 or more AMST graduate seminars or graduate electives
in other disciplines in a chosen field of specialization (one
400-level course permitted)
up to 9 credits of AMST 699

**Students must also complete:**
- A qualifying and comprehensive examination
- 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 ANTH 645, Historic Preservation
- 3 credit hours of AMST 675, Preservation: Theory and Practice
- 3 credit hours of AMST 695, Historic Preservation Practicum
- 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 manoa.hawaii.edu/amst/historic-preservation/the-field/.

**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 Education
- 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 manoa.hawaii.edu/amst/museum-studies/about-museum-studies/.

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**Anthropology**

**College of Social Sciences**
Saunders Hall 346
2424 Maile Way
Honolulu, HI 96822
Tel: (808) 956-8415
Fax: (808) 956-4893
Email: anthprog@hawaii.edu
Web: www.anthropology.hawaii.edu

**Faculty**

* C. E. Peterson, PhD (Chair)—archaeology, comparative study, early complex societies, regional settlement patterns, household archaeology, quantitative methods; China
* C. J. Bae, PhD (Graduate Chair)—biological anthropology, paleoanthropology, vertebrate taphonomy, Out of Africa I, modern human origins; China, Korea, Japan
* A. Golub, PhD (Undergraduate Advisor)—cultural anthropology, kinship and identity, governance, indigenous land tenure, mining and natural resources, common and intellectual property, semiotic technologies; Papua New Guinea, Melanesia, massively multiplayer online video games
* J. M. Bayman, PhD—archaeology, craft economies; North America, U.S. Southwest, Hawai‘i
* 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.
* J. Brunson, PhD—medical anthropology, fertility and reproduction, maternal health, new medical technologies, structural and interpersonal violence, gender, family; Nepal
* J. Padwe, PhD—environmental anthropology, agro-ecology; war and the environment; ethnicity; Southeast Asia (Cambodia), South America (Paraguay, Bolivia)
* M. Pietrusewsky, PhD—physical anthropology, skeletal biology, forensic anthropology; Oceania, SE and East Asia, Australia
* B. V. Rolett, PhD—archaeology; Pacific Islands, Southeast China
* E. J Saethre, PhD—medical anthropology, indigenous health, HIV/AIDS, biomedical interventions; Aboriginal Australia, South Africa
* 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
* M. Stark, PhD—archaeology ecology, early village economics, ceramics, ethnarchaeology; Southeast Asia, U.S. Southwest
* T. P. K. Tengan, PhD—cultural anthropology, indigenous theory and methodology, colonialism, nationalism, identity, gender, cultural politics; Pacific, Hawai‘i
* 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

**Cooperating Graduate Faculty**

D. Brown, PhD—physical anthropology, medical anthropology; Polynesia
R. Cann, PhD—physical anthropology, anthropological genetics, human populations
W. Chapman, PhD—historic preservation, historical archaeology, history of anthropology
98 Colleges of Arts and Sciences  2015-2016

C. Clayton, PhD—cultural anthropology; sovereignty and colonialism; nationalisms and transnationalisms; history, memory and place-making; China and East Asia

E. Drechsel, PhD—historical sociolinguistics, ethnohistory, North American Indians; North America

S. Falgout, PhD—cultural and historic anthropology; Micronesia

H. Hamnett, PhD—applied policy research, economic development, research management; Oceania

R. Labrador, PhD—cultural anthropology, identity, immigration political economy, globalization and diaspora; Hawai’i/Pacific, Philippines, Filipina/American and Asia Pacific America

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

W. Nishimoto, PhD—oral history, ethnographic interviewing; Hawai’i

J. Y. Okamura, PhD—ethnicity and ethnic relations, Asian American studies; Philippines, Hawai’i

M. Sharma, PhD—political economy, development, class formation and gender relations, radical feminist theory; India

Affiliate Graduate Faculty

J. S. Athens, PhD—evolutionary and agricultural ecology, origin of agriculture, development of complex societies, tropical paleoenvironmental (Ecuador, Oceania), archaeology of Ecuador, Micronesia, and Hawai’i, CRM issues, management and administration

L. Barton, PhD—archaeology of archaic and modern humans in northeast Asia; transition to agriculture in Northern China

R. A. Bentley, PhD—complexity theory, the prehistoric spread of agriculture into Europe and the effects of human interaction on cultural evolution

K. Brown, PhD—cultural anthropology; family histories; farmer production decision; religious syncretism; ethnicity and the Emperor; globalization and food, family and car culture; Japan

C. K. Cachola-Abad, PhD—archaeology, oral traditions, historic preservation, evolution; Hawai’i and Polynesia

E. Cochran, PhD—evolutionary theory, cultural transmission, archaeological science, Oceania, Fiji, ceramics

S. Collins, PhD—archaeology, human and faunal osteology, historic preservation compliance and practice; Hawai’i and the Pacific

M. T. Douglas, PhD—physical anthropology, skeletal biology, bioarchaeology, paleopathology; Oceania, Southeast Asia

T. Dye, PhD—archaeology; Hawai’i and the Pacific

J. Fox, PhD—land use, forest resources and management GIS and spatial information technology; South Asia, Southeast Asia

R. Gould, PhD—ethnoarchaeology, hunter-gatherer ecology, maritime archaeology forensic archaeology, Australian Aborigines

T. D. Holland, PhD—physical and forensic anthropology, skeletal biology; U.S. Midwest, Southeast Asia

T. Jiao, PhD—transition from hunting-gathering to farming, maritime adaptation, complex society, early state formation; China, southeast Asia

J. Kahn, PhD—archaeology, lithic technology, household archaeology, monumental architecture and landscapes; Hawai’i, French Polynesia, and the Pacific

L. Kealhofer, PhD—Southeast Asia and Near East; landscape approaches; paleobotany; land use and environmental change in complex societies; political economy

L. Lindstrom, PhD—cultural anthropology, sociolinguistics, ethnohistory, social theory; Oceania, Vanuatu

M. Mulrooney, PhD—Pacific archaeology, Hawaiian archaeology, geographic information systems, chronometric dating analysis, landscape archaeology, exchange and interaction, social complexity, agricultural intensification, ideological legitimation of power, contact and colonialism

J. A. Peterson, PhD—archaeology, historical ecology, landscapes, historical archaeology; Hawai’i-Pacific, Philippines, American Southwest

M. Tomlinson, PhD—cultural and linguistic anthropology, religion and ritual, discourse analysis, Christianity; Fiji, Oceania

D. Y. H. Wu, PhD—cultural anthropology, ethnicity, anthropology of food; China and Chinese diaspora

D. Yen, PhD—ethnobotany; Oceania, Southeast Asia

Adjunct Faculty

J. Baker, PhD—medical and nutritional anthropology, anthropology of food, ethnopharmacology, science and technology studies; Oceania

N. I. Cooper, PhD—socio-cultural anthropology, performance, gender, expressive culture, ritual and religion; Southeast Asia, Indonesia, Java, Singapore

L. Gollin, PhD—medical anthropology, ethnobotany and ethnobiology, local ecological knowledge, cultural resource management, oral histories; Indonesia and Hawai’i

J. Jin, PhD—zooarchaeology, vertebrate taphonomy, human skeletal biology, forensic anthropology, paleoanthropology; China, Korea

G. Pigliacasco, PhD—cultural and legal anthropology, visual anthropology, ritual and performance commodification and tourism; Oceania, Fiji

J. Rensel, PhD—socioeconomic history, housing change, migrant communities; Polynesia

P. J. Ross, MA—quantitative methods, nutritional and medical anthropology, GIS and spatial information technology; South Asia, Southeast Asia

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

The Academic Program

Anthropology (ANTH) is the comparative study of human societies, 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: archaeology, cultural anthropology, linguistic anthropology, and physical anthropology. While physical anthropologists focus upon our biological nature, cultural anthropologists deal with ways of life past and present. 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 cultural basis of human society, and 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 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. 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 152, 210, 215, 215L and 490
  - 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.

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

**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 (Study of 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. All incoming students are required to attend the Anthropology Colloquium Series 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 December 1.

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 three out of four core courses (archaeology, linguistic anthropology, physical anthropology, and cultural anthropology). 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 30 credit hours. A minimum of 18 credit hours must be taken in the department. Graduate students must maintain at least a B (3.0) average. All courses taken for degree credit must be taken for a letter grade.

**Plan A**
- 24 credit hours of course work
- Thesis (6 credit hours)
- Minimum of 12 credits in graduate level courses numbered 600 and above

**Plan B**
- 30 credit hours
- Three papers on anthropological topics, one of which shall be a research proposal to the committee as evidence of scholarly ability
- Minimum of 18 credits in graduate level courses numbered 600 and above

**MA Track in Applied Archaeology**

Please consult departmental and graduate college guidelines for application instructions. Applicants to our Applied Archaeology MA program should explicitly note in their statement of purpose and other correspondence that they are applying to the MA Track in Applied Archaeology, which is a Plan B program. Students who are admitted to the applied program will be assigned an interim advisor upon their acceptance. By the end of the second semester, a student must select a committee of three anthropology faculty, one of whom will serve as her or his committee chair. A student must complete a report on original research, or three publishable papers.

Students who wish to enter the doctoral program, upon completion of the MA Track in Applied Archaeology, must re-apply for admission to the anthropology program.

**Doctoral Degree**

A student completing the requirements for the MA may request admission to the PhD program by filling out a Petition for Admission to a Doctorate in Same Discipline (found on the Graduate Education website) and submitting the form to the departmental Academic Specialist. This form will be forwarded to Graduate Education based upon the approval of the graduate chair.

Before the graduate chair can formalize his recommendation, a meeting must be convened consisting of all Anthropology faculty members with whom the student has taken graduate-level courses. They will evaluate the MA thesis or three papers and review the quality of previous graduate work. The faculty will then make their recommendations to the graduate chair to admit or not to admit the student to the doctoral program.

Admission to the PhD program requires a two-thirds majority of favorable versus unfavorable recommendations from the Anthropology faculty members. The student will receive 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 (3.0 GPA) 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 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 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. 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 Graduate Education. 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
Tel: (808) 956-8251
Fax: (808) 956-9043
Email: uhart@hawaii.edu
Web: www.hawaii.edu/art/

Faculty
*G. Chan, MFA (Chair)—photography
*K. Lingley, PhD (Associate Chair)—Chinese art history
*L. Andrews, PhD—Western art history
*M. Babcock, MFA, PhD—fiber
*R. Bengston, MFA—gallery director
*A. Bush, MFA—graphic design
*P. Chamberlain, MFA—electronic arts
*C. Cohan, MFA—printmaking
*D. Drexler, MFA—drawing and painting
*S. Groeniger, MFA—digital imaging
*J. Hamilton Faris, PhD—contemporary art history and theory
*W. Kawabata, MFA—drawing and painting
*P. Lavy, PhD—South and Southeast Asian art history
*C. Lee, MFA—graphic design
*R. Mills, MFA—glass, sculpture
*F. Roster, MFA—sculpture
*S. Spangler, MFA—ceramics
*J. Szostak, PhD—Japanese art history
*B. Taylor, MFA—ceramics
*D. Waite, PhD—Pacific art history

Cooperating Graduate Faculty
J. Stanton, PhD—Western art history

* Graduate Faculty
Affiliate Graduate Faculty
J. Feldman, PhD—Pacific art history

Degrees Offered: Undergraduate Certificate in Islamic Studies, 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, the 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, PCs for electronic 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, Kate Lingley, in Art 142A, email: lingley@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 42 credit hours, including:
- 6 credits of art studio core: ART 113 and 116
- 12 credits of art history: ART 175, 176, and 6 credits at the upper division level
- 24 credits of art studio: 12 credits must be upper division

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

Art History Focus
Students must complete 42 credit hours, including:
- 11 art history courses (33 credit hours), including ART 175, 176, and 395
- Three studio classes (9 credit hours), selected in consultation with advisor

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

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: ceramics, digital imaging, drawing, electronic arts, fiber, glass, graphic design, painting, photography, 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 requirements: 113 and 116.
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 Mānoa core requirements exclusive of art department courses.

All studio areas will hold an annual BFA Portfolio Review in late spring, at least one week prior to registration.

Requirements
Students must complete 63 credit hours, including:
- Seven courses in one of the 11 program areas as indicated at the time of declaration (last 9 credit hours must be completed at UH Mānoa)
- Two art studio core courses (6 credit hours): ART 113, 116
- Three art history core courses (9 credit hours): ART 175, 176, 302
- Four art history elective courses (12 credit hours)
- Five art elective courses (15 credit hours)

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

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.

Undergraduate Certificate in Islamic Studies
The purpose of this certificate is to increase understanding of Islam as a world religion through critical analysis of primary and secondary materials, to foster knowledge about the complexity among Islamic societies and their diverse cultural expressions, and to explore the role of Islam and Muslims in present and past world affairs.

This certificate is housed within the College of Arts and Humanities. The participating departments are Art and Art History, History, Philosophy, and Religion. Minimum prerequisites for acceptance into the program for undergraduates are sophomore or higher standing with a minimum GPA of 2.5 and the completion of at least one introductory course within one of the four participating departments with a grade of B or better.
A more complete description and the requirements are described under the Department of Philosophy.

**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 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 directly to the art department prior to the application deadline. The application form for graduate admission should be sent under separate cover to Graduate Education.

**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 course study 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

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.

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 Paul Lavy, PhD, email: paullavy@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 arts, fiber, glass, 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 transcript of 25% or more nontraditionally graded undergraduate or graduate credit hours must submit GRE scores and course performance report forms.

Supporting material of 20 samples of original work should be submitted on a cd (still images in jpeg format, no more than 1.5 mb each and video samples in .mov format) that illustrates abilities in an area of specialization, as well as potential for development within the scope of the department’s facilities and personnel. 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 Graduate Education.

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. 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 with 6 credits each in ART 611, 612, 613, 614. Conditional or unclassified graduate students may enroll only in ART 611 for a maximum of 6 credits. Consent of instructor is required.
- 15 credits of electives
- 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

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 Mānoa department, provided such study is deemed useful and pertinent to the student’s degree plan. MFA students wishing to take ART 699 must petition through the Office of Graduate Education to apply it toward the degree. All elective courses require appropriate preparation and the consent of the instructor and graduate student’s advisor. For more information on the MFA program, contact gradart@hawaii.edu.
Astronomy
College of Natural Sciences
Watanabe 416
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Undergraduate Program:
Email: undergrad@ifa.hawaii.edu
Web: manoa.hawaii.edu/astronomy
Graduate Program:
Email: grad-chair@ifa.hawaii.edu
Web: www.ifa.hawaii.edu/gradprog

Faculty
*D. B. Sanders, PhD (Graduate Chair)—infrared and millimeter astronomy
*C. Aspin, PhD—star formation
*C. Baranec, PhD—exoplanets, adaptive optics
*J. Barnes, PhD—theoretical astronomy
*F. Bresolin, PhD—stellar astronomy
*S. J. Bus, PhD—asteroids
*K. Chambers, PhD—extragalactic astronomy
*M. R. Chun, PhD—adaptive optics
*P. Coleman, PhD—cosmology
*M. S. Connelley, PhD—instrumentation, star formation
*A. S. Cowie, PhD—interstellar matter
*L. L. Cowie, PhD—extragalactic astronomy
*H. Ebeling, PhD—galaxy clusters
*R. R. Gal, PhD—extragalactic astronomy, outreach coordinator
*S. R. Habbal, PhD—solar and heliospheric physics
*N. Haghighipour, PhD—extrasolar planets
*D. N. B. Hall, PhD—infrared astronomy
*G. Hasinger, PhD (IFA Director)—X-ray astronomy
*K. Hodapp, PhD—infrared astronomy
*A. W. Howard, PhD—exoplanets
*E. M. Hu, PhD—extragalactic astronomy
*R. Jedicke, PhD—asteroids
*S. Jefferies, PhD—solar physics, advanced imaging
*R. Joseph, PhD—infrared astronomy
*N. Kaiser, PhD—theoretical astronomy
J. Keane, PhD—preroplanetary disks
*R-P. Kudritzki, PhD—stellar astronomy
*J. R. Kuhn, PhD—solar astrophysics
*H. Lin, PhD—solar physics
*M. Liu, PhD—stellar astronomy
*J. Lu, PhD—star formation
*E. Magnier, PhD—star formation, large-scale surveys
G. S. Mathews, PhD—instructor
*R. A. McLaren, PhD (IFA Associate Director)—infrared astronomy
*K. Meech, PhD—planetary astronomy
*R. H. Mendez, PhD—stellar astronomy
*G. Morrison, PhD—galaxy clusters
*N. Raja, PhD—computer support
*J. Rayner, PhD—star formation, instrumentation
*B. Reipurth, PhD—star formation
K. Robertson, PhD—librarian
*N. Schorghofer, PhD—planetary science
*I. Szapudi, PhD—cosmology
*D. Tholen, PhD—planetary science
*A. T. Tokunaga, PhD—infrared astronomy
*J. Tonry, PhD—extragalactic astronomy

* Graduate Faculty

*R. B. Tully, PhD—galaxies and cosmology
*R. Wainscoat, PhD—asteroids
*J. P. Williams, PhD—submillimeter astronomy

Degrees Offered: BA (including minor) in astronomy, BS (including minor) in astrophysics, 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 universe 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 cosmos taken in its largest extent in space and time. Astronomy is the field of study which provides us with a fundamental understanding of both the universe and our place in it.

Incomparable facilities for ground-based observational astronomy in the optical, infrared, and submillimeter regions of the spectrum reside in Hawai‘i. UH Mānoa’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 UH Mānoa is guaranteed access to them. The Institute for Astronomy at UH Mānoa has significant programs in the study of galaxies and cosmology, stellar and interstellar astronomy, solar astronomy, infrared and submillimeter astronomy, and planetary astronomy.

The astronomy and astrophysics curricula are designed to provide students with a strong background in the application of fundamental physics to astronomical phenomena, as well as practice designing and carrying out projects in observational astronomy. This serves to train students in the core practices of science, applicable to careers in research and in astronomy-related fields. The BA in Astronomy provides a flexible program for students interested in astronomy who also have a wider range of career goals. The BS in Astrophysics is a rigorous program for students who plan to pursue graduate studies in astronomy, astrophysics, or physics and are aiming at a long-term research career.

Advising
Academic advising is mandatory for all undergraduate astronomy and astrophysics majors. Contact the department office for assignment to an advisor. Note that in order to complete the program in 4 years, astronomy and astrophysics students must begin the study of calculus in either the first or the second semester of the freshman year.

Undergraduate Study
BA Degree in Astronomy

Requirements (C [not C–] grade minimum)

Students must complete 48 credit hours in ASTR, PHYS, and related courses, including:
- ASTR 210, 300/300L, 301, 320, 494 (3 credits)
- PHYS 151/151L, 152/152L, 485 (170/170L, 272/272L, 274/274L may be substituted for 151/151L, 152/152L; if so 274 also satisfies one of the non ASTR electives below.)
Minor in Astrophysics

The minor in astrophysics prepares students with the essential core of theoretical and observational courses of the BS Astrophysics degree. This minor can provide a fulfilling and career-broadening complement to most bachelor’s degree programs in the physical sciences, earth sciences, and engineering that already require calculus-based physics.

Students must complete the following courses with grades of C (not C-) or better:

- ASTR 241 and 242
- ASTR 300, 300L, and 301
- At least 3 credit hours of additional ASTR course(s) at the 300-level or above

BS Degree in Astrophysics

Requirements (C [not C-] grade minimum)

Students must complete 62 credit hours in ASTR and PHYS courses, including:

- ASTR 241, 242, 300/300L, 301, 423, 494 (6 credits)
- PHYS 170/170L, 272/272L, 274/274L, 310, 311, 350, 450, 480, 485
- One course from ASTR 320, 430
- Two courses from PHYS 400, 460, 481, 490
- CHEM 161/161L and 162/162L or 171/171L or 181A/181L
- MATH 241, 242 (251A, 252A may be substituted for 241, 242. 215, 216 may be substituted for 241, 242 with consent from advisor.)

Recommended languages: German, French, or Japanese.

Upon approval of an astronomy program advisor and chair, the elective requirements may be modified to accommodate a special emphasis or interdisciplinary program that is appropriate for a major in astronomy.

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

Minor in Astronomy

The minor in astronomy prepares students with the essential core of theoretical and observational courses of the Bachelor of Arts in Astronomy degree. This minor can provide an exciting and useful complement to a wide range of bachelor’s degree programs, including biological sciences, computer science, and other professional degrees that already require introductory physics and calculus.

Students must complete the following courses with grades of C (not C-) or better:

- ASTR 210
- ASTR 300, 300L, and 301
- At least 3 credit hours of additional nonIntroductory ASTR course(s) at the 200-level or above

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 institution.

Applicants who already hold a masters degree from another institution are also eligible for admission and may move in our program to PhD candidacy on an accelerated track. In addition, these students have the option to be based at any of the Institute for Astronomy branches (Maunakea, Maui, or Hilo) immediately upon entering the program. Placement at the IfA-Maui or IfA-Hilo facilities is contingent upon funding for an assistantship and applicants are encouraged to contact potential research advisors during the admissions process.

In selecting applications for entry to the astronomy program, we pay attention to high academic achievement, especially in physics, and to the letters of recommendation. Research experience at the undergraduate level is extremely valuable.

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 master’s is that it can be completed within four semesters for 6 credits total.

Four courses, including at least 3 upper-division credits, from CHEM 272, ECON 321, EE 160, GG 101 (or 170), any GG course at 200-level or higher worth at least 3 credits, ICS 111, ICS 211, MATH 243, 244, PHYS 274, any MATH or PHYS course at 300-level or higher worth at least 3 credits

CHEM 161/161L and 162/162L or 171/171L or 181A/181L

MATH 241, 242 (251A, 252A may be substituted for 241, 242. 215, 216 may be substituted for 241, 242 with consent from advisor.)

Recommended languages: German, French, or Japanese.

Upon approval of an astronomy program advisor and chair, the elective requirements may be modified to accommodate a special emphasis or interdisciplinary program that is appropriate for a major in astronomy.

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.
semesters; it is therefore of interest only to those students who want to get a terminal master’s 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 700-level seminars. 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.

Requirements
Students entering the program with a masters degree in a related field may advance to PhD candidacy after completing one year of course work with a minimum of 6 credits per semester (3 credits of astronomy graduate-level course work and at least three credits of ASTR 700-level seminars), successful completion of one ASTR 699 research project, and passing the Qualifying Exam Assessment.

All 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
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Email: biology@hawaii.edu; mbiology@hawaii.edu
Undergraduate Advising Email: bioadvis@hawaii.edu
Web: manoa.hawaii.edu/biology/

Faculty
*K. Cole, PhD (Chair)—ichthyology, behavioral ecology, reproductive biology, morphology and morphogenesis, microgravity biology
*J. H. Bailey-Brock, PhD—invertebrate zoology, reef ecology, Polychaetes
*K. M. Bennett, PhD—neuroscience and nphrology utilizing magnetic resonance imaging
M. Butler, PhD—evolutionary ecology, adaptive radiation, functional morphology, biomechanics
*H. G. de Couet, PhD—molecular cell biology, development biology, evolution
*L. A. Freed, PhD—evolutionary and behavioral ecology, ornithology, conservation biology
M. A. Hixon, PhD—marine ecology and conservation biology
*C. L. Hunter, PhD—conservation biology, coral reef ecology, biology and ecology of marine invertebrates
S. D. Kraft-Terry, PhD—academic advising and assessment
*P. B. J. Marko, PhD—biogeography, evolution and conservation
*A. L. Moran, PhD—marine ecology and evolution
M. Porter, PhD—evolution and ecology of vision, crustacean phyllogenetic
*F. A. Reed, PhD—population genetics
*S. Robinow, PhD—neurogenetics
*A. D. Taylor, PhD—population, theoretical, and insect ecology
*R. Thomson, PhD—evolutionary biology and phyllogenetic
*T. Tricas, PhD—marine animal behavior
*L. Watling, PhD—impacts of humans on benthic environments; crustacean biology
*C. Z. Womersley, PhD—environmental physiology, biochemical adaptation, parasitology
*A. N. Wright, PhD—population ecology, community ecology, conservation biology
*M. Yoshizawa, PhD—evolutionary developmental biology, neuroscience, quantitative genomics

Cooperating Graduate Faculty
R. Alegado, PhD—bacterial pathogenesis, microbial evolution and ecology
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
B. S. Holland, PhD—conservation biology of Native Hawaiian tree snails
K. N. Holland, PhD—physiology, behavior, ecology of aquatic organisms
P. J. Jokiel, PhD—coral reef biology, biogeography and ecology
K. Y. Kaneshiro, PhD—systematics, evolution, insect behavior
S. A. Karl, PhD—molecular ecology, systematics, and phylogoeogy of marine animals
P. Lenz, PhD—neuroecology of zooplankton sensory systems
P. E. Nachtigall, PhD—behavior and sensory processes of marine mammals
R. Richmond, PhD—invertebrate zoology, conservation biology
F. I. Thomas, PhD—marine ecology, biology of larvae
R. Toonen, PhD—molecular genetics of marine organisms

Affiliate Graduate Faculty
G. Aeby, PhD—coral reef ecology
R. Allison, PhD—systematics, biogeography and ecology
C. Birkeland, PhD—conservation biology regarding coral
A. Friedlander, PhD—marine ecology, marine conservation biology
S. Miller, PhD—ecosystem and population conservation biology
K. Rodgers, PhD—coral reef ecology

Degrees Offered: Undergraduate Certificate in Mathematical Biology and Marine Option Program, BA (including minor) in biology, BS in biology, BS in marine biology, minor in zoology, MS in zoology, PhD in zoology

The Academic Program
The Department of Biology (BIOL) provides an academic home to students who wish to pursue a broad training in the biological sciences. It offers a BA degree and a BS degree in
biology, a BS degree in marine biology, a minor in biology, an MS in zoology, and a PhD in zoology.

Biology is of fundamental importance in a science or liberal arts education, as it provides students with a keener insight into 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
Undergraduate student advising is mandatory. Prospective majors should visit manoa.hawaii.edu/biology/advising or contact bioadvis@hawaii.edu to meet with an advisor to design a curriculum that satisfies program requirements.

Undergraduate Study

BA Degree in Biology

Requirements (C [not C-] grade minimum)
- BIOL 171, 172, 265, 275, and 375 plus laboratories
- 20 credit hours in approved courses, including at least 1 credit of laboratory, 3 credits in microbiology, and 3 credits from the approved list of physiology courses

Related Requirements (C [not C-] grade minimum)
- CHEM 161, 162, 272 plus laboratories and 273
- PHYS 151 and 152 or 170 and 272 plus laboratories
- MATH 215 or 216 or 241 or 242 or 251A and 252A

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

BS Degree in Biology

Requirements (C [not C-] grade minimum)
- BIOL 171, 172, 265, 275, and 375 plus laboratories
- One course and laboratory from morphology/systematics
- One course from the approved list of physiology courses
- BIOL 441 or BIOL 402
- 16 credit hours in approved courses, including one or more laboratory courses at the 300 level or above; no more than 6 credits of BIOL/ZOOL 499 can apply to this requirement
  - The above courses to include one or more courses at the 300 level or above from microbiology

Related Requirements (C [not C-] 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 or 251A and 252A
- ECON 321 or NREM 310 or SOCS 225 or MATH 243 or 304 or 373 or 472

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

BS Degree in Marine Biology

Requirements (major of 2.5 GPA or higher)
- BIOL 171, 172, 265, 275, and 375 plus laboratories
- OCN 201
- BIOL 301 plus laboratory
- BOT 480
- ZOOL 475 plus laboratory
- MICR 401 plus laboratory
- 4 credits of directed research in approved disciplines or BIOL 403
- BIOL 404
- 9 credit hours in approved courses

Related Requirements (major of 2.5 GPA or higher)
- CHEM 161, 162, and 272 plus laboratories
- PHYS 151 and 152 or 170 and 272 plus laboratories
- MATH 215 and 216 or 241 and 242 or 251A and 252A
- ECON 321 or NREM 310 or SOCS 225 or MATH 373 or MATH 472

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

Minor in Biology

Requirements (C [not C-] grade minimum)
- Students must complete BIOL 265/265L, 275/275L, and 375/375L; and a minimum of 3 credits from the following:
  - BIOL 301/301L, 331, 363, 390, 395, 401, 402, 407, 408/408L, 425, and 499
- Approved upper level botany, biochemistry, microbiology, physiology, and zoology courses

Minor in Zoology

Please go to page 179 for more information on this degree.

Undergraduate Certificate in Mathematical Biology

The purpose of the certificate is to induce students to pursue the interdisciplinary study of biology and mathematics together with research. The course work will be similar to, but less than, that required to receive a minor in mathematics or biology. However, the students will also have to do a substantial amount of research in addition to the course work. The emphasis in the certificate is different, however, in that the majority of the work is interdisciplinary.

Students will be considered accepted into the Mathematical Biology Certificate Program upon formal request for acceptance and completion of either MATH 304 or 305 with a grade of C or better. To receive the certificate, students must complete 15 credits of approved course work with no grade below a C and attain a GPA of 2.5 in the collection of courses used to satisfy the certificate requirements. Due to the interdisciplinary nature of the certificate, 6 credits of required electives will differ depending on a student’s major. Courses used towards the certificate can only be double-dipped with focus requirements.
Prerequisites to the Certificate
- BIOL 171 (lab not required)
- CHEM 161 or 171 (lab not required)
- year of calculus (MATH 215/216, MATH 241/242, MATH 251A/252A)
- electives may have additional prerequisites

Requirements for the Certificate (15 credits)
- required courses (9 credits): MATH 304, 305, MATH/BIOL 490 (capstone)
- math majors (6 credits): BIOL 172, and 265 or 275 (lab not required)
- life science majors (6 credits): two courses selected from MATH 243/253A, 301, 302, 303, 307, 311, 371, 373, 402, 403, 407, 414, 416, 471, 472
- other majors: completion of above required courses, and at least 6 credits of electives approved by the Committee

Participation in an interdisciplinary Mathematical Biology research project is required. These projects must be substantial, requiring at least the effort of a 5 credit 400-level course; examples include a senior honors research project, summer Research Experiences for Undergraduate programs, and the Undergraduate Biology and Mathematics Research Program; students are advised to discuss their projects with an advisor from the Mathematical Biology Certificate Coordinating Committee before commencing. A research paper based on this research project must be submitted to and approved by the Committee. Students are expected to present their research to an approved symposium or conference.

Undergraduate Certificate in 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/BIOL 104) followed by the MOP skill project. The unique MOP skill project (worth 3 or more credits, e.g. IS 400/BIOL 400) 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.
- 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; email manoa.mop@hawaii.edu; www.hawaii.edu/mop/; Facebook ID: uhm mop.

Graduate Study in Zoology
- Please see page 178 for more information.
systems. The curriculum provides broad-based training, from
traditional field methods to the latest molecular techniques, and
the program offers excellent opportunities for research experi-
ence for undergraduates and graduate students.

The department’s programs take advantage of Hawai‘i’s
unique location by offering students unparalleled opportunities
to explore the botanical diversity of tropical freshwater, marine,
and terrestrial ecosystems through a wide range of field and
laboratory experiences. Students may focus on topics ranging
from the ecology, evolution, and conservation of Hawai‘i’s
unique ecosystems and flora, to the threats posed by invasive
species, to the uses of plants by humans.

At the undergraduate level, the department offers a BA, BS,
and minor degree in botany and a BS in ethnobotany. The
MS and PhD in botany are offered at the graduate level. All
botany faculty members, regardless of rank, teach courses at
both the undergraduate and graduate levels. Financial support
for undergraduates is available via competitive tuition waivers
and scholarships. Tuition waivers and teaching and research
assistantships are available to graduate students. Undergraduate
majors will be prepared for careers as naturalists, environmen-
tal planners, policy makers, conservation biologists, teachers,
researchers, and museum or organizational directors. Recipients
of advanced degrees commonly follow careers with government
agencies, conservation organizations, and colleges and universi-
ties in the U.S. and abroad.

The department’s website at www.botany.hawaii.edu pro-
vides glimpses into the many environments and special plants
in Hawai‘i, and provides further information about faculty
interests and research.

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

An undergraduate advisor guides undergraduates through
the academic program and is available to talk with prospective
majors about their interests. Graduate students entering the
department are assigned an interim committee of three faculty
members who provide general advice. The student’s commit-
ete and the graduate program chair oversee requirements and
provide a link between Graduate Education 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 in Botany

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

- Students must earn a grade of C (not C-) or higher in each
course applied to the major, including required courses in
Chemistry, Physics, and Math
- 4 credits required of seminars: BOT 100, 200, 300, 400
- 43 credits of the following:
  - BOT 101/101L
  - BOT 201/201L
  - BOT 202/202L
  - BOT 301/301L
  - BOT 302
  - BOT 303
  - BOT 420
  - BOT 462
  - BIOL 171/171L
  - BIOL 275/275L
  - BIOL 375/375L
- Minimum 9 credits of electives
  - Two of either BOT 401, 450, or 499
  - One of BOT 430/430L, 461, or 480
  - Any of the following: BOT 350, 430/430L, 444, 453, 454, 456, 461, or 480
  - 19 credits other required courses: CHEM 161/161L, 162/162L, 272/272L, PHYS 100/100L or higher, and
MATH 100

Prospective majors should consult the department promptly
to design a curriculum that satisfies these requirements.
For information on a Bachelor Degree Program Sheet, go to
www.manoa.hawaii.edu/ovcaa/programsheets/.

BS Degree in Botany

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

- Students must earn a grade of C (not C-) or higher in each
course applied to the major, including required courses in
Chemistry, Physics, and Math
- 4 credits of required seminars: BOT 100, 200, 300, 400
- 43 credits of the following:
  - BOT 101/101L
  - BOT 201/201L
  - BOT 202/202L
  - BOT 301/301L
  - BOT 302
Prospective majors should consult the department promptly to design a curriculum that satisfies these requirements. BOT 135 and 160 do not fulfill major requirements.

**Minor**

Requirements

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

**For Ethnobotany:**

- BOT 440 and 461
- Two of: BOT 442, 444, or 446
- One 400 level Social Science course that forms part of an ethnobotany theme with the other courses

**For Evolutionary Botany:**

- BOT 201/201L and 462
- Electives: BOT 420, 430, 450, 461, or 480

**For Tropical Field Botany:**

- BOT 453
- Electives: BOT 201/201L, 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, ecology, and morphological and physiological variations within a geographically variable yet isolated setting. Abundant opportunities are available for research in marine, aquatic, and terrestrial environments, and faculty expertise spans a phylogenetically diverse set of organisms including land plants, algae, and fungi. The faculty is composed of a number of nationally and internationally recognized scientists in conservation, ecology, ethnobotany, and systematics.

Recipient of the MS degree often teach at the high school level, pursue careers with state or federal government agencies, or work with environmental organizations and consultancies. Those with a PhD may teach and/or conduct research in colleges and universities, work as environmental consultants, and pursue careers with environmental organizations or the government.

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

At the time of application, 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 January 15 for fall 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.

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 BOT 610 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 intending a research-related career. Plan B is for students who do not intend to make research in botanical sciences their profession.

**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 (excluding BOT 699 and BOT 700). Of these credits, at least 6 (but not more than 9) must be 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 a combination of oral and written parts. The exam 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**

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Fax: (808) 956-5908
Email: chemdept@hawaii.edu
Web: www.manoa.hawaii.edu/chem

**Faculty**

*K. K. Kumashiro, PhD (Chair)—physical chemistry, solid-state nuclear magnetic resonance of proteins and peptides*
*T. Apple, PhD—physical chemistry, solid-state NMR*
*M. F. Cain, PhD—organometallic chemistry, catalysis, alternative energy processes, synthesis and ligand design*
*W. J. Chain, PhD—organic chemistry, synthesis of natural products*
*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*
*H. L. Ng, PhD—membrane protein crystallography*
*M. A. Tius, PhD—organic chemistry, synthesis of natural products*
*P. G. Williams, PhD—organic and natural products chemistry*

**Cooperating Graduate Faculty**

D. M. Jameson, PhD—fluorescence spectroscopy, protein interactions
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, BA in biochemistry, BS in chemistry, BS in biochemistry, 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.

* Graduate Faculty
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 in Chemistry**

Requirements
- 27 credit hours in CHEM courses numbered 200 and above, including CHEM 272/272L, 273/273L, 274/274L, 351, 352/352L, and either 425/425L or 445/445L
- MATH 243 (Calculus III) or 253A
- PHYS 170/170L and 272/272L
- Recommended languages: German, French, Russian, or Japanese

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

**BS in Chemistry**

Requirements
- 41 credit hours in CHEM courses numbered 200 and above, including CHEM 272/272L, 273/273L, 274/274L, 351, 352/352L, 372 or BIOL/MBBE/PEPS 402 or BIOCH 441, 425/425L, 427, and 445/445L
- A minimum of three credits from CHEM 399, 601, 602, 622, 641, 642, 643, 651, 653, or 657
- MATH 243 (Calculus III) or 253A
- PHYS 170/170L and 272/272L
- Recommended electives: MATH 244 and PHYS 274
- Recommended languages: German or French

To view a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets.

**BA in Biochemistry**

Requirements
- 24 credit hours or more in CHEM courses numbered 200 and above, including CHEM 272/272L, 273/273L, 274/274L, 361 or 351/352, and 372
- BIOL 171/171L, 172/172L, 275/275L, and 402
- MATH 215 or 241 or 251A and 242 or 252A
- PHYS 170/170L and 272/272L
- Three elective lecture courses and one accompanying laboratory course from select CHEM, BIOL, MBBE, or MICR courses numbered 300 or higher*.

*Upon approval of a Department of Chemistry advisor and the chair, the elective requirements may be modified to accommodate a special emphasis or interdisciplinary program that is appropriate for a major in Biochemistry.

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

**BS in Biochemistry**

Requirements
- 30 credit hours or more in CHEM courses numbered 200 and above, including CHEM 272/272L, 273/273L, 274/274L, 361 or 351/352, 372, 462, 463L.
- MATH 215 or 241 or 251A and 242 or 252A
- PHYS 170/170L and 272/272L
- 14 credit hours or more, which must include two laboratory courses, from the following:
  - At least one course from CHEM 352L, 399, 425/425L, 427, 445/445L

*Upon approval of a Department of Chemistry advisor and the chair, the elective requirements may be modified to accommodate a special emphasis or interdisciplinary program that is appropriate for a major in Biochemistry.

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

**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 the PhD must take the GRE General Test.

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 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 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.

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 active learning and inquiry in fundamental communication processes with specific emphasis on media arts (digital cinema and multimedia), communication in communities (local, global, organizational, and intercultural), and information and communication technologies (ICTs) 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 laboratories. The internship program facilitates the merging of academic knowledge with applied experience in students’ fields of interest.

Affiliations

The East-West Center, Pacific Telecommunications Council, Telecommunications and Social Informatics Research Program (TASI), 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 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 one or more of three areas of concentration: media arts, communication and communities, and ICTs and policy.

Bachelor’s Degree

Requirements

Students must complete 33 credit hours of communication courses, including the following:

- Introduction to Communication (COM 201)
- three foundation courses (COM 310, 320, and 330)
- one capstone course (COM 476, 477, 478, or 479)

To declare a major in communication, students must be enrolled in, or have completed with a B (3.0) or better in COM 201, Introduction to Communication, 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. Students are also responsible for meeting the prerequisite requirements for at least one of the capstone courses in order to graduate in a timely manner. Students must earn a C (2.0) or better in every course counted toward the major degree requirements.

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

Faculty

* A. Auman, PhD (Chair)—journalism, media ethics
* J. Winter, PhD (Graduate Chair)—emerging communication technology and policy
* W. Bente, PhD (Undergraduate Chair)—information and communication technologies
* P. Buskirk, MFA—multimedia, visual media
* F. Dalisay, PhD—mass communication
* G. Kato, MA—broadcast news, law, reporting
* H. Kramer, PhD—intercultural communication
* M. Moody, MFA—video and film production
* B. Oppegaard, PhD

Cooperating Graduate Faculty

J. C. Ady, PhD—organizational communication
T. Brislin, PhD—mass communication, ethics
C. Ho, PhD—communication technologies
D. Lassner, PhD—telecommunication, public relations
N. Okamura, PhD—telecommunication
M. Shapiro, PhD—political science

Affiliate Graduate Faculty

C. Clarke, MA—intercultural organizational intervention
W. Dissanayake, PhD—intercultural counseling
R. Halverson, PhD—telecom, political communication, software development
K. Kawamoto, PhD—digital media, health communication

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

* Graduate Faculty

Communication

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

Tel: (808) 956-8715

Honolulu, HI 96822

Crawford 320

College of Social Sciences

School of Communications

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

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Email: comm@hawaii.edu
Web: www.communications.hawaii.edu

Faculty

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* P. Buskirk, MFA—multimedia, visual media
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* G. Kato, MA—broadcast news, law, reporting
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Cooperating Graduate Faculty

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C. Ho, PhD—communication technologies
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Affiliate Graduate Faculty

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K. Kawamoto, PhD—digital media, health communication

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

* Graduate Faculty

Communication

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

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K. Kawamoto, PhD—digital media, health communication

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

* Graduate Faculty
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 intercultural communication, global communication, information and communication technologies, social media, public relations, and communication policy and planning. Both individual faculty members and the program as a whole work within sociocultural and sociotechnical perspectives. The goal of our program in terms of student learning is to help our students build and exchange knowledge in areas relevant to the broad field of communication and to our specific areas of specialization.

Qualified applicants are admitted to the program in the fall semester only. Applicants are not required to have an undergraduate communication degree. All applicants must fulfill the UH Mānoa Graduate Education’s admission requirements. 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. Students applying from non-English-speaking countries must have a minimum TOEFL score of 600 (paper-based) or 250 (computer-based). Applicants whose academic objectives match 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 his or her permanent advisor. The student remains, however, primarily responsible to ascertain that all program requirements are met in a timely fashion.

Each student must complete a minimum of 33 credits with at least a 3.0 grade point average. These credits are to be distributed by taking:

- Both foundation courses 611 Communication Theories and 612 Communication Inquiry (6 credits).
- Two core courses (6 credits) from our specializations in Organizational and Intercultural Communication (623 and 643), Telecommunication and New Media (633 and 634), or Global Communication and Journalism (644).
- One seminar 691 (3 credits) (repeatable up to 6 credits).
- One capstone activity (6 credits) selected from 700 (Plan A-Thesis) or 695 (Plan B-Practicum).
- The remaining 12 credits are selected from: additional core courses, advanced courses 646 and 660; courses from the school’s Graduate Certificate Program in Telecommunication and Information Resource Management (TIRM) 680, 681, 682, 683, 684; Directed Research 699; 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 33 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 course work, 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 his or her capstone activity. At the same time the student selects the chair and members of the 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 the university with at least two of those members, including the chair, from our program. Both the committee members and the topic of the activity must be approved by Graduate Education and research to be conducted approved by the university’s Institutional Review Board (IRB). 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/graduate/.

Doctoral Degree in Communication and Information Sciences

The School of Communications is one of the academic programs that participates in an interdisciplinary doctoral program in Communication and Information Sciences (CIS). See the “Interdisciplinary Program” section for more information on that program.

Communicology

College of Arts and Humanities
George 326
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Tel: (808) 956-8202
Fax: (808) 956-3947
Email: COMG@hawaii.edu
Web: manoa.hawaii.edu/communicology

Faculty

*R. K. Aune, PhD (Chair)—message and information processing, natural language processing, research methods
*A. S. E. Hubbard, PhD (Graduate Chair)—nonverbal communication, conflict and relational management, deception
*W. F. Sharkey, PhD (Undergraduate Chair)—family communication, interpersonal, conflict management, interviewing and interrogation
*K. S. Aune, PhD—relational management, emotion
*R. Boller, EdD—argumentation and debate, public speaking, interpersonal and intercultural communication, leadership
*R. E. Cambra, PhD—interpersonal and instructional strategies, negotiation, intercultural
*J. Gasiorek, PhD—social cognition, intergroup & intergenerational communication, research methods

* Graduate Faculty
The Academic Program

The Department of Communicology (COMG) has as its primary objectives the development of knowledge in and instruction concerning the process of 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 communication as well as examining the encoding and decoding processes involved in communication. The second area is relational communication, which focuses on factors that influence growth, maintenance, and termination of relationships. The third area, social influence, deals with the processing of beliefs, attitudes, and behavioral modification, including gaining compliance, conflict resolution, persuasive campaigns, and propaganda.

Communicology is predominantly a discipline of systematic, purposeful thinking and communicating. Students obtain a liberal education of considerable breadth and depth in regard to communication theory. Furthermore, they are afforded ample opportunity to develop their communicative skills by applying theory in such diverse activities as interviewing, persuasion, group discussion, organizational communication, conflict management, intercultural communication, public speaking, relational communication, deceptive communication, and health communication. 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 promotes the skills to communicate effectively.

Undergraduate Study

Bachelor’s Degree

Requirements

Students must complete 33 credit hours, including:

- COMG 251, 301, 302, 364, 371, and 381
- 5 upper division elective courses
- COMG 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 COMG 302, must be taken in the Department of Communicology at UH Mānoa. Introductory courses do not count as electives. Electives must have a prerequisite or be numbered 300 or above and only three (3) credit hours of COMG 399 or COMG 499 (or a combination of the two classes), and/or up to three (3) credit hours of COMG 453 may be applied to the communicology major degree.

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

Minor

Requirements

Students must complete 15 credit hours of communicology, including:

- COMG 364, 371, and 381
- 2 upper division elective courses
- Introductory courses, COMG 399, and COMG 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 Communicology 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. In addition, given our cultural and geographical advantages at UH Mānoa, the Department of Communicology excels in teaching and research in intercultural communication.

All applicants for the MA program in communicology must supplement the application and transcripts required by Graduate Education 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 communication 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. Applicants may be interviewed as well.

Further details on the program may be requested from the graduate chair.

Requirements

The department offers both Plan A (thesis) and Plan B/C (non-thesis: applied project or comprehensive exams) programs. The Plan A thesis program requires a minimum of 33 credit hours of graduate work, at least 27 of which must be in communicology courses numbered 600 and above, including 6 credit hours of COMG 700 Thesis Research. The Plan B applied project program requires a minimum of 33 credit hours of graduate work in courses numbered 600 and above, which includes at least 3 credit hours of COMG 500 Master’s Plan B. The comprehensive exam program requires a minimum of 33 credit hours of graduate work in courses numbered 600 and above and one credit of COMG 500. Communicology courses numbered 400 to 499 and courses from allied disciplines may be counted toward the degree only with prior consent of the graduate chair. COMG 601 and 602 are required for both Plan
East Asian Languages and Literatures

College of Languages, Linguistics and Literature
Moore 382
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Honolulu, HI 96822
Tel: (808) 956-8940
Fax: (808) 956-9515
Web: www.hawaii.edu/eall/

Faculty
*R. N. Huey, PhD (Chair)—classical Japanese literature (especially waka)
S. Chang, PhD—Korean language teaching
*S-Y. Cheon, PhD—Korean phonology and phonetics, second language phonology, content-based instruction (CBI), and media-based instruction
*H. M. Cook, PhD—Japanese linguistics, sociolinguistics, discourse analysis and pragmatics; language socialization
S. A. Curry, PhD—Japanese language teaching
*S. Fukuda, PhD—syntax, lexical semantics and their interface phenomena in Japanese, experimental approaches to syntax and lexical semantics, syntax of understudied Asian languages (Vietnamese and Burmese), first language acquisition of syntax-lexical semantics interface phenomena in Japanese and Korean
S. H. Hirate, MA—Japanese language teaching
*H-I. Hsieh, PhD—Chinese language, linguistics, and culture; mathematical linguistics; semantics; cognitive grammar
*K. K. Ito, PhD—modern Japanese literature, particularly fiction of the Meiji period (1908-1912); cultural studies, narratology, and reception studies
T. Iwai, PhD—Japanese language teaching
*S. Iwasaki, PhD—Japanese linguistics, Ryukyuan linguistics, Thai linguistics, language documentation, functional linguistics, discourse analysis
*L. Jiang, PhD—syntax, semantics, syntax-semantics interface, language universals and variation, comparative linguistics, Chinese linguistics (Chinese dialects, minority languages and sign languages), language acquisition
*S. Jiang, PhD—Chinese language and linguistics, cognitive linguistics, Chinese historical syntax, Chinese dialects, language acquisition and pedagogy, technology-assisted language learning
*K. Kanno, PhD—Japanese linguistics, syntax, second language acquisition, parsing
M. S. Kim, PhD—discourse-functional linguistics, conversation analysis, vocabulary acquisition, Korean language pedagogy
*Y-H. Kim, PhD—modern Korean women writers; modern Korean literature; Korean culture; East Asian women writers and society

*D-K. Kong, PhD—Korean language and linguistics, language acquisition, pedagogy, assessment
M. Lachmann, MA—Japanese language teaching
*D. R. McCraw, PhD—classical Chinese literature, especially poetry, particularly Tang shi, Song shi and ci, and Qing ci
N. T. McPherson, MA—Japanese language teaching
E. Murayama, PhD—Japanese language teaching
G. E. Nakahara, PhD—Japanese language teaching
M. Ogasawara, MA—Japanese language teaching
D. T. Ogawa, MA—Japanese language teaching
*M. J. Park, PhD—Korean language and linguistics, pedagogy, pragmatics
*Y. Peng, PhD—20th century Chinese literature and visual culture, Chinese film, critical theory
G. E. Ray, MA—Japanese language teaching
*K. A. Reynolds, PhD—Japanese socio-historical linguistics, and sociolinguistics (gender and class)
*S. Shibayama, PhD—Classical Japanese literature, especially poetry and prose from the twelfth-century; commentary culture of medieval Japan; comparative study of the European Middle Ages and medieval Japan
*H-M. Sohn, PhD—Korean language and linguistics, Korean-Japanese comparative syntax, general linguistics
*M. Spring, PhD—applied linguistics: cross-cultural communication; issues related to developing superior level proficiency; teacher training, cultural literacy; literature: six dynasties and Tang fiction; Tang prose and rhetoric
*M. Tabata-Sandom, PhD—reading in Japanese as a second language, extensive reading in Japanese, language learner literature and second language vocabulary acquisition
*Y. Tateyama, PhD—pragmatics, Japanese language pedagogy, discourse analysis, translation and interpretation
*A. H. Thornhill, PhD—medieval Japanese literature and religion
H. Uchida, MA—Japanese language teaching
Y. Wada, MA—Japanese language teaching
*H. Wang, PhD—Chinese syntax, semantics, and phonology; Chinese language pedagogy; teaching Chinese for professionals
P. C-K. Woo, MA—Japanese language teaching
*D. R. Yoshimi, PhD—Japanese second language acquisition and pedagogy; discourse analysis, pragmatics and sociolinguistics
*M-B. Yue, PhD—20th century Chinese literary and cultural studies, visual culture and media studies, transnational Chinese writings, constructions of Chineseness and diasporic consciousness in Asian-American, exile, and immigrant writings, theories of ideology and representation, feminism, 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, conversation analysis, pragmatics, qualitative research methods


* Graduate Faculty
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, Japanese, and Korean language, linguistics, and literature.

At the undergraduate level, language skill courses help students develop a high level of proficiency in both the spoken and written aspects of the languages. There are separate BA and Certificate programs to prepare American students to function in Korean in given professional fields. Other courses provide both introductory survey coverage and advanced, theme-specific investigations of the literary cultures of East Asia and the linguistic analysis of Chinese, Japanese, and Korean. Cultural awareness as well as language proficiency are further promoted through extra-curricular activities such as student clubs, video/film showings, lectures, and study abroad programs. Our students have the opportunity to participate in study abroad programs in Hainan, China; Kobe and Machida, Japan; and Seoul, Korea. The graduate programs are designed to provide students with advanced professional training in two tracks: 1) language/linguistics, and 2) literary studies.

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 36 credit hours, including the following upper division courses:
- CHN 300, 302 or 303 or 305, 401, 402 or 404 or 405, and 461
- 6 credit hours from the following, at least one course must be taken from each of the following group:
  (a) CHN 451, 452, 455, 456, 457, 470
  (b) EALL 361, 362, 363B, 363C
- 9 credit hours of approved courses in Chinese language and literature

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

BA in Japanese

Requirements
Students must complete a minimum of 36 credit hours, including:
- JPN 350, 370, 401 or 403, 402 or 404, and 407E
- JPN 407B, 407C, or 407D
- EALL 271 and 272
- 12 credit hours in approved courses

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

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

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

Korean for Professionals Track

Requirements
Students must complete a minimum of 36 credit hours, including:
- KOR 401, 402, 403, and 404 [KOR 307, 308 may replace exempted KOR 401, 402]
- KOR 421, 422, 425 (6 credits), 470, 480, 485, 486, and 1-year overseas program year at Korea University

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

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 skills 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. 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, Korean, and Korean for Professionals 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 2.5. A detailed description of the program requirements is available from the department office in Moore 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, Canada, 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, California, Colo-
rado, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming are eligible, upon admission with a GPA of 3.50 or higher, 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, Korean literature, and Korean for Professionals. The PhD degree is offered with concentrations in the same fields, but not in Korean for Professionals. 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, must have earned with distinction an MA in the language or literature of their concentration, 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, in order to be eligible for advancement to candidacy. Students emphasizing Japanese Language/Linguistics and Korean Language/Linguistics must also fulfill a publishable paper requirement in order to be eligible for advancement 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. The MA in Korean for Professionals is a Plan B program only.

**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**

In order to be advanced to candidacy, PhD students are expected to master four fields, at least one of which will be outside the students’ areas of specialization and must pass a comprehensive examination covering the four fields. PhD students in Japanese and Korean Language/Linguistics must master three fields and a comprehensive examination covering these three fields and produce a scholarly paper. After being advanced to candidacy, all PhD candidates must complete an original dissertation, and pass a final oral examination in defense of the dissertation. Apart from having a command of English and their language of concentration, 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.

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**Economics**

**College of Social Sciences**

Saunders Hall 542

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Tel: (808) 956-8496

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Email: econ@hawaii.edu

Web: www.economics.hawaii.edu

**Faculty**

*S. La Croix, PhD (Chair)—economic history, development economics, industrial organization

*C. Bonham, PhD—applied macroeconomics, monetary theory

*P. Fuleky, PhD—time series econometrics, economic forecasting

*B. Gangnes, PhD—international macroeconomics, econometric modeling

*T. Greaney, PhD—international economics, industrial organization

*T. Halliday, PhD—health economics, economic development, econometrics

*R. Juarez, PhD—microeconomic theory

*B. Karacaoglu, PhD—international trade, political economy of trade policy, development economics

*D. E. Konan, PhD—international trade

*S. H. Lee, PhD—population economics, labor economics

*L. Love, PhD—development economics, finance

*J. Lynham, PhD—environmental and resource economics, experimental economics, marine ecology, behavioral economics

*A. Mason, PhD—population economics, macroeconomics

*S. Rhee, PhD—macroeconomics, labor economics

*M. Roberts, PhD—environmental and resource economics, agricultural economics

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

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

*N. Tarui, PhD—environmental and resource economics, applied microeconomics, applied game theory

*J. R. Tracynski, PhD—economics of education, law and economics

*L. Wang, PhD—monetary economics, macroeconomics, search and matching theory

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

**Cooperating Graduate Faculty**

K. Burnett, PhD—environmental and resource economics

I. Cintina, PhD—labor economics, health economics

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

T. B. Vu, PhD—development economics, international economics

**Affiliate Graduate Faculty**

L. Cho, PhD—population economics

L. Endress, PhD—growth theory

F. Fesharaki, PhD—energy economics

H. He, PhD—macroeconomics, health economics

B. Kaiser, PhD—environmental economics, microeconomics

I. Love, PhD—international finance

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

* Graduate Faculty
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 Department of Economics participates in academic and educational exchanges with Nihon University, Tokyo, Japan; Yonsei University, Seoul, South Korea; 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

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 321. 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.

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovca/programsheets/.

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 School of Pacific and Asian Studies and with other programs in the College of Social Sciences. In conjunction with the Shidler College of Business, 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 macroeconomics theory, elementary statistics, and a mathematics background that includes at least two 3-credit semester courses in calculus. For the PhD program, we 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. A student following normal progress should be able to earn the MA degree within two years.

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 GPA) for all courses completed at UH Mānoa 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.

**Graduate Ocean Policy Certificate**

Guiding state governance and community stewardship of the oceans requires an interdisciplinary approach grounded in both theory and empirical study of the human-marine environment relationship. The Graduate Ocean Policy Certificate is designed as a concurrent program for classified graduate students and law students in good standing. Community professionals and practitioners who meet minimum admissions requirements are eligible to build their skills in coastal conflict resolution, maritime boundaries, fisheries economics, species recovery, and ecosystem-based management of marine resources. An advisor assists each student in custom-designing a 15-credit program that draws on marine-related courses at UH Mânoa in environmental and resource economics, geography, law, history, marine science, public policy, conflict resolution, and planning. A major paper or internship project and participation in an interdisciplinary seminar are required. For further information and applications, see the department’s web page.

**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. A student following normal progress should be able to earn the PhD degree within five years.

**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 Education.

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 (two of ECON 670, 672, and 674)

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 Mânoa economics faculty member to serve as their research paper advisor. Any member of the economics graduate faculty may serve as your paper advisory, and the arrangement is by mutual agreement. You then invite two other faculty members to serve as readers of your paper. Have your paper advisor and readers indicate their willingness to serve by having them sign the research paper form, which can be obtained from the staff in the economics department office. Submit the form to the graduate chair for approval before or during the fall semester of your third year of graduate study. During that semester, you are required to register for ECON 730, Research Seminar, and make substantial progress on your research paper. You are encouraged to consult with your paper advisor periodically as you work on your research paper. You may also consult with your second and third readers. Upon completion of the paper, submit it to your advisor and readers, who will evaluate the paper and assign a grade of “pass,” “high pass,” or “fail.” Students who receive a grade of “fail” will have one opportunity to revise the paper provided they meet the appropriate deadlines. The deadline for submitting your paper is **May 1** of your third year of graduate studies and the deadline for resubmissions is **August 1**.

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 Graduate Education. A student who fails the comprehensive examination may repeat it once. A student who fails a second time is dismissed 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 Graduate Education. Those failing it twice are dismissed from the program.

Finally, a dissertation accepted by the dissertation committee is submitted to Graduate Education. The final dissertation must also conform to UH Mânoa standards in content and format.
English
College of Languages, Linguistics and Literature
Kuykendall 402
1733 Donagho Road
Honolulu, HI 96822
Tel: (808) 956-7619
Fax: (808) 956-3083
Email: enghi@hawaii.edu; see list of contacts on webpage
Web: www.english.hawaii.edu

Faculty
* L. Lyons, PhD (Chair)—post-colonial literatures and theory, Irish literature, cultural studies
* C. Bacchilega, PhD—folklore, narrative, fairy-tale studies, 20th-century fiction, feminist criticism, literary theory, translation studies
* K. Beutner, PhD—fiction and creative nonfiction
* J. Caron, PhD—19th-century American literature, Mark Twain, comic art and literature, popular culture
* J. Carroll, PhD—rhetoric and composition, American novel, fiction
* R. W. Dassenbrock, PhD—modernism, literary theory, post-colonial literature, comparative literature
* D. Desser, PhD—20th-century rhetorics, writing and difference, composition studies
* C. Franklin, PhD—contemporary women’s literature, ethnic American literatures, feminist theory
* 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. Heberle, PhD—Renaissance literature, American Vietnam literature
* J. Henry, PhD—workplace writing and subjectivity, composition studies, technical communication and its rhetorics
* K. Ho‘omanawainui, PhD—Native Hawaiian literature, literatures of Hawai‘i, folklore and mythology, children’s literature, translation studies
* C. Howes, PhD—life writing, literary theory, research methods, 19th-century literature
* R. Hsu, PhD—modernism, ethnic literature, Asian American literature, feminist criticism
* J. Lew, PhD—late 18th-century literature, English and European romanticism, Gothic
* P. Lyons, PhD—49th- and 20th-century U.S. literatures, literary and cultural theory, regional and settler literatures in Oceania
* G. Man, PhD—film, narrative, 19th-century British literature
* K. McAndrews, PhD—folklore, oral narrative, American Literature (1905–present), cultural studies in relationship to gender, humor and tourism
* R. McHenry, PhD—Restoration and 18th-century literature, Shakespeare, literature and art
* L. Middleton, PhD—19th-century British literature, women’s literature, psychology and literature
* R. Morales, MA—creative writing, Pacific literature, American ethnic literature
* J. Morse, PhD—American literature, literary history
* G. Nordstrom, PhD—composition and rhetoric
* 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)
* P. Quigley, PhD—environmental literature, ecocriticism, critical theory, 19th century American and British literature, cyber literature
* J. Rieder, PhD—literary and cultural theory, science fiction, British Romanticism
* T. Sammons, PhD—Renaissance and 17th-century literature, Milton, science fiction, rhetoric
* C. Santos Perez, MA—creative writing, international poetry, indigenous literature and theory, Pacific and Chamorro studies
* 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
* C. Sinavaiana, PhD—Pacific literature and drama, ethnic literatures, folklore, feminist criticism
* F. Stewart, MA—creative writing, modern and contemporary poetry and poetics, American nature writing
* J. Taylor, PhD—African American literature, visual culture, critical theory
* A. Te Punga Somerville, PhD—Maori, Pacific and Indigenous literatures and cultural production, Maori studies, Pacific studies, Indigenous studies, Maori and Pacific history, Maori diasporas, postcolonial and gender studies, Indigenous research methodologies
* C. Ward, PhD—critical theory, post-colonial literature, popular culture, oral and performance theory, the novel
* S. Yang Ryan, MA—creative writing, Asian American literature, speculative and social protest fiction
* 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. 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 in literary and cultural studies, composition, rhetoric, and creative writing; (b) to develop students’ critical thinking and reading skills; and (c) to develop students’ interests and abilities in rhetoric and writing across a variety of genres. Many of our courses recognize Hawai‘i’s geographical and cultural location in the Pacific.

The graduate program enriches students’ knowledge of literature, composition and rhetoric, creative writing, 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 under-
standing 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**

One FW and one ENG 270–273 course are prerequisites for upper-division English courses. Majors must complete 33 credit hours of upper division courses, as follows:

**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. 5 300-level courses are recommended 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 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 or ENG 491
- at the 300 or 400 level:
  - E. 2 elective 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 ENG 320 must come from at least two different categories:

- Composition/Language/Rhetoric (300, 302, 303, 306, 307, 308, 311)
- Creative Writing (311, 313)
- Genre (340, 360, 361, 362, 363, 364, 365, 366)
- Literature and Culture (372, 373, 374, 380, 381, 382, 383, 384, 385)
- Literature of Hawai‘i and the Pacific (370, 371, 375, 376, 378)

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.

Only courses in which a student receives a C or better may be counted toward the major.

For a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

**Non-English Department Course**

With the consent of the student’s advisor or the director of the undergraduate program, one appropriate three-credit upper division course from outside English may be counted as a major elective.

**Advising**

Advising is mandatory for majors; new majors will be assigned an advisor when they meet with the director of the undergraduate programs for their required orientation session. Call (808) 956-7619 for an appointment.

**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, cultural studies, or rhetoric and composition. The student may also take electives from any of these areas.

One FW and one ENG 270–273 course are prerequisites for upper-division English courses. 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; 3 credits
2. Single author course (440 Single Author; 442 Chaucer; 445 Shakespeare; or 447 Milton); 3 credits
3. 300-level ENG elective; 3 credits
4. 400-level ENG elective; 3 credits
5. 300- or 400-level ENG elective; 3 credits

No more than one upper division English large enrollment course may be counted toward the minor. Only courses in which a student receives a C or better may be counted toward the minor.

**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 a bachelor’s degree in English or a closely related field. PhD applicants normally will have completed the MA in English. In addition to the application and transcripts required by Graduate Education, all applicants must submit directly to the department three letters of recommendation and the GRE General Test scores. Applicants must also submit a comprehensive statement of professional goals and objectives; PhD students must submit 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. The completed application should be sent to Graduate Education by **December 1** for the PhD program and **January 1** for the MA program. Complete information on the application process is provided on the department’s website.

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.

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

Plan A is applicable only to students admitted to the Creative Writing concentration. Students complete 33 credits:

- 27 credit hours of course work:
  - ENG 625D and ENG 625B, C, or E
  - 9 credits of course work in creative writing and 12 credits outside of creative writing.
  - One course must be pre-1900
  - One course must have substantial Hawai‘i/Asia/Pacific content
  - 6 credits of work on the MA thesis

Students must also achieve intermediate level knowledge of one foreign language.

Plan B (Non-thesis) Requirements

Plan B is applicable to students in the Literary Studies in English, Composition and Rhetoric, and Cultural Studies in Asia/Pacific concentrations. All Plan B students complete 33 credits—30 credits of course work and 3 credits of work on the MA final project. One course must have substantial Hawai‘i/Asia/Pacific content. All students must also achieve intermediate level knowledge of one foreign language.

- Requirements for those in Literary Studies in English: ENG 625B and ENG 625C, D, or E; 9 credits minimum in LSE. One course must be pre-1700.
- Requirements for those in Composition and Rhetoric: ENG 625C and ENG 625B, D, or E; ENG 605, 705, and 709; 12 credits minimum in other concentrations. One course must be pre-1900.
- Requirements for those in Cultural Studies in Asia/Pacific: ENG 625E and ENG 625B, C, or D; 9 credits minimum of course work in CSAP and 12 credits minimum in other concentrations. One course must be pre-1900. 3 credits may be taken outside of the English department with the permission of the concentration advisor.

Concentration-specific program requirement sheets are available on the English Department website.

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 graduate or 400-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
Krauss Annex 19, 2500 Dole Street
Honolulu, HI 96822
Tel: (808) 956-7362 or (808) 956-7164
Fax: (808) 956-3980
Email: jcusick@hawaii.edu
Web: www.hawaii.edu/envctr/evs/

Faculty

J. Cusick, PhD (Advisor)—environmental studies, education for sustainability, ecotourism, political ecology, protected areas, Pacific Basin

Affiliate Faculty

C. L. Andrade, PhD—traditional navigation, Malama‘aina: traditional resource management, indigenous geography, Hawaiian music
L. J. Cox, PhD—community economic development
E. P. Dashiell, MA—environmental and facilities planner, environmental impact statements, environmental investigations
E. H. DeCarlo, PhD—aquatic and environmental geochemistry, oceanography, freshwater
D. Duffy, PhD—conservation, restoration ecology
D. R. Drake, PhD—botany, ecology, Polynesian plants
S. Meder, ArchD—architecture, design, environmental systems
M. D. Merlin, PhD—biogeography, natural history of Hawai‘i
J. K. Odin, PhD—Interdisciplinary Studies advisor, cultural studies of science and technology, literary and political ecology, new technologies and their impact on higher education
T. Radovich, PhD—vegetables, sustainable farming
J. E. Schoonmaker, PhD—Global Environmental Sciences advisor, oceanography
B. Szuster, PhD—geography, coastal resource management, environmental impacts assessment

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

The Academic Program

Environmental studies (EVS) is an individually designed, interdisciplinary program established in 1965 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 “Interdisciplinary Studies” within the Undergraduate Education section.

**Requirements**

- Introductory courses:
  - BIOL 101/101L or BIOL 171/171L
  - 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/ATMO 310
  - BOT 450 or ZOOL 200/200L
  - GEOG 404
  - 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.

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheet/.

**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/ATMO 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 450, 453, 454, 455
  - GEOG 300, 305, 309, 401, 404, 405, 410
  - GG 455
  - OCN 320, 330, 331
  - ZOOL 439/439L, 450, 485
- Electives for the social science courses include the following:
  - AMST 320, 420
  - ANTH 415, 435
  - ARCH 341
  - ECON 358
  - GEOG 330, 335, 380
  - IS 361
  - NREM 302
  - PLAN 310, 399
  - SOC 412

**Ethnic Studies**

College of Social Sciences
2560 Campus Road, George Hall 301
Honolulu, HI 96822
Tel: (808) 956-8086
Fax: (808) 956-9494
Email: esdept@hawaii.edu
Web: www.ethnicstudies.hawaii.edu

**Faculty**

T. Tengan, PhD (Chair)—identity, gender, indigenous theory and methodology, Hawai‘i and the Pacific
I. G. Aoudé, PhD—Hawai‘i political economy, Middle East politics, social movements in Hawai‘i and the South Pacific
B. Chung, PhD—Chinese diaspora, transnationalism, Chinese Americans, popular culture and music
M. Das Gupta, PhD—South Asians in America, race and gender politics, U.S. immigration policies
U. Hasager, PhD—associate specialist in civic engagement
N. Kent, PhD—political economy in Hawai‘i and the Pacific, American ethnic relations
R. Labrador, PhD—Filipino culture, history and politics in Hawai‘i and the Pacific
D. McGregor, PhD—Hawaiian history, social movements in Hawai‘i and the Pacific
J. Y. Okamura, PhD—race and ethnicity, minority access to higher education, ethnic relations in Hawai‘i, Japanese in Hawai‘i, Filipinos in Hawai‘i, Asian Americans
F. L. Uperesa, PhD—American ethnic and race relations, racism and ethnicity in Hawai‘i

**Affiliate Faculty**

A. Castanha, PhD—political science (indigenous cultures)
W. Nishimoto, PhD—education (oral history)
L. Petranek, PhD—political science (political economy)
L. Wang, PhD—American studies (immigration law and critical race theory, Asian American politics and public policy, feminist ethnography)

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

* Graduate Faculty
The Academic Program

The Department of Ethnic Studies (ES) is an interdisciplin ary program with emphasis on undergraduate education. Initiated in 1970, ethnic studies combines traditional and contem porary 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, class, and gender. The program also offers courses on the history and experiences of specific groups, including African Americans and Native Americans. Among groups in Hawai‘i, Chinese, Filipinos, Hawaiians, and Japanese 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

Bachelor’s Degree

Requirements

Students must complete 30 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, 333, 338, and 339
- 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, 350, 360, 365, 370, 372, 373, 375, 381, 390, 392, 399, 410, 418, 420, 443, 455, 456, 460, 480, 492, 493, 495, and 496
- A 2.0 GPA in ethnic studies and the 6 credit hours of related courses must be approved by a departmental advisor

For information on a Bachelor Degree Program Sheet, go to www.hawaii.edu/ovcaa/programsheets/.

Certificate

Requirements

- Complete 18 credit hours in ethnic studies with a 3.0 GPA
- ES 101 (301 may be substituted)
- 6 credit hours on the history and dynamics of ethnic groups from ES 221, 305, 306, 330, 331, 333, 338, and 339
- 9 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, 350, 360, 365, 370, 372, 373, 375, 380, 381, 390, 392, 399, 410, 418, 420, 440, 443, 455, 456, 460, 480, 492, 493, 495, and 496

Geography

College of Social Sciences
Saunders Hall 445
2424 Maile Way
Honolulu, HI 96822
Tel: (808) 956-8465
Fax: (808) 956-3512
Email: uhmgog@hawaii.edu
Web: www.geography.hawaii.edu

Faculty

H. Jiang, PhD (Chair)—cultural geography, environment, perception of nature, China
D. Beilman, PhD—biogeography, long-term ecology, terrestrial carbon accumulation, paleoenvironmental change
Q. Chen, PhD—remote sensing, geographic information systems, geostatistics, spatially-explicit modeling
T. W. Giambelluca, PhD—climatology, hydrology
R. Jones, PhD—political geography, globalization, borders, sovereign state system, nationalism, South Asia
M. G. McDonald, PhD—agricultural change, social theory, political geography, Japan
M. McGranaghan, PhD—computer cartography, geographic information systems
C. Mora, PhD—interlinks between biodiversity patterns, processes, threats and human welfare
M. Mostafanezhad, PhD—cultural politics of tourism, politics of consumption, Thailand
A. Rieser, JD, LL.M.—marine environmental governance; marine science and policy; political geography of the oceans; ocean policy and climate change
K. Suryanata, PhD—political ecology, agricultural geography, natural resource management, Third World
R. A. Sutherland, PhD (Associate Dean)—geomorphology, soil erosion, water quality
B. Szuster, PhD—coastal resource management, environmental impacts assessment, marine recreation, Thailand
E. A. Wingert, PhD—cartography, remote sensing

Cooperating Graduate Faculty

M. D. Merlin, PhD—biogeography, natural history of Hawai‘i

Affiliate Graduate Faculty

M. Finucane, PhD—environmental perception
J. Fox, PhD—social forestry
N. Lewis, PhD—medical geography
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

The Academic Program

Geography (GEOG) provides a broad and flexible academic program that explores the human and environmental systems that shape the surface of the Earth. The discipline investigates the interaction of culture, society, ecology and physical environments that characterize particular places and studies how these relationships vary across space. The undergraduate program at UH Mānoa focuses on three interlocking subdisciplines: human geography, environmental geography, and geographic technologies. Human geography investigates the cultural, economic, and
political processes that shape human experiences on the Earth; the relationship between the environment, society, and culture; and the nature of place in the Asia-Pacific region. Environmental geography engages in a systematic study of the Earth’s physical environment (atmosphere, biosphere, hydrosphere, and lithosphere) and considers the challenges associated with natural resource management and global environmental change. Geographic technologies include the study of cartography, geographic information systems (GIS), and remote sensing science.

Students who study geography obtain a holistic understanding of the world and a set of methodological tools that can be applied to a wide range of domestic and international career opportunities. Geographers are involved in environmental planning, natural resource management and social policy development with all levels of government, private firms, non-profit organizations, educational institutions, and international agencies. Hawai‘i’s unique historical, socio-cultural and environmental context also provides a fascinating setting for geographical investigations into the wider Asia-Pacific region.

### Undergraduate Study

#### Bachelor’s Degree

**Requirements**

Students must complete 16 core credit hours including:
- GEOG 101/101L, 104, 151, 380, and 493

In addition to the core requirements, each student must elect one of three of the following streams and complete at least 21 credit hours in the upper division courses specific to each stream.

**Environmental stream:**
- two environmental geography courses
  - GEOG 300, 302, 303, or 309
  - GEOG 370, 376, 387, or 388
- one human geography course
  - GEOG 322, 325, 330, or 335
- three upper division environmental geography courses (two from the list below)
  - GEOG 400, 401, 402, 403, 404, 405, 408, 409, 410, 411, 412, or 413

**Geotechnical stream:**
- two geotechnical courses
  - GEOG 370, 376, 387, or 388
- one environmental geography course
  - GEOG 300, 302, 303, or 309
- one human geography course
  - GEOG 322, 325, 330, or 335
- one intern or research topic course
  - GEOG 468 or 492
- two upper division courses from the list below
  - GEOG 470, 472, 476, or 489

**Human stream:**
- two human geography courses
  - GEOG 322, 325, 330, or 335
- one environmental geography course
  - GEOG 300, 302, 303, or 309
- one geotechnical course
  - GEOG 370, 376, 387, or 388
- three upper division human geography courses (two from the list below)
  - GEOG 421, 422, 423, 424, 425, 426, 435, or 436

Individual programs are designed in consultation with the undergraduate advisor.

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

#### Minor

**Requirements**

The minor in geography requires 15 credits of upper division course work in geography, which should include at least one course in each of the three areas: human geography, environmental geography, and geotechnology.

### 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 management and systems; (c) conservation, 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 environmental 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, Graduate Education, 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

#### 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. Minimum of 15 credit hours in graduate courses in a departmental field of specialization (course work taken at the MA/MS level may be used in partial fulfillment of this requirement);
4. Minimum of 6 credit hours in research methods or techniques (statistics, cartography, remote sensing, GIS, quantitative or qualitative methods, computer applications, field methods, experimental methods, laboratory techniques or bibliographic techniques);
5. Passing of written and oral comprehensive examinations; and

History
College of Arts and Humanities
Sakamaki A-203
2530 Dole Street
Honolulu, HI 96822
Tel: (808) 956-8486, 956-8358
Fax: (808) 956-9600
Web: manoa.hawaii.edu/history

Faculty
*D. J. Cohen, PhD—modern Europe, political and legal history
*D. J. Reiss, PhD—U.S. foreign relations, Latin America, Atlantic world, Native American, sensory
*D. N. Arista, PhD—Hawaiian Islands, 19th century Hawai‘i, U.S. social and cultural
*D. L. Hanlon, PhD—Pacific Islands, Micronesia, ethnography
*D. M. Rapson, PhD—U.S., cultural and intellectual
*D. P. Schwartz, PhD—ancient Europe, classical history, gender, law
*D. Wang, PhD—ancient China, Ming/Qing China, politics and culture
*D. J. Wang, PhD—modern Korea, colonialism, gender and cultural studies
*D. C. Ziegler, PhD—modern Europe, Germany, Holocaust, world history

Cooperating Graduate Faculty
B. Andaya, PhD—Southeast Asia
D. J. Cohen, PhD—modern Europe, political and legal history

Degrees Offered: Undergraduate Certificate in Islamic Studies, 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 eleven courses (33 credit hours) in history with a grade of C (not C-) or better, distributed as follows:
- Minimum of five courses (15 credit hours) in one of the following four fields (U.S., Europe, Asia/Pacific, Europe, or Comparative/World)
- One upper division course (3 credit hours) in each of the other three fields
Undergraduate Certificate in Islamic Studies

The purpose of this certificate is to increase understanding of Islam as a world religion through critical analysis of primary and secondary materials, to foster knowledge about the complexity among Islamic societies and their diverse cultural expressions, and to explore the role of Islam and Muslims in present and past world affairs.

This certificate is housed within the College of Arts and Humanities. The participating departments are Art and Art History, History, Philosophy, and Religion. Minimum prerequisites for acceptance into the program for undergraduates are sophomore or higher standing with a minimum GPA of 2.5 and the completion of at least one introductory course within one of the four participating departments with a grade of B or better.

A more complete description and the requirements are described under the Department of Philosophy.

Graduate Study

The Department of History offers the MA and PhD degrees in the U.S. and the Americas, Asian, European, Pacific/Hawai’i, and World fields. All applicants for advanced degree programs in history are required to supplement the application and transcripts required by Graduate Education 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 the departmental website, manoa.hawaii.edu/history or by email 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.
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
Email: hip@hawaii.edu
Web: www.manoa.hawaii.edu/ipll/

Faculty
J. F. Mayer, PhD (Chair)—language learning and teaching, language in society, Samoan
A. S. Agcaoili, PhD—Philippine literature and culture, creative writing: poetry, fiction, drama, Ilokano language and literature, philosophy of language, literary relations, literatures of exile and diaspora
P. C. Arboleda, PhD—Philippine literature, creative writing, Ifaliklig orature and Philippine folklore, gender studies, literary theory, and Southeast Asian traditional culture
S. Bhatrawadekar, PhD—Hindi, Urdu language, foreign and heritage language teaching, pedagogy, curriculum and material development and program building; South Asian cinema and culture; film adaptation of literature, Hindi and Buddhist religious philosophies and their reception in the West; German-Indian comparative philosophy
S. T. Chailloux, MA—linguistic anthropology, the power’s dimension of the Tahitian language in the political and religious area; anthropology of Christianity, syncretism and contextual theology in the Tahitian Protestant Church; contemporary history of Tahiti; Tahitian oratory art (traditional speech)
I. Gasmen, MA—Filipino (Tagalog) language learning and teaching; language and multimedia; educational communication, distance education
L. Hamedani, PhD—linguistics, Persian language syntax, testing, translation, Persian culture, and modern and classical Persian literature as well as pedagogy and second language acquisition
Y. Hoonchamlong, PhD—Thai linguistics, language learning and teaching, information technology in language research and language learning
J. R. Knutson, PhD—Assistant Professor of Sanskrit and Bengali, Sanskrit literature and literary theory, ancient and early medieval history and literary history of South Asia, Early Middle Bengali poetry, comparative premodern poetry and poetry
U. Kozok, PhD—Indonesian language and literature, prehistory and paleography of Island Southeast Asia, Sumatran philology
F. Lesa, PhD—language learning and teaching, Samoan
S. D. O’Harrow, Doceo—Vietnamese language, philology and civilization, Sino-Vietnamese
L. C. Pagkalainawan, PhD—Filipino (Tagalog) language learning and teaching, Filipino linguistics; Philippine literature, creative writing, sociolinguistics
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)
L. Q. Santiago, PhD—Philippine literatures, Ilokano and Filipino (Tagalog) languages and literatures, poetry, fiction, creative writing and critical writing, comparative literature, women and feminist literatures, and translation studies
M. F. Simanu-Klut, PhD—Samoan language learning and teaching, pedagogy, traditional literature and forms of entertainment, intersections of oral traditions and cultural history, creative writing
J. Soria, PhD—Ilokano language, second/foreign, and heritage language teaching and learning, curriculum development and evaluation, media literacy and electronic portfolio

Degrees and Certificates Offered: Undergraduate Certificate in Indo-Pacific languages (Filipino, Hindi, Ilokano, Indonesian, Khmer, Samoan, Sanskrit, Tahitian, Thai, or Vietnamese); 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

The Academic Program
Indo-Pacific Languages and Literatures (IPLL) 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 department is the only one to offer programs of study in four Polynesian languages, most of the national languages of Southeast Asia, as well as classical and modern Indian languages as well as Arabic, Urdu, and Persian. Beyond language, the department offers courses in the literatures and cultures of the area, including literature in translation of South and Southeast Asia, Polynesia, 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 second 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 Arabic, Cambodian (Khmer), Chamorro, Filipino, Hindi, Ilokano, Indonesian, Maori, Marshallese, Persian, Samoan, Sanskrit, Tahitian, Thai, Tongan, Urdu, and Vietnamese. For additional languages and topics, see Indo-Pacific languages (IP) courses listed at the back of the Catalog.

Undergraduate Study

Certificates
On recommendation of the Department of Indo-Pacific Languages and Literatures, UH Mānoa confers certification of achievement in Filipino, Hindi, Ilokano, Indonesian, Khmer, 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 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.

To view the Bachelor Degree Program Sheets with Filipino and Ilokano concentrations, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

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

Honors and Awards

Samuel H. Elbert Graduate Scholarship

Offered to encourage graduate-level research and study for students specializing in Pacific Island 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.

Amos P. and Edna Lee Leib Scholarship for Graduate Study of Literature of the Pacific

Offered to support graduate students pursuing the study of literature of the Pacific.

Ilokano BA Scholarship

The scholarship provides academic recognition to an undergraduate student in the College of Arts and Sciences pursuing a Bachelor of Arts in Philippine Language and Literature with Concentration in Ilokano.

Roshan Institute Graduate Fellowship for Persian Linguistics, Language Acquisition and Applied Linguistics

Offered to support graduate students pursuing the study of Persian, Roshan Cultural Heritage Institute provides two renewable Graduate Fellowships for outstanding PhD students in Persian Linguistics, Language Acquisition, and Applied Linguistics.

Roshan Institute Graduate Student Fellowship for Persian

Offered to support graduate students pursuing the study of Persian, Roshan Cultural Heritage Institute provides two annual non-renewable fellowships of $5,000 for graduate students.

Jack Haven Ward Graduate Scholarship

Promoting the study of Tahitian (first priority) and any other language of French Polynesia or Balinese.

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

*D. Chin, PhD (Chair)—artificial intelligence, natural language processing, user modeling
*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
*M. E. Crosby, PhD—human-computer interaction, cognitive science
*R. Gazan, PhD—social aspects of information technology
*P. Johnson, PhD—software engineering, artificial intelligence
G. Lau, MS—educational specialist
*J. Leigh, PhD—big data visualization, virtual reality, high performance networking, human augmentics, video game design
*D. Li, PhD—security, privacy and performance in systems, software, networks and databases
*L. Lim, PhD—database systems
*M. B. Ogawa, PhD—educational specialist
*D. Pavlovic, PhD—security, software, search and networks, quantum computation
*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
*S. P. Robertson, PhD—human-computer interaction, digital government and digital democracy
*P-M. Seidel, DrEng habil—formal methods, computer arithmetic, computer architecture, algorithms
*N. Sitchinava, PhD—algorithms and data structures, parallel and distributed computation, I/O- and cache-efficient computation
*J. Stelovsky, DrTechSc—computer-hypermedia, human-computer interaction

* Graduate Faculty
*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—human-computer interaction, computer-supported collaborative learning, technology for education, socio-technical networks and online communities

Affiliate Graduate Faculty
V. Harada, PhD—school library administration, information literacy
S. Itoiga, PhD—database system, expert system and logic programming
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 science, 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 geographica l 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 (54 credits):
- ICS 111, 141, 211, 212 or 215, 241, 311, 312 or 331, 313 or 361, 314, 321, and 332
- 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.

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

BS in Computer Science
Requirements
Students must complete the following courses (51 credits):
- ICS 111, 141, 211, 212 or 215, 241, 311, 312 or 331, 313 or 361, 314, 321, and 332
- 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 Placement CS Exam, must be approved by the ICS faculty advisor.

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

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 with a grade of B (not B-) or higher, 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. Applicants from foreign countries must be academically qualified, proficient in English (TOEFL or IELTS with scores above the minimum required by Graduate Education, with the additional requirement that TOEFL scores be 580/237/92 or above for admission to the MS program, and 600/250/100 or above for admission to the PhD program, where scores are listed as paper/computer/internet), and sufficiently financially supported.

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 Graduate Education and foreign applicants from Pacific or Asian countries may be eligible for Pacific-Asian Scholarships. Prior to submitting a
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 course work.

Requirements

Plan A (thesis) and Plan B (non-thesis) are available. A minimum of 31 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 graduate courses, i.e. courses with numbers between ICS 600 and ICS 692, with the exception of ICS 690. At least one course must be taken from each of four areas of concentration in the program to ensure breadth of knowledge. 3 credits of ICS 700 may be substituted for one of these six courses;
2. Two additional elective 600-level courses must be taken either from the ICS department or some related discipline (such as LIS, EE, MIS, etc.) on a topic related to computer science. Elective courses must have prior approval from the ICS graduate chair as to the suitability prior to enrollment in the courses;
3. Up to two of the graduate courses may be replaced by regular ICS 400-level courses (not ICS 499), taken after enrolling in the ICS graduate program. ICS 400-level courses do not count towards the area requirement.
4. Thesis research taken as 6 credits of ICS 700 is required for the degree. These credits are typically taken close to or during the final semester in the program consist of six credits of ICS 700; and
5. ICS 690 (taken for CR/NC) for one semester.

Plan B (Non-thesis) Requirements

1. At least six ICS graduate courses, i.e. courses with numbers between ICS 600 and ICS 691, with the exception of ICS 690. At least one course must be taken from each of four areas of concentration in the program to ensure breadth of knowledge;
2. Two additional elective 600-level courses must be taken either from the ICS department or some related discipline (such as LIS, EE, MIS, etc.) on a topic related to computer science. Elective courses must have prior approval from the ICS graduate chair as to the suitability prior to enrollment in the courses;
3. Up to two of the graduate courses may be replaced by regular ICS 400-level courses (not ICS 499), taken after enrolling in the ICS graduate program. ICS 400-level courses do not count towards the area requirement.
4. A final project taken as ICS 699 (a maximum of six credits is counted toward the degree) under the supervision of a faculty member with a written report of the final project is required at the end of the student’s program of study; and
5. ICS 690 (taken for CR/NC) for one semester.

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 are encouraged to propose a degree plan by selecting Plan A (Thesis) or Plan B (Non-Thesis) options;
3. Plan A students are encouraged to choose a thesis topic and committee upon completion of 18 credit hours of applicable courses; and
4. All requests for changes in degree plan must be submitted in writing by the student and approved by the graduate program chair before the diploma application is filed.

PhD in Computer Science

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

Applicants with bachelor’s degrees must first satisfy the admission and degree requirements of the master’s degree in computer science. Advantages to this route are (1) students are admitted at an early stage to the PhD program; (2) they will, in practice, usually take a year LESS to obtain their PhD since the MS portion of the program will prepare them for their qualifying examination; and (3) students who have completed the MS requirements will have the option of obtaining a master’s degree even if they do not continue with the PhD 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 course work.

Requirements for students to complete the PhD program are:

1. Passing a qualifying examination demonstrating core competency in computer science no later than the end of the first year of their PhD studies;
2. Preparing a portfolio showing research readiness by the end of the second year of their PhD studies;
3. Up to two of the graduate courses may be replaced by regular ICS 400-level courses (not ICS 499), taken after enrolling in the ICS graduate program. ICS 400-level courses do not count towards the area requirement.
4. Defend their PhD proposal;
5. Final defense of PhD dissertation.

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

Interdisciplinary Doctoral Degree Program

The ICS department participates in an interdisciplinary program in Communications and Information Sciences (CIS) that integrates computer science, library science, communica-
tion and management information systems. Due to the broad knowledge base required to support the program, it draws on a variety of majors such as behavioral science, economics, engineering, and political science. The computer science program is one of four academic programs (COM, ICS, ITM, and LIS) that support this degree. See the “Interdisciplinary Program” section for more information on this program.

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

Faculty
A. Auman, PhD—multimedia reporting, editing, media ethics, publication design, race, ethnicity, gender and media
G. Y. Kato, MA—broadcast news, law, reporting
B. Oppegaard, PhD—multimedia journalism

Degree Offered: BA in journalism

The Academic Program
Journalism (JOUR) education develops students’ critical thinking skills and ability to gather, analyze, and organize information and to communicate it clearly, effectively, and responsibly using multiple media platforms such as print, broadcast, online, and other new media. 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.

The journalism degree program is professional in its orientation. Admission to the major requires sophomore standing and at least a 2.5 GPA after completion of JOUR 250 and a B or better. Majors should follow the recommended course sequencing. All students wishing to enroll in JOUR 250 and above must have earned a C or better in ENG 100. All students must take either ICS 101 or 110 or 111 or equivalent before taking 400-level courses.

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 and the UH Mānoa chapter of the Society of Professional Journalists (SPJ).

Advising
Advising is mandatory for all journalism majors.

Undergraduate Study
Bachelor’s Degree
Requirements
■ Admission to the major is restricted to students with sophomore standing and at least a 2.5 GPA after completion of JOUR 250 with a B or better.

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
Email: llea464@hawaii.edu
Web: manoa.hawaii.edu/lea

Faculty
*P. M. Chandler, PhD (Chair)—second language acquisition, applied Spanish linguistics, Portuguese language
*L. V. Aranda, PhD—U.S. Latino literature, translation
*A. Ascunce, PhD—19th, 20th, and 21st-century Spanish literature and cultural studies
*C. D. Beaule, PhD—Latin American (Andean) anthropology, household archaeology
*V. H. Bennett, PhD—Russian language and literature, 19th-century Russian literature, Russian symbolism, modernism and literature of the 1920s
*L. Bousquet, PhD—20th and 21st century French literature and culture, French Oceania, history of the novel
J. M. Debrah, MA—French language instruction
K. A. Galante, MA—Spanish language instruction
*M-C. Garneau, PhD—19th- and 20th-century French literature, oral genres, Italian
*C. R. Gerhardt, PhD—20th-century German literature, culture, and film
*M. González-Lloret, PhD—second language acquisition, technology and language instruction, Spanish linguistics, pragmatics
L. N. Hamasaki, MA—classical language instruction
*D. Harris-McCoy, PhD—Greek and Latin literature, intellectual history, magic and divination
A. B. Hawajska-Waters, MA—German language instruction
*K. A. Hoffmann, PhD—17th-century French literature, critical theory, theatre, interdisciplinary studies
J. M. Huss, MA—French language instruction
*A. Kostetskaya, PhD—Russian fin-de-siècle literature and culture, conceptual integration and blending theories, Russian and German war film
L. E. Kou, MA—Spanish language instruction
*R. J. Littman, PhD—Greek literature, ancient history, ancient medicine, Biblical studies, Egyptian archaeology

* Graduate Faculty
**The Academic Program**

The Department of Languages and Literatures of Europe and the Americas (LLEA) is divided into five divisions: Classics (ancient Greek and Latin), French/Italian, German, Russian, and Spanish/Portuguese/Latin American and Iberian Studies. Language instruction at the beginning and intermediate levels is offered in French, German, Greek, Italian, Latin, Portuguese, Russian, and Spanish. 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 the literatures of ancient Greece and Rome. 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: 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, Francophone, German, Italian, Latin American, Russian, and Spanish Film.

The department promotes language proficiency and cultural awareness through its sponsorship of student organizations, films, lectures, scholarships, and Study Abroad programs. Currently, the department supports programs in France (Angers, Annecy, Paris); Florence, Italy; Berlin, Germany; Vladivostok, Russia; and several sites in the Spanish-speaking World.

**Bachelor’s Degree**

A minimum GPA of 2.5 in courses counted toward the major is required of all students earning their major in this department. At least half the credits required for the major must be taken at UH Mānoa.

**BA in Classics**

- 30 credit hours of course work
  - 3 credit hours from LLEA 122, 123, GRK 101, 102, LATN 101, 102
  - 6 credit hours from either Option A LLEA 327 and 328, or Option B LATN 201 and 202, or Option C GRK 201 and 202
  - 18 credit hours from following list of elective courses:
    - Of these 18 credits, 15 must be at the 300-level or above
    - 12 of the 18 credits can be substituted with GRK or LATN courses at the 300-level or above
    - 3 credit hours of LLEA 499

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

**BA in French**

- 33 credit hours of FR courses above the 200 level
  - FR 311, 312, 331, and 332
  - Four French 400-level courses, including two on literature

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

**BA in German**

- 30 credit hours of GER courses above the 200 level
- 6 credit hours from LLEA 338, 340, or 342 may be taken

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

**BA in Russian**

For a language emphasis:

- 24 credit hours of RUS courses above 202
- 9 credit hours from LLEA (or other approved department) Russian-related courses

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

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*J. L. Logan, PhD—Spanish American literature and cultural studies, women’s studies
R. H. Mamiya Hernandez, MA—Spanish and Portuguese language instruction
D. Mansilla Hermann, MA—Spanish language instruction
R. H. Nylen, MA—Spanish language instruction
*M. E. Overstreet, PhD—pragmatics, discourse analysis, sociolinguistics, psycho-sociolinguistic perspectives on categorization
*B. J. Quintana, PhD—Spanish classical theater, colonial and post-colonial studies, Mexican culture
S. C. Reemelin, MA—Spanish and Portuguese language instruction
*N. R. Schweiter, PhD—18th-century German classicism, Germans in Hawai‘i, Europeans in the Pacific
*N. Ségeral, PhD—French and Francophone women’s studies, translation theory and practice, 20th- and 21st-century trauma narratives
E. M. Thau, PhD—contemporary Spanish literature, film, cultural studies
J. C. Tomé, MA—Spanish language instruction

**Degrees and Certificate Offered:** BA in Classics, BA in French, BA in German, BA in Russian, and BA in Spanish; MA in French, MA in Spanish; Certificate in Classics, Certificate in French, Certificate in German, Certificate in Russian, Certificate in Russian Studies, Certificate in Spanish, Certificate in Latin American and Iberian Studies
**BA in Spanish**
- 33 credit hours of SPAN courses above the 200 level
- SPAN 301 or 310, 302, 303, 351††, 352††
- SPAN 361 or 362
- SPAN 371 or 372
- Two 400-level courses††
- Two electives††

1. Language skill courses (SPAN 201 to 302) 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.
2. Recommended courses for prospective teachers: SPAN 330, 400, 403, 451, and 452
3. Recommended courses for prospective graduate students: SPAN 330, 351, 352, 451, 452, and two 400-level literature courses

Approved study abroad in a Spanish-speaking country is recommended for all students completing the major and the certificate.

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

**Certificate**
- A minimum GPA of 2.5 in courses counted toward the certificate is required of all students earning their certificate in this department. At least half the credits required for the certificate must be taken at UH Mānoa.

**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 Certificates in Classics, French, German, Russian, Russian Studies, and Spanish. Students must complete 15 credit hours of courses numbered 300 and above. For the Certificate in Classics, students may complete 12 credit hours of Greek or Latin courses numbered 300 and above, plus GRK 101-102 for those emphasizing Latin and LATN 101-102 for those emphasizing Greek. For the Certificate in German, one course may be taken from LLEA 338, 340, or 342.

**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, anthropology, 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 Spanish, Portuguese, and Latin American context.

The requirements for the Certificate in Latin American and Iberian Studies are:
- sophomore standing or consent
- 15 credit hours
- LAIS 360 (Alpha) Studies in Culture: (B) Latin America, or (C) Iberian Peninsula (should be taken the first semester in the program; it may be taken concurrently with one of the electives)
- at least one from LAIS 360B, 362, 363, 366, 368/ANTH 368, 372, 478/ANTH 478, 468/HIST 478, HIST 479
- at least one from LAIS 360C, 361, 365, 380, 495, HIST 350, 448

**Graduate Study**

**Master’s Degree**

LLEA has designed MA programs that combine the study of language and literature with other forms of expressive culture in their permutations in the specific geographic regions of Europe, the U.S., Latin America, the Pacific Basin, and Africa. Graduate students are offered the following opportunities: an MA degree in French or Spanish; graduate teaching assistantships on a competitive basis; preparation for a PhD program and a career in teaching. Former students have found careers in government and foreign service; editing, publishing, and translation; law, business, and international banking; fashion, the arts, and travel industry.

**Admission Requirements**

In addition to meeting the requirements of Graduate Education, applicants must have the following:
1. A major or its equivalent in French or Spanish with a minimum GPA of 3.0 (B); applicants in French should also have taken a course in French phonetics;
2. For Spanish, the competence equivalent to two years of study at the college level in a second foreign language; applicants in French who plan to go on to a doctoral program are strongly encouraged to develop reading competence in an additional language;
3. For French and Spanish, an acceptable accent and fluency.

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. Applicants accepted provisionally are expected to complete any deficiencies by the end of the first year of study.

**Additional Requirements**

All students are required to satisfy the remaining specific requirements and to pass the comprehensive examinations in their 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 Education deadline. The Graduate Education requires all theses to be written in English.

**French Requirements**

Candidates in French may select Plan A (thesis) or Plan B (non-thesis). Candidates in both plans are required to take 30 credit hours. A minimum of 18 credits must be earned in courses numbered 600 and above, including 15 credits in French and at least one graduate seminar. All candidates must take either FR 409 or FR 661. Up to 6 credit hours of LLEA 600-level courses may also be included, in which candidates in French are expected, whenever possible, to read French language texts in the original. Candidates selecting Plan A (thesis) must complete 6 credit hours of LLEA 700 (Thesis Research). All candidates must pass a final comprehensive examination, covering the major periods and genres of French literature and including the history of the language.

**Spanish Requirements**

Candidates in Spanish may select Plan A (thesis) or Plan B (non-thesis). Candidates in both plans are required to take
Graduate Faculty

M. Kowalsky, EdD—librarian, Rowan University
E. Kleiber, MLIS, MAS—librarian, Hamilton Library
J. Kamiya, MLISc—young adult librarian, Mānoa Public Library
J. Hori, MLS—curator, Hawaiian Collection, Hamilton Library
G. Geary, MLS—Interim University Librarian, Hamilton Library
N. Fujii-Babb, MLS—librarian, Salt Lake/Moanalua Public Library,
D. Dunn, MLIS—preservation educational specialist, Conservation,
S. Dawrs, MLIS—librarian, Hamilton Library
M. Chopey, MLS—cataloging, Hamilton Library
L. Bell, CASIT, MLS—lecturer, San Jose State Universiy
D. Bair-Mundy, PhD—information systems
R. Gazan, PhD—social aspects of information technology
P. Jacsó, PhD—online technology, computer system analysis, databases
R. Knuth, PhD—history of libraries, international librarianship
R-A. Montague, PhD—school librarianship and community informatics
D. Nahl, PhD—information services, human-system interaction
L. Quiroga, PhD—information retrieval, databases, library systems

Adjunct Faculty
L. Bell, CASIT, MLS—lecturer, San Jose State University
J. Campbell-Meier, PhD—assistant professor, University of Alabama
M. Chopey, MLS—cataloging, Hamilton Library
S. Dawrs, MLIS—librarian, Hamilton Library
D. Dunn, MLIS—preservation educational specialist, Conservation, Hamilton Library Treatment, Hamilton Library
N. Fujiibabb, MLS—librarian, Salt Lake/Moanalua Public Library, retired
G. Geary, MLS—interim University Librarian, Hamilton Library
J. Hori, MLS—curator, Hawaiian Collection, Hamilton Library
J. Kamiya, MLISc—young adult librarian, Mänoa Public Library
C. Kellett, MLIS—systems librarian, Library Information Technology, Hamilton Library
E. Kleber, MLIS, MAS—librarian, Hamilton Library
M. Kowalsky, EdD—librarian, Rowan University

Degree Requirements

Students are required to take the following courses:
- LIS 601 Introduction to Reference & Information Services
- LIS 605 Metadata Creation for Information Organization
- LIS 610 Foundations of the Information Professions
- LIS 615 Collection Management
- LIS 663 Database Searching

In addition, they must take one of the following:
- LIS 650 Management of Libraries & Information Centers
- LIS 684 Administration of School Library Media Centers

In addition, the student’s LIS faculty advisor must approve one course selected to meet the ICT requirement.
Plan A (Thesis)

The normal requirement for the MLISc degree under the thesis option is a minimum of 39 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. The student must also take 6 credit hours in LIS 700 Thesis Research and 3 credit hours in a research methods course.

To advance to candidacy and become eligible to enroll in LIS 700 Thesis Research, students must complete at least 15 credits of course work, and defend a thesis proposal in a private meeting with their thesis committee. While it is strongly suggested that all committee members physically attend the thesis proposal defense meeting, remote participation is permitted. Upon approval of the committee, students advance to candidacy, conduct their research, and present their results at a public defense.

Plan B (Non-thesis)

The normal requirement for the MLISc degree under the non-thesis option is a minimum of 39 credit hours of approved graduate study. At least 30 credits must be taken in LIS courses or in a combination of LIS and approved ICS courses. Up to 9 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 Graduate Education.

The maximum course load is 15 credit hours per term. Therefore, 39 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 Graduate Education 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 uses different formats for course delivery. It offers a few courses each year online. Students at remote sites may also request the use of Adobe Connect (Halawai) to participate synchronously in courses being taught at UH Mānoa. In addition, several courses are offered asynchronously throughout the year.

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), educational technology (MEd), Hawaiian Language (MA), Hawaiian 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 Licensure

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 also complete 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
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Honolulu, HI 96822
Tel: (808) 956-9002
Fax: (808) 956-9165
Email: linguist@hawaii.edu
Web: www.ling.hawaii.edu

Faculty
*P. J. Donegan, PhD (Chair)—phonology and phonetics; vowel systems; acquisition; variation and change; typology; Austronesian languages
*K. Deen, PhD (Graduate Chair)—language acquisition (emphasis on experimental approaches); experimental morphosyntax; acquisition of understudied languages, particularly Bantu languages and languages of South East Asia; bilingualism; second language acquisition
*V. B. Anderson, PhD—phonetics; prosody; experimental linguistics; phonetic and phonological universals; endangered and underdocumented languages; animal communication; speech technology
*A. L. Berez, PhD—language documentation; language archiving; Aithabascan languages; Papuan languages; geography and languages; discourse; intonation; functional approaches to grammar
*R. A. Blust, PhD—historical linguistics; Austronesian linguistics and culture history; field methods; lexicography; endangered and underdocumented languages
*L. R. Campbell, PhD—language documentation, historical linguistics, endangered languages and language revitalization, typology, field methods, American Indian languages
*K. K. Drager, PhD—sociolinguistics; phonetics; experimental linguistics; language variation and change; language and identity
*W. D. O’Grady, PhD—syntactic theory and description; experimental syntax; language acquisition; Korean and Jejueo; heritage languages; language revitalization
*Y. Otsuka, DPhil—syntax; Minimalist Program; Tongan and other Polynesian languages; Austronesian languages; endangered and underdocumented languages of Polynesia; language planning in Polynesia
*A. J. Schafer, PhD—psycholinguistics; experimental linguistics; sentence comprehension and production (including Korean, Japanese, Austronesian languages, underdocumented languages, and in language learners/bilinguals); sentence prosody; information structure; psycholinguistic approaches to language documentation and conservation
J. Tertell, MA—language documentation; case and voice systems; tones; typology; sociolinguistics; language planning and policy; economics; North Korea; Southeast Asia

Emeritus Faculty In Residence
B. W. Bender, PhD—general linguistics, morphology, Micronesian linguistics
D. Bickerton, PhD—language variation, pidgins and creoles, language and literature
M. L. Forman, PhD—general linguistics, ethnographic linguistics, Philippine studies
G. W. Grace, PhD—historical linguistics, Austronesian
A. V. Lyovin, PhD—typology, Sino-Tibetan, historical linguistics
A. M. Peters, PhD—language acquisition: prosody, emergence of grammatical morphemes, crosslinguistic issues
A. J. Schütz, PhD—descriptive linguistics, field methods, lexicography, Fijian and other Melanesian languages; history of linguistics in the Pacific
D. L. Stapme, PhD—computational linguistics, phonology and prosody, holistic typology and drift, Munda languages

Cooperating Graduate Faculty
*R. Bley-Vroman, PhD—applied linguistics; syntax; second language acquisition theory; computational linguistics; natural language processing; corpus linguistics, and machine translation
J. D. Brown, PhD—language learning and teaching, language testing
*H. M. Cook, PhD—Japanese linguistics, sociolinguistics, discourse analysis and pragmatics
E. Drechsel, PhD—ethnolinguistics; American Indian languages
S. Fukuda, PhD—syntax, lexical semantics: their interface phenomena in Japanese; understudied Asian languages (Vietnamese, Burmese)
C. Higgins, PhD—macro- and micro-sociolinguistics, qualitative research methods, conversational analysis, code-switching
Y. Hoonchamlong, PhD—Thai linguistics (syntax, discourse, semantics), Tai/Thai dialectology, language learning and teaching, internet technology in language research and language instruction, translation
G. Kasper, PhD—second language curriculum, discourse analysis, interlanguage, pragmatics
C. Sak-Humphry, PhD—Khmer language, linguistics and literature
*B. Schwartz, PhD—linguistics theory and second-language acquisition and analysis, Universal Grammar, child second-language acquisition
N. Silva, PhD—Hawaiian politics, indigenous politics
*H. M. Sohn, PhD—Korean linguistics; grammaticalization
S. Warner, PhD—Hawaiian language, Hawaiian language immersion education, curriculum development and second language acquisition, educational psychology

Degrees Offered: 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, sociolinguistics, and language documentation and conservation.

Our program is recognized as being among the top twenty-five in the U.S.

Advising
All faculty in the department participate in the advising of students majoring in linguistics. Undergraduates majoring in linguistics under the Interdisciplinary Studies program are

* Graduate Faculty
advised initially by the undergraduate advisor. Graduate majors are advised by the chair of the graduate field of study or by one of the language documentation faculty. Students are later assigned to specific faculty members for advising according to their special interests.

**Undergraduate Study**

**Bachelor’s Degree**

Students may obtain a BA degree with a linguistics major at UH Mānoa through the Interdisciplinary Studies program. See manoa.hawaii.edu/undergrad/is/. In this program, with the guidance of a faculty advisor, students create for themselves a major that may combine the study of linguistics with related disciplines, such as anthropology, second language studies, or psychology, or with the study of one or more foreign languages. Students majoring in linguistics in this way may include some or all of the MA core of courses in their BA program, and are thus able to do more advanced work, should they continue with an MA.

**Graduate Study**

The faculty represents a variety of theoretical viewpoints. The various faculty members are especially well 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.

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 entering 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. Both the GRE general and subject tests are recommended. Students interested in experimental research are strongly advised to have completed 30 credit hours in one or more courses in statistical analysis as well (e.g., EDEP 429, SLS 490 or SLS 671.)

The program is divided into two parts: the MA and the PhD degrees. The requirements for the MA are a minimum of 33 credit hours beyond the MA level. Courses in Phonology (LING 621), grammar (LING 622), and a Methods course are required of all PhD students. The required 30 hours of research must be taken for a letter 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, Experimental Linguistics, and Language Documentation and Conservation. For all streams there is a core list from which different numbers of courses are to be selected. For details, see our MA manual, via ling.hawaii.edu/wp-content/uploads/MA-Manual-FINAL-September-2014.pdf.

**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 UH Mānoa (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 750 Phonology and Phonetics; LING 750Q Language Acquisition; and LING 750Y Psycholinguistics. Students interested in experimental research are strongly advised to have completed 30 credit hours in one or more courses in statistical analysis as well (e.g., EDEP 429, SLS 490 or SLS 671.)

All PhD candidates must demonstrate competence in one language other than their native language. Students may demonstrate their language knowledge either by taking a reading/translation test involving a linguistics-related passage or by having satisfactorily taken courses in the language through the 202 level. 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.

PhD students must present two professionally written papers, pass a comprehensive examination, and pass a final oral examination in defense of the dissertation.


**Marine Biology**

See the “Interdisciplinary Programs” section of the Catalog for more information.
Mathematics

College of Natural Sciences
Keller 401-A
2565 McCarthy Mall
Honolulu, HI 96822
Tel: (808) 956-4680
Fax: (808) 956-9139
Web: www.math.hawaii.edu

Faculty
* E. Guentner, PhD (Chair)—geometrical functional analysis
  * C. Allday, PhD—algebraic topology, transformation groups
  * M. Chyba, PhD—control theory
  * K. Dovermann, PhD—algebraic topology
  * R. Freese, PhD—lattice theory, general algebra
  * P. Guerzhoy, PhD—number theory
A. Hadari, PhD—geometric group theory
  * T. Hangelbroek, PhD—approximation theory
R. Harron, PhD—algebraic number theory
  * H. Hilden, PhD—geometric topology
  * M. Jovovic, PhD—operator theory, function theory
  * B. Kjos-Hanssen, PhD—computability, logic, probability
  * M. Manes, PhD—number theory
  * Y. Mileyko, PhD—applied topology, mathematical biology
  * D. Myers, PhD—mathematical logic
  * S. Post, PhD—mathematical physics, integrable systems
  * L. Thomas Ramsey, PhD—harmonic analysis
  * D. Ross, PhD—logic, probability
  * W. Smith, PhD—analysis, function theory
  * D. Takagi, PhD—applied math, fluid dynamics
  * G. Wilkens, PhD—differential geometry, control theory
  * R. Willett, PhD—noncommutative and coarse geometry
  * L. Wilson, PhD—singularity theory

Degrees Offered: Undergraduate Certificate in Mathematical Biology, 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 331
- MATH 480
- 3 credit hours in a writing-intensive mathematics course
- 6 credit hours in courses numbered above 400
- 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

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

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 related fields including:
- MATH 321
- MATH 331
- MATH 480
- 6 credit hours in writing-intensive mathematics courses
- 6 credit hours in courses numbered above 400
- 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 demonstrate an understanding of algorithms and logic, as well as precision of thinking.

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

Minor
Requirements
Students must complete MATH 243 or 253A 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

Undergraduate Certificate in Mathematical Biology
The purpose of the certificate is to induce students to pursue the interdisciplinary study of biology and mathematics together with research. The course work will be similar to, but less than,
that required to receive a minor in mathematics or biology. However, the students will also have to do a substantial amount of research in addition to the course work. The emphasis in the certificate is different, however, in that the majority of the work is interdisciplinary.

Students will be considered accepted into the Mathematical Biology Certificate Program upon formal request for acceptance and completion of either MATH 304 or 305 with a grade of C or better. To receive the certificate, students must complete 15 credits of approved course work with no grade below a C and attain a GPA of 2.5 in the collection of courses used to satisfy the certificate requirements. Due to the interdisciplinary nature of the certificate, 6 credits of required electives will differ depending on a student’s major. Courses used towards the certificate can only be double-dipped with focus requirements.

Prerequisites to the Certificate
- BIOL 171 (lab not required)
- CHEM 161 or 171 (lab not required)
- year of calculus (MATH 215/216, MATH 241/242, MATH 251A/252A)
- electives may have additional prerequisites

Requirements for the Certificate (15 credits)
- required courses (9 credits): MATH 304, 305, MATH/BIO 490 (capstone)
- math majors (6 credits): BIOL 172, and 265 or 275 (lab not required)
- life science majors (6 credits): two courses selected from MATH 243/253A, 301, 302, 303, 307, 311, 371, 373, 402, 403, 407, 414, 416, 471, 472
- other majors: completion of above required courses, and at least 6 credits of electives approved by the Committee

Participation in an interdisciplinary Mathematical Biology research project is required. These projects must be substantial, requiring at least the effort of a 5 credit 400-level course; examples include a senior honors research project, summer Research Experiences for Undergraduate programs, and the Undergraduate Biology and Mathematics Research Program; students are advised to discuss their projects with an advisor from the Mathematical Biology Certificate Coordinating Committee before commencing. A research paper based on this research project must be submitted to and approved by the committee. Students are expected to present their research to an approved symposium or conference.

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
Most MA students will select Plan B, which requires 30 credit hours of course work, including 611, 612, 631, and 644. Masters candidates must form a two member committee. The student is required to write and defend a paper on a research topic approved by the student’s master’s committee and the graduate chair. The defense will consist of a one hour public presentation on the chosen topic, followed by an oral exam. The department does not have a thesis option (Plan A), and only 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 one of the following languages: French, German, or Russian. 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, 631, 632, 644, 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. The most important requirement for a PhD degree is the successful defense of a doctoral dissertation involving original mathematical research.
Microbiology

Faculty
*S. P. Donachie, PhD (Chair)—marine microbiology, coral microbiology, microbial diversity, and taxonomy
*S. M. Callahan, PhD—genetics, cellular differentiation, and coral microbiology
*J. T. Douglas, PhD—medical microbiology and infectious diseases
*T. T. Hoang, PhD—bacterial genetics, physiology, and molecular pathogenesis
*S. Prisic, PhD—molecular pathogenesis of Mycobacterium tuberculosis, alternative ribosomal proteins, protein phosphorylation
B. J. Smagghe—cancer therapeutics, stem cell reagents, protein engineering

Cooperating Graduate Faculty
M. Bankowski
S. N. Bennett
D. Borthakur
S. P. Chang
Y. Lu
F. D. Miller
V. R. Nerurkar
M. S. Rappe
S. E. Seifried
B. A. Yoza

Affiliate Graduate Faculty
H. Turner
C. Whelen

Degrees Offered: BA (including minor) in microbiology, BS in microbiology, BS in molecular cell biology, 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 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 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
Majors should visit manoa.hawaii.edu/biology/advising or contact bioadvis@hawaii.edu to meet with an advisor.

Undergraduate Study
Students must earn a grade of C (not C-) or higher in each course applied to the major, including required courses in CHEM, BIOL, PHYS, and MATH.

BA in Microbiology
Requirements
Students must complete the following:
- 18 credit hours in microbiology, including required courses:
  - MICR 351/351L
  - Three courses from MICR 361, 401, 431, 461, 463, 470, 475, 485, and 490, plus 4 credits of 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 or 170/170L, and 152/152L or 272/272L
- 9 credits of approved major electives

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

BS in Microbiology
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 6 credits of 400-level MICR lab courses
- 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 and 241
  - PHYS 151/151L or 170/170L, and 152/152L or 272/272L
- 6 credit hours of approved major electives

BS in Molecular Cell Biology
The BS degree in Molecular Cell Biology (MCB) is designed to prepare students for careers in fields that require advanced knowledge of molecular biology, in particular those that relate to human health and welfare. Examples of such fields include, but are not limited to, medicine, pharmacology, pathology, genetic testing and counseling, biotechnology, nanotechnology, teaching, and basic research.
Requirements

Students must complete the following:

- 23 credits including required courses:
  - BIOL 375/375L, 407, 408/408L
  - MBBE 402 or BIOL 441
  - MCB 314, 461, 472
- The following required related courses:
  - BIOL 171/171L, 172/172L, 275/275L
  - CHEM 161/161L and 162/162L or 181A/181L
  - CHEM 272/272L and 273
  - PHYS 151/151L and 152/152L, or 170/170L and 272/272L
  - MATH 215 and 216 or 241 and 242
- 10 credits of approved major electives, a minimum of 1 credit of an approved elective laboratory

Major electives should be chosen with the assistance and approval of an advisor in Edmondson Hall 216, and in the department, to provide a well integrated and coherent program. Prospective majors should consult the microbiology/molecular cell biology advisors promptly, so as to design a curriculum that satisfies the major requirements.

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

Minor in Microbiology

Requirements

- Students must complete 15 credits of 300- and 400-level MICR courses, of which five credits must be MICR 351/351L.
- 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 Education with three letters of recommendation and the official scores from the GRE General Test. 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, 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. Course deficiencies shall be made up before admission to candidacy.

Both the MS and the PhD are research degrees requiring a research project, a thesis or dissertation, and an oral defense. Prospective graduate students are encouraged to contact faculty or cooperating graduate faculty to determine whether there might be a laboratory that is conducting research of interest and to determine which laboratories are taking new students (see the department website at www.hawaii.edu/microbiology to find areas of research and faculty contact information).

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

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);
- additional 12 credit hours of course work at the 600 level or higher; plus
- 9 credit hours at the 400 level or higher

Note: 3 credit maximum of MICR 695 may be applied towards the MS Plan A degree.

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.

Course work requirements for a PhD are the same as those for the MS degree (with MICR 800 replacing MICR 700). However, consideration will be given to those who already possess an MS in Microbiology or closely related field.

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. Experience in teaching in a laboratory course is considered a desirable 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
Email: uhmmusic@hawaii.edu
Web: manoa.hawaii.edu/music/

Faculty
*T. Bingham, MA—music education
D. Blon, MM—music education
*J. Boeckman, DMA—music education
*M. Felipe, DMA—choral music
*M. Hoover, DMA—voice performance
*T. Itoh, DMA—composition/theory
*J. Korth, DMA—piano performance
*F. Lau, DMA—ethnomusicology
*B. W. Lee, PhD—ethnomusicology
*I. B. Lin, DM—strings performance
*C. Loong, PhD—music education
*B. P. McLain, PhD—music education
*K. McQuiston, PhD—musicology
*J. Moulin, PhD—ethnomusicology
*J. Mount, MM—voice performance
*T. Osborne, DMA—composition/theory
A. Sala, MA—ethnomusicology
*D. Womack, DMA—composition/theory
*L. Wright, PhD—musicology
*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 on the Music Department website: manoa.hawaii.edu/music/.

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 and minors.

New Students
An orientation session for new students is held each semester during the week 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, composition, music education, and general music studies.

Speciﬁc course requirements are available on the Music Department website: manoa.hawaii.edu/music/. New and transfer students must attend orientation and consult the undergraduate chair when entering UH Mānoa.

Admission Requirements
In addition to the UH System Application form, prospective music majors must submit a Music Department Undergraduate Admission Application, recommendation form, and perform an audition. Forms and instructions are available from the department office and the department website at www.manoa.hawaii.edu/music/apply/ugrad.

BA Degree Requirements

Major requirements include 40 credit hours in various music courses. Bachelor of Arts majors work with an advisor to emphasize general music, Hawaiian music, or musical theater.

For information on the BA degree, go to manoa.hawaii.edu/music/about-us/degrees-programs/ba/.

For information on the BMUS degree, go to manoa.hawaii.edu/music/about-us/degrees-programs/bm/.

For information on the BEd degree, go to manoa.hawaii.edu/music/about-us/degrees-programs/bed/.

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 K-12 degree program is offered in conjunction with the College of Education.

For information on the BEd degree, go to manoa.hawaii.edu/music/about-us/degrees-programs/bed/.

Minor Requirements
Students can pursue a minor in music while continuing their chosen major. The minor program requires a minimum of 15 credit hours. For further information, contact the music depart-
ment office or view the website at manoa.hawaii.edu/music/about-us/degrees-programs/minor/.

Graduate Study

Entrance exams for incoming students consist of the Diagnostic Exam to test for any deficiencies and insure that students remedy them as soon as possible in their degree programs. The General Exam (master’s level)/Qualifying Exam (doctoral level) is completed before candidacy for a degree.

Diagnostic Exam

Prior to enrolling for the first semester of study, each classified graduate student will take a diagnostic examination in music history (part I) and music theory (part II) to determine whether or not the general exams or qualifying exams in those areas (or specified courses in lieu of the general exams) are needed to clear pre-program deficiencies. Students are also tested in their area of concentration (part III). 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. Successful performance on specific parts of the diagnostic examination exempts the student from the equivalent parts I and II of the general examination or qualifying examination. Entering doctoral students who are continuing directly from a master’s degree in UH Mānoa Music are exempt from taking parts I and II of the diagnostic/general exams, since the student has fulfilled this requirement. In Ethnomusicology and Composition, the student will also be exempt from part III. Musicology and Music Education doctoral students must take part III, the qualifying exam, upon entering the doctoral program.

The diagnostic/general/qualifying examination is offered in August (before the beginning of the fall semester), in January (before the beginning of the spring semester) and in the third week of April.

Students who enter in the fall semester will take the diagnostic examination in August. If the student does not pass any portion of the diagnostic examination, he or she may re-take the examination in January and April or take the recommended course(s) between August and May and clear deficiencies in the first academic year of study by earning a grade of B or higher.

Students who enter in the spring semester will take the diagnostic examination in January. If the student does not pass any portion of the diagnostic examination, he or she may re-take the examination in August and the following January or take the recommended course(s) between January and December and clear deficiencies in the first year of study by earning a grade of B or higher.

N.B. Students who enter in the spring semester will be exempt from taking the April examination and will not need to submit a petition for approval to the graduate faculty.

Dismissal from the graduate program will occur if the student does not pass any part of the diagnostic examination and then: (1) does not pass any part of the general examination or qualifying examination in two attempts; or (2) does not take the prescribed course(s) to clear deficiencies in their first year of study; or (3) does not earn a B or better in the prescribed course(s).

Students with deficiencies are strongly advised to take the recommended course(s). Students may also wish to study on their own and re-take the examination. Keep in mind that many classes recommended to rectify deficiencies are offered only once per year. The student should consult with his or her advisor to discuss the most suitable course of action.

General or Qualifying Exams

Before being admitted to candidacy for a degree, each graduate student must pass the department’s general examination/qualifying examination, which consists of three parts: music history, music theory, and the student’s area of concentration. All parts of the general examination must be passed before the student earns 18 credit hours toward the degree; course work taken in excess of this limit will not be counted if the credits are earned before all three parts of the general examination are passed.

When a student does not pass any part of the diagnostic/general/qualifying examination, there are two options:

1. Exam Option. The student may repeat the unsuccessful portion of the exam the next time the examination is offered. If a student chooses this option but does not take the next examination, a failure is recorded. Any student who does not pass the diagnostic examination and does not pass the general examination/qualifying examination twice will be dropped from the program.

2. Course Option. The student may take courses to remove the deficiency and must submit the required course option form. Courses to clear pre-program deficiencies or in lieu of general or qualifying examination must be taken for grade during the first two semesters of study and passed with a grade of B (not B-) or better. These courses do not count toward graduate degrees. All deficiencies must be cleared by the end of the first year of study. Students who do not remove their deficiencies by the end of the first year of study will be dropped from the graduate program.

Any exceptions to these procedures must receive prior approval by petition to the graduate faculty. 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.

Master’s Degree

The department offers programs leading to the MA in music with concentrations in ethnomusicology, music education, and musicology, 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 a bachelor’s degree with a major in music or a bachelor’s degree and evidence of musical background equivalent to a music major; three confidential letters of recommendation (not more than two years old) on forms provided by the music department; and, for non-native speakers of English, a TOEFL score of 500 (paper) 61 (iBT) minimum for performance or 540 (paper) 76 (iBT) for other concentrations and 600 (paper) 100 (iBT) with scores of 25 in listening and speaking for teaching assistants. Application forms are available at the music department and its website, or Graduate Education and its website. The completed forms should be submitted with two copies
of all transcripts by January 15 for the fall semester, and by August 1 for the spring semester. (Those who decide to enroll must submit official copies of all post secondary transcripts.)

In the following concentrations, students must meet additional admission requirements:

a. Composition—Three original scores representative of various forms and media.
b. Ethnomusicology—A personal statement of 800 words minimum (3 pages) including the purpose of study. Background in cultural anthropology is desirable and, depending on the thesis research, may be required.
c. Music Education—BEd (music education) or equivalent, minimum of one year of full-time music teaching experience in a public or private school, a 20-30 minute videotape/DVD demonstrating current teaching expertise, and a lesson or rehearsal plan.
d. Musicology—Sample of academic writing proficiency (a 10-page term paper in English from an upper division music history course is preferred).
e. 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.

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, he or she 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: manoa.hawaii.edu/music/.

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.

Degree Requirements

Plan A requires a minimum of 30 credit hours, 22 in course work and 8 of thesis. Candidates concentrating in ethnomusicology and musicology follow this plan. An ethnomusicology thesis is usually based on fieldwork.

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.

Plan B also requires a minimum of 30 credit hours but does not include a thesis. Candidates in performance, music education, and composition follow this plan. Plan B students in performance must fulfill the following requirements:

1. Give a public, hour-long recital.

2. Additionally, in the recital semester the student will meet with the recital committee for a one-hour oral examination to discuss historical and analytical aspects of the works performed in the graduate recital.

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.

Plan B students in composition must fulfill the following requirements:

1. Composition students must compose an original work in one of the larger forms, and write an essay on a topic related to their master’s studies.
2. Candidates concentrating in composition must give a public, 30-45 minute recital of original works composed during their master’s studies at UH Mānoa.

The master’s student must spend at least two semesters in program residency at UH Mānoa. (Full-time work or the equivalent in credit hours.)

Doctoral Program

The department offers programs leading to the PhD in music with concentrations in composition, ethnomusicology, music education, 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 as specified in certain areas, and, for non-native speakers of English, a TOEFL score of 560 (paper), 83 (iBT) or better, and, for teaching assistants, 600 (paper), 100 (iBT) with scores of 25 in listening and speaking. Application forms are available at the music department and its website, or Graduate Education and its website. The completed forms should be submitted with two copies of all transcripts by January 15 for entrance in the following fall semester and by August 1 for entrance in the following spring semester. (Those who decide to enroll must submit official copies of all post secondary transcripts.)

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 recording of at least one of the above.
2. Ethnomusicology—A master’s degree in ethnomusicology or the equivalent in terms of course work 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 20-30 minute videotape or DVD demonstrating current teaching expertise, or (b) an in-person teaching demonstration; and a lesson or rehearsal plan relevant to the 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, he or she 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 ethnomusicology. 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, and/or supervised college teaching experiences.

The PhD student must spend at least three semesters in program residence (full-time work or the equivalent in credit hours) at UH Mānoa and must complete the degree within seven years.

Other 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—Language appropriate to areas of research. Presentation of a full (50-60 minute) recital of works composed during the doctoral residency.

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. 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 formation of a five-member doctoral committee, the comprehensive exam, 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), research for and 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 Education 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. The committee chair and outside member must be physically present at the exam, which is subject to other regulations described at the Graduate Education website: manoa.hawaii.edu/graduate/content/final-defense.

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/Spark M. Matsunaga Institute for Peace and Conflict Resolution
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2424 Maile Way
Honolulu, HI 96822
Tel: (808) 956-6433
MIPCR Fax: (808) 956-9121
Email: uhip@hawaii.edu
Web: www.peaceinstitute.hawaii.edu

Faculty
*C. Petersen, JD (Director, Matsunaga Institute for Peace and Conflict Resolution)—international human rights, equality and non-discrimination, women and the law
*B. Barnes, JD, LLM (Chair, Graduate Certificate in Conflict Resolution)—conflict resolution
*B. Hallett, PhD—peace studies
*M. Soetero-Ng, PhD—teacher education, peace studies

Cooperating Faculty
*I. Aoude, PhD—ethnic studies
*J. Barkai, JD—law
J. Campos, PhD—political science, terrorism studies
*R. Chadwick, PhD—political science
D. Chandler, PhD—sociology, conflict resolution
*S. Chandler, PhD—public policy/child welfare
M. Coffman, PhD—environmental economics, planning
*D. Foley, PhD—deliberative dialogs, conflict resolution
*A. Hubbard, PhD—conflict and relational management
*M. Jones, PhD—physics
K. Lowry, PhD—ADR, coastal management, community planning
L. Minerbi, PhD—urban and regional planning
A. Rieser, LLM—geography, law, marine conservation
*R. Robinson, PhD—management
*W. Sharkey, PhD—conflict and relational management

* Graduate Faculty
Degree and Certificates Offered: Certificate in Peace Studies, BA in interdisciplinary studies (peace and conflict studies), Graduate Certificate in Conflict Resolution

The Academic Program

The Matsunaga Institute for Peace and Conflict Resolution is a multi-disciplinary community of scholars, students, and practitioners who through academic programs and outreach promote cross-cultural understanding and collaborative problem-solving. Residing within the Public Policy Center (PPC), the institute emphasizes critical thinking and collaboration to groom future leaders to address contemporary and complex issues in Hawaii, the Asia-Pacific region, and the world.

Peace Studies broadens students’ perspectives and strengthens critical thinking on issues of war and peace, justice and human rights, and governance. Conflict resolution processes such as facilitation, mediation, and negotiation are necessary in organizational, community, and civic relations, and build important interpersonal skills that are vital to good leadership. Students develop a theoretical foundation to advance scholarship in peace studies, including human rights and advocacy, leadership and governance, policy analysis, and communications, while they learn and hone practical conflict management skills to develop as professionals in their chosen field.

Students may enroll in Peace and Conflict Education (PACE) courses, either as an intellectual endeavor or to enhance personal and professional skills. Students who understand the causes of conflict and the methods for resolving conflicts will be better equipped for a wide range of careers in the fields of education, law, human resource management, industrial relations, government, foreign service, security, urban and regional planning, sociology, and social work, to name a few.

For students who wish to obtain an academic qualification in peace and conflict resolution, the institute offers three programs:

1. The Peace and Conflict Resolution major for undergraduates (a flexible inter-disciplinary program offered in cooperation with the Interdisciplinary Studies BA program);
2. The Certificate in Peace Studies (open to undergraduate students and equivalent to a “minor”); and
3. The Graduate Certificate in Conflict Resolution (open to graduate students seeking the certificate only or concurrently with another graduate-level degree program).

Inherently interdisciplinary and international in perspectives; the institute is committed to building on Hawai’i’s cultural heritage and island values of aloha, mutual aid and respect, and sense of community. The institute is dedicated to honoring the memory of U.S. Senator Spark M. Matsunaga and implementing his hope that; “every student enrolled in Hawai’i’s public university system will be exposed to peace studies.”

Undergraduate Study

Bachelor’s Degree in Peace and Conflict Resolution

In collaboration with the Interdisciplinary Studies program, the Matsunaga Institute for Peace and Conflict Resolution offers a flexible, student designed BA in Peace and Conflict Resolution (36 credit hours).

The core of the program consists of three courses that are meant to give students the basic skills and knowledge of conflict resolution and the opportunity to put these skills into practice. Students are then free to design an academic program that aligns with their interests, needs, and goals. Students work closely with faculty advisors from the Matsunaga Institute and Interdisciplinary Studies to develop a coherent, multidisciplinary course of study. This gives students the flexibility to concentrate on a specific area of interest or to take a broader approach to peace and conflict studies.

Additional information is available at www.peaceinstitute.hawaii.edu and from Interdisciplinary Studies in the Office of Undergraduate Education.

Requirements

- PACE 310 Survey Peace and Conflict Studies (3)
- Either PACE 429 Negotiation (3) or PACE 447 Mediation Skills: UH Basic (3)
- PACE 495 Practicum and Internship (or a faculty approved substitute) (3)

The remaining credit hours, to meet the major’s minimum requirement of 36 credit hours, can be drawn from courses offered by the Matsunaga Institute (designated as PACE courses) as well as courses offered by other departments. Although a list of suggested electives is set forth below, students may also propose other courses, provided that they can achieve a coherent program of study that meets the requirements of the Interdisciplinary Studies program. An overall GPA of 2.5, with no grade below a C, is required in the major course work.

Certificate in Peace Studies

The Certificate in Peace Studies (15 credit hours) is equivalent to a minor. The certificate exposes students to the fundamentals of peace and conflict resolution while they learn methods to remedy social injustice and manage and resolve conflict. These skills are highly valued by employers in a wide range of professional fields, making the certificate a valuable complement to many popular majors. Students enrolled in a degree-granting program may obtain the Certificate in Peace Studies. Some students may wish to focus primarily on peace studies as a personal, intellectual endeavor. Others may seek a career in an area relevant to peace studies and will use the certificate to enhance their credentials and expertise.

To receive a Certificate in Peace Studies, students are required to take PACE 310, 429 or 447, and 495 (or a faculty approved substitute) and six additional credit hours selected in consultation with the student’s certificate advisor. A GPA of 2.5, with no grade below a C, is required in certificate courses.

Suggested optional courses for the major in Peace and Conflict Resolution and for the Certificate in Peace Studies include:

- PACE 247 Survey of Conflict Management
- PACE 315 Personal Peace: Stories of Hope
- PACE 345/ANTH 345 Aggression, War, and Peace
- PACE 373/POLS 396 Nonviolent Political Alternatives
- PACE 399 Directed Reading
- PACE 410 History of Peace Movements
- PACE 412 Gandhi, King, and Nonviolence
- PACE 413 Terrorism
- PACE 420 Introduction to Human Rights
- PACE 430 Leadership for Social Change
- PACE 477 Culture and Conflict Resolution
- PACE 478 International Law and Disputes
- PACE 485* Topics in Peace and Conflict Resolution
- PACE 489 Hiroshima and Peace (summer only)
Graduate Study

Certificate in Conflict Resolution

The Graduate Certificate in Conflict Resolution (GCCR) allows students pursuing a master’s or doctoral degree in another area to become acquainted with conflict resolution theory, practice, and activities. Students learn the fundamentals of conflict resolution including conflict dynamics, dispute resolution systems, deliberative dialogue, and culturally appropriate dispute resolution processes. The program offers basic and advanced courses to develop and practice foundational skills such as negotiation, facilitation, and mediation.

Students are encouraged to use the certificate program to increase their competence in conflict resolution as it relates to their major area of study. It is a compliment to many degrees and can be earned concurrently with a JD, MA, MPA, MS, PhD, MEd, MBA, or MSW. It is also available to students seeking the certificate only. Unclassified students, as well as degree students, are considered for admission.

The certificate attracts students enrolled in public administration, education, law, urban and regional planning, political science, sociology, anthropology, geography, health, social work, human resource management, environmental science, and psychology, along with working professionals in the community.

Students are required to complete fifteen (15) credits from the approved course list, which is divided into core and elective courses. Students must complete at least two skills courses from the list of core and three from the list of electives.

The program is multi-disciplinary in nature. The following list provides examples and is not a comprehensive list of courses that are approved in the certificate program.

- PACE 629 Advanced Negotiation
- PACE 647 Mediation: Theory and Practice
- PACE 650 Dispute Resolution System Design
- PACE 652 Conflict Management for Educators
- PACE 660 Family Mediation
- PACE 668 Facilitation: Facilitating Community and Organizational Change
- PACE 695 Conflict Resolution Practicum (variable hours)
- PLAN 627 Negotiation & Mediation in Planning
- PLAN 661 Collaboration Between Sectors
- EDCS 640K Peace Education for the Humanities
- LAW 508 Negotiation and Alternative Dispute Resolution
- LAW 529 Peacemaking
- LAW 547/WS 647 Gender and Law
- LAW 590 Mediation Clinic
- MGT 660 Negotiation
- POLS 633 International Conflict Resolution
- POLS 635 (B) International Relations and War
- POLS 635(E) International Organization
- SOC 730 Conflict Analysis/Resolution

Up to two classes at the 400-level may also be counted toward the certificate, subject to advisor approval. See the website at www.peaceinstitute.hawaii.edu or contact the program office for a complete list of courses.

The Matsunaga Institute also highly encourages, but does not require, a practicum to deepen the students’ understanding of conflict management and to develop their skills in a real world setting. A practicum, PACE 695, is offered as an elective with variable credits and is repeatable once up to 3 credits.

The precise form is to be determined in consultation with the advisor. Practicum guidelines are available in the office or can be obtained from an advisor. Specific information about the required and elective courses, including the graduate certificate brochure, can be found on our website.

Each student will be assigned a temporary advisor upon acceptance into the program and may choose an alternate advisor during the first semester of coursework based on the student’s interests and the advisor’s area of expertise. Prior to completing the program, and under the supervision of their advisor, students will complete a capstone paper that integrates both academic and practical experiences in the certificate.

Upon completion of the core courses, students are expected to demonstrate their skills in facilitation, negotiation, mediation, or process design. The demonstration may be either an actual intervention or a simulated mediation or other problem-solving process organized by the student with the help of their advisor. Students are assessed on their ability to develop and maintain a collaborative atmosphere and approach; their ability to use communication skills such as appropriate questions and active listening; their ability to clarify, analyze, frame, track, and link appropriate issues; their ability to use interest-based negotiation principles effectively and to develop and test dispute resolution options using interests and criteria. Successful completion of the program leads to a Graduate Certificate in Conflict Resolution.

Consideration for admission to the certificate program requires filing of an application form available from the department and the Office of Graduate Education, and a supplemental program application that can be found online at www.peaceinstitute.hawaii.edu. International students must have a 600 (paper), 250 (computer), and 100 (internet) TOEFL score to be admitted.
Philosophy
College of Arts and Humanities
Sakamaki D-301
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Fax: (808) 956-9228
Email: philo@hawaii.edu
Web: www.hawaii.edu/phil

Faculty
* R. Bontekoe, PhD (Chair)—hermeneutics, epistemology, philosophy of law
* 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
* 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
* M. Ishida, PhD—classical American philosophy, Japanese philosophy, process philosophy, history and philosophy of mathematical logic
* 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
* R. Raghunathan, PhD—Indian and Buddhist philosophy, philosophy of religion, ancient Greek philosophy, epistemology
* J. Tanke, PhD—continental philosophy, aesthetics, historical ontology, social and political philosophy
* G. Tsai, PhD—ethics, social and political philosophy

Degrees Offered: Undergraduate Certificate in Islamic Studies, 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:
- Logic: PHIL 110 or 111;
- Two elective courses 200-level or above;
- Two courses in the History of Western Philosophy: PHIL 211, 212, 213, or 414 (Alpha);
- Three courses in the core philosophical fields (of ethics, aesthetics, metaphysics, political philosophy, epistemology, philosophy of science): PHIL 301, 302, 304, 306, 307, 308;
- One course in Buddhist, Chinese, Indian, Islamic, or Japanese philosophy: PHIL 330 to 380, PHIL 406; and
- PHIL 449

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

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; ethics and law; science and society; humanities and the arts; and history of philosophy.

For details of which courses fall under these themes, students should consult the department undergraduate advisor.

Undergraduate Certificate in Islamic Studies

The purpose of this certificate is to increase understanding of Islam as a world religion through critical analysis of primary and secondary materials, to foster knowledge about the complexity among Islamic societies and their diverse cultural expressions, and to explore the role of Islam and Muslims in present and past world affairs.

This certificate is housed within the College of Arts and Humanities. The participating departments are Art and Art History, History, Philosophy, and Religion. Minimum prerequisites for acceptance into the program for undergraduates are sophomore or higher standing with a minimum GPA of 2.5 and the completion of at least one introductory course within one of the four participating departments with a grade of B or better. For non-UH Mānoa students, the prerequisite is an AA or BA degree (or equivalent) that included some humanities component or relevant work experience. Non-UH Mānoa students who do not wish to enroll in a degree program may register for the courses through Outreach College.
Requirements

- 15 credit hours are required for completion of the certificate.
- HIST 354, PHIL 330, and REL 209. It is recommended that REL 209 be taken first.
- Two electives selected from: ART 491B, 492B, 493, HIST 301, 302, 355, 432, and REL 352. (One course in Arabic language may be used as one of the electives.)
- Students are required to undertake a final research project in association with an elective class. Advanced undergraduates with GPA of 3.5 or above may, with instructor consent, use credit from the following graduate classes: ART/ASAN 792, HIST 662, or PHIL 730.

For more information, contact the undergraduate chair.

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 the department’s "Graduate Student Handbook" at umepsa.wordpress.com/the-graduate-student-handbook/.

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 UH Mānoa 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. Whatever their field of specialization, graduate students intending to complete a PhD in philosophy at UH Mānoa 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.

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 resources 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 Graduate Education and the department of UH Mānoa responsible for teaching that language.
Physics
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Faculty
*P. K. Lam, PhD (Chair)—condensed matter, theory
*V. Bindi, PhD—particle astrophysics
*T. Browder, PhD—elementary particles, experiment
*W. L. Ditro, PhD—applied chaos theory
*L. Elias, PhD—free electron laser physics
*P. Gorham, PhD—elementary particles, experiment
*F. Harris, PhD—elementary particles, experiment
*M. D. Jones, PhD—elementary particles, experiment
*J. Kumar, PhD—elementary particles, theory
*J. G. Learned, PhD—particle astrophysics
*J. M. J. Madey, PhD—free electron laser physics
*D. Marfatia, PhD—elementary particle (theory)
*J. Maricic, PhD—particle astrophysics
*S. Matsuno, PhD—particle astrophysics
R. Milincic, PhD—elementary particles, experiment
M. Nassir, MS—astronomy
*K. Sattler, PhD—condensed matter, experiment
*E. B. Szarmes, PhD—free electron laser physics
*X. R. Tata, PhD—elementary particles, theory
*S. Vahsen, PhD—elementary particles, experiment
*G. Varner, PhD—elementary particles, experiment
*C. Vause III, PhD—condensed matter, theory
*P. von Doeringhem, PhD—particle astrophysics

Affiliate Graduate Faculty
A. Barger, PhD—cosmology, observational
T. Dombeck, PhD—elementary particles, experiment
S. Dye, PhD—particle astrophysics
A. McDonald, PhD—particle astrophysics
R. Morse, PhD—particle astrophysics
R. Musa, PhD—elementary particles, experiment
W. Simmons, PhD—elementary particles, theory
J. Yepez, PhD—quantum information dynamics studies in quantum computation

Cooperating Graduate Faculty
K. Bennett, PhD—high-field magnetic resonance imaging
T. Ernst, PhD—magnetic resonance imaging
V. A. Stenger, PhD—neuroscience, magnetic resonance research
S. Still, PhD—theoretical biophysics, physics of information processing; nonequilibrium thermodynamics; information theory; econophysics

Degrees Offered: BA (including minor) in physics, BS in physics, BS in astrophysics, 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, quantum theory, atomic and nuclear phenomena, condensed matter, and elementary particles. Physics is widely regarded as the most fundamental 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, the mainland U.S., France, Japan, and Antarctica to study neutrinos and high-energy gamma rays coming from the stars. Others are involved in experiments at the KEKB accelerator in Japan, studying particle production and decay and the violation of particle/anti-particle symmetry. Faculty members are also involved in the space-based AMS experiment and on the development of techniques for dark matter searches. The particle theory group is involved in the identification of new physics that addresses new questions in particle physics and cosmology that are beyond the scope of the Standard Model, and the development of strategies that distinguish this new physics from the Standard Model phenomena. In condensed-matter physics, they investigate nano-materials and use a scanning tunneling microscope to take pictures of individual atoms. A free electron laser is operating in the physics building. This device allows scientists to carry out forefront research in fundamental and applied physics. 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 in Physics
The BA Physics degree is designed specifically for those students who wish to supplement the core study of physics with courses in interdisciplinary fields. As a fundamental science with applications in many fields, physics strengthens the background of students who have wider interests that lie outside of physics, in fields such as biology, health sciences, environmental studies, oceanography, geology, computer sciences, and social sciences.

Requirements
Students must complete the following courses with grades of C (not C-) or better:
- PHYS 170/170L, 272/272L, 274/274L, 310, 350, 400, 480
- One course in advanced laboratory or applied techniques:
  - PHYS 305 or MATH 407, or PHYS 475 or EE 211, or
  - PHYS 480L
- CHEM 161/161L or 171/171L or 181A/181L
- MATH 241, 242, 243, and 244; or MATH 251A, 252A, and 253A
- MATH 307 or 311
- Minimum of 15 credits of an approved Interdisciplinary Concentration (IC) course program:
  - Courses must be chosen to form a coherent theme
  - Minimum of 12 credits must be non-introductory courses at the 200-level or above

* Graduate Faculty
– Proposed IC courses (and any modifications) must be approved by physics department chair
– Approval shall be granted only after the student has passed (or is currently enrolled in) PHYS 274, 274L, and MATH 243 or 253A

For more details, including examples of previously approved Interdisciplinary Concentration course programs, see the website: www.phys.hawaii.edu.

Upon approval of a physics department advisor, MATH 215 and 216 may be substituted for MATH 241 and 242, and PHYS 170 through 272L may be satisfied by PHYS 151 through 152L.

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

BS in Physics

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 181A/181L
  - MATH 241, 242, 243, 244, and 311 or 307 (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 305 (or 475 or 481L), 440 (or 460 or 490), 450, 480, and 480L, may be modified to accommodate a special emphasis or interdisciplinary program that is appropriate for the major in physics.

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

Minor in Physics

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.

BA (and Minor) in Astronomy

For more information on the BA degree and Minor in Astronomy, see ASTR program on page 103.

BS (and Minor) in Astrophysics

For more information on the BA degree and Minor in Astrophysics, see ASTR program on page 103.

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.

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 colloquium.

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

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2424 Maile Way
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Email: polisci@hawaii.edu
Web: www.politicalscience.hawaii.edu

Faculty

*D. Halbert, PhD (Chair)—public policy, political futures, law and politics, and politics of intellectual property
*S. Krishna, PhD (Graduate Chair)—comparative politics, international political economy, South Asian Studies, and postcolonial studies
*J. N. Goodyear-Ka’opua, PhD (Undergraduate Chair)—Hawaiian politics, Indigenous politics, politics of education and culture
*H. Aikau, PhD—contemporary native Hawaiian identity and politics, feminist theory, and critical race theory
*R. Chadwick, PhD—international relations, global modeling, methodology
*K. Ferguson, PhD—feminist theory and methods; political theory; politics of organizations; gender, globalization, militarism
*P. Flowers, PhD—Japanese politics, international law, international relations
*J. Goldberg-Hiller, PhD—law and society, law and philosophy, sexuality politics, indigenous politics
*J. Grove, PhD—critical war studies, complexity theory and system theory
*M. Henningsen, PhD—European politics, genocide/Holocaust, political philosophy, political theory
*K. Heyer, PhD—law and society, disability politics, comparative law, social movement and civil rights
*E. Kimura, PhD—comparative politics, political change, Southeast Asia
*C. Moore, PhD—American politics, public policy, politics of bureaucracy, institutional change
*L. Nitz, PhD—American government; methodology; political economy; public policy; research methods; topics in political theory
*M. J. Shapiro, PhD—American politics; interpretive methods; politics of culture; media and popular culture; political theory; public policy
*N. Silva, PhD—Hawaiian politics, indigenous politics
*N. Soguk, PhD—international relations theory, comparative politics; international organization; international migration and diasporas, human rights, Middle East
*M. Steger, PhD—global politics, globalization, political ideologies, comparative political theory (mostly East-West), nonviolence
*C. M. Stephenson, PhD—international relations; international organization; international environmental politics; international security; peace studies, conflict resolution
*M. Yang, PhD—comparative politics, political economy of development, East Asia
*K. Zhou, PhD—comparative politics; Chinese & Asian politics; women and development, and public policy

Affiliate Graduate Faculty

W. Dissanayake, PhD—Asian cinema, film theory
F. Farhi, PhD—Middle East politics, comparative politics
B. Kerkvliet, PhD—Southeast Asian politics
O. Lee, PhD—Chinese foreign policy, U.S.-China relations
J. Wilson, PhD—political philosophy, American politics

Cooperating Graduate Faculty

K. O. Kane, PhD—philosophy and theory, pedagogy, film and media studies, women’s studies
C. R. Lawrence—anti-discrimination law, educational law and policy, Constitutional law
M. MacKenzie—Native Hawaiian rights, Native Hawaiian rights clinic, advanced legal studies in Native Hawaiian law, legal research

Degrees Offered: Undergraduate Certificate in Law and Society, 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 Asian politics, comparative politics, Asian politics, futures studies, indigenous politics, international relations, law and society, policy analysis, and political theory. 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.

*Graduate Faculty

* Graduate Faculty
Bachelor’s Degree

Requirements
Students must complete 30 credit hours, including:
- a prerequisite introductory course at the 100 or 200 level
- 12 credit hours from courses distributed as follows: POLS 335; either POLS 301 or 302; either POLS 305 or 315; and one of either POLS 375, 376, 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

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

Minor

Requirements
Students must complete 18 total credit hours. 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.

Undergraduate Certificate in Law and Society

Requirements
15 credits will be required to be completed with a GPA of 2.5 or above.
- POLS 374/SOC 374
- 9 credits must be upper division (300-400 level)
- 6 credits from either AMST 365, AMST 436/POLS 436/WS 436, ECON 476, HWST 495, HWST 496, HIST 475, PHIL 318, POLS 375, POLS 376, SOC 231, SOC 333, SOC 432, or SOC 435/WS 435
- Students are also required to submit a portfolio containing three essays.

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, indigenous politics, and public policy.

Further information regarding the requirements for all three programs is available at www.politicalscience.hawaii.edu.

The application deadline is December 1 for admission in the fall semester. NO SPRING semester admissions are taken.

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

The department has several teaching assistantships, research assistantships, and scholarships that are awarded to deserving qualified students.

Undergraduate
- Thomas Hamilton Memorial Scholarship—$600 for a student with outstanding scholarship and all-around performance who has completed at least two courses in political theory.
- Carl Knobloch Prize Fund—$500 for a student with an excellent academic record who also has an outstanding record of community and/or UH service.

Graduate
- Norman Meller Award—$1,500 for fall semester to a graduate student with an outstanding academic record.
- Harry J. Friedman Memorial Scholarship—$700 for outstanding work in comparative politics.
- Jorge Fernandes Memorial Fellowship and Award—for spring semester to aid an outstanding graduate student to support the completion of his/her dissertation.
- Glendon Schubert and James Neal Schubert Political Science Endowed Scholarship—for spring to a graduate student who specializes in public law, law and society.

Psychology

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Fax: (808) 956-4700
Email: psych@hawaii.edu
Web: www.psychology.hawaii.edu

Faculty

* A. E. Maynard, PhD (Chair)—developmental, cultural, siblings and socialization, cognitive change
* C. K. Baker, PhD—community, intervention development and evaluation, domestic violence, teen dating violence
* J. Barile, PhD—community, neighborhood environments, health equity, quality of life and well-being
* D. Cicero, PhD—clinical, experimental psychopathology, psychosis, risk for schizophrenia
* P. A. Couvillon, PhD—behavioral neuroscience, animal learning, cognition
* F. J. Floyd, PhD—clinical, family and couple relationships, developmental disabilities, sexual minority growth
* B. N. Frazier, PhD—children’s cognitive development

* Graduate Faculty
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

Pre-major BA and BS Degree Requirements

Students must complete one course in methodology (PSY 212) and one course in statistics (PSY 225 or SOCS 225) with a minimum grade of C (not C-) and attend one major meeting. In addition, a minimum overall entry GPA of 2.5 in all PSY UH Mānoa course work (including PSY 100 and any transfer PSY courses) is required to declare psychology as a major.

BA Degree Requirements

(minimum 36 credits, 15 earned at UH Mānoa)

In addition to completion of PSY 212 and PSY 225 or SOCS 225, students must complete 30 credit hours, including:
- 15 credits at the upper division level (300 level and above)
- One course from three of these four psychology foundation areas:
  - Experimental (PSY X2X courses), e.g., PSY 220, 322, 324
  - Psychobiology (PSY X3X courses), e.g., PSY 230, 331, 333
  - 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 topic series (PSY 4X9, many 4X9 courses are designated as Writing Intensive), excluding PSY 499

A minimum exit GPA of 2.0 in psychology must be maintained for graduation. PSY 100 is a prerequisite to all other courses except PSY 170 and may be counted toward the major and the diversification social sciences (DS) core requirement. 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. Furthermore, students intending to do graduate work are encouraged to enroll in PSY 499 and in PSY 408 or 478.

BS Degree Requirements

(minimum 42 credits, 21 earned at UH Mānoa)

In addition to completion of PSY 212 and PSY 225 or SOCS 225, students must complete one year of Biology* and 18 credits at the 300 and above level, including:
- One additional PSY 4X9 advanced focus (W, O, etc.) seminar (3 credits)
- Two semesters of directed research PSY 499 (6 credits)
- One 3-credit course in Statistics, e.g., PSY 419, 610, or 611 is highly recommended in their senior year
- BIOL 171/171L (4 credits)
- And either BIOL 172/172L (4 credits) or PSY 331 or 333 (3 credits)

A minimum exit GPA of 2.5 in psychology must be maintained for graduation.

New majors should seek assistance from the Undergraduate Advising Office in Sakamaki D409 (psychadv@hawaii.edu) or consult with Lorey K. Takahashi, Chair of Undergraduate Studies (LKT@hawaii.edu), as soon as possible for advising. 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, 2530 Dole Street, Honolulu, HI 96822; (b) by faxing your request to (808) 956-4700; (c) by sending an email communication to the Chair of Graduate Studies (gradpsy@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, 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.manoa.hawaii.edu/graduate/. Completed applications must be received by Graduate Education no later than December 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 Mānoa or another accredited institution of higher learning) prior to entering the doctoral program in psychology at UH Mānoa. 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 Graduate Education 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.

For further details of this certificate, please see www.psychology.hawaii.edu/concentrations/clinical-psychology.html.

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Email: pubadmin@hawaii.edu
Web: www.puba.hawaii.edu

Faculty
*M. Johansen, PhD (Director)—public management
*J. Ady, PhD—communication studies
*S. Chandler, PhD—social work
*C. Grandy, PhD—economics
T. Kim, PhD—public administration
*D. Nixon, PhD—political science

Degree and Certificate Offered: MPA, Graduate Certificate in Public Administration

The Academic Program
The Public Administration Program (PUBA) offers students a comprehensive foundation in public administration that is designed to build leadership in public service in Hawai‘i, the mainland U.S., and the Asia-Pacific region. Located in the College of Social Sciences, it offers a 39-credit master’s degree and a 15-credit certificate. The program’s format emphasizes interdisciplinary learning, collaborative teaching, and a learning community experience that is designed to help students gain knowledge, and learn skills and the values that are important for public service leadership. The classes create 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 in the public, nonprofit, and private sectors. The program emphasizes teamwork and collaboration so students can practice effectively in a multicultural and global society. PUBA also offers a certificate in public administration with a track in public leadership as well as one with a focus in nonprofit management. It offers a part-time program designed to assist students who are working full time and an 18-month accelerated program.

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
Graduate Study

Master's Degree

The master’s degree consists of 8 required courses (24 credits hours); two electives (6 credits), a 120 hour practicum experience and a capstone. The capstone must be taken as the final requirement in the program and serves as the culminating experience of the Masters degree.

Admissions are in the fall only.

The required courses are highly interdisciplinary and integrate a series of perspectives and skills important to effective work in public service. These courses include content in effective communication in the public sector, the political context of public institutions, economic processes, public ethics and leadership, budgeting, policy processes, analysis and implementation, administrative law, organizational change, public personnel management, research design and methods and the role of culture in public service.

The electives allow each student to design a program of study built around a theme of their personal and professional interests. Elective courses are selected by the student in consultation with the student’s faculty advisor.

The Plan A thesis option requires the student to take at least one additional graduate level research methods or statistics course.

The practicum is designed to place individuals in a setting where they compare organizational structures and processes; study leadership styles, sources of power, and communication strategies; differentiate between types of clients and sources of funding; discuss measures of organizational success; and develop specific skills. The location of the practicum varies according to the student’s past work experience and his or her learning goals. In some cases a practicum placement in one organization may be modified to become work on a project in another part of the organization. Students are encouraged to undertake a practicum that will stretch and extend their knowledge and skills.

The practicum must be completed before or concurrently with the final capstone seminar. The capstone requirement consists of a 3-credit capstone planning class, taken during the semester preceding that in which graduation will occur. All students must also enroll in a 3-credit capstone seminar during their final semester. The capstone is a group analysis of a public issue of importance in Hawai‘i, the mainland, or the Asia-Pacific region. This is usually done in the fall and spring semesters of the student’s last year in the program but may also be completed as a summer-fall option for students in the accelerated 18-month program.

Four required courses, Introduction to Public Administration, Effective Communication in Public Administration, Research Methods, and Organizations: Theory and Change must be taken before enrolling in Capstone Planning. Three required courses, Introduction to Public Administration, Organizations: Theory and Change, and Leadership and Ethics must be taken before enrolling in the Practicum.

The program welcomes a diversity of professional and educational backgrounds and sees these as contributing to the learning environment. Classes are taught in the evenings to accommodate the schedules of students working full-time.

Requirements

MPA candidates must complete 24 credit hours of core requirements, 6 credit hours of electives, 3 credit hours of practicum, and 6 credit hours of capstone. The student must earn at least a grade of B in the practicum and in both capstone courses to graduate and must maintain a B average in all other classes.

Other

Up to nine graduate credits may be counted toward the degree with approval. Call the PUBA program office for additional information.

The Certificate in Public Administration

The program offers two certificate tracks: (1) public service leadership, and (2) nonprofit management. Each is 15 credits.

Courses in both tracks are compatible with working schedules. The nonprofit management track may be taken in conjunction with the Master of Public Administration (MPA) degree. The classes in both of these tracks may be counted toward the MPA degree, with some restrictions. Students wishing to move from one of the certificates into the MPA must apply for and be formally accepted into the master’s program.

The Certificate in Public Administration

The track in public service leadership consists of 15 credits. Four required courses, (Introduction to Public Administration, Organizations, Effective Communication in Public Administration and Leadership and Ethics) are required courses for the MPA. Certificate students may then choose an elective course selected from any course taught in PUBA.

The Nonprofit Management Track

The track in nonprofit management is made up of two 3-credit required courses (Nonprofit Management, Nonprofit Practices and Tools) that provide an overview of issues in the field; 6 credits of electives; and a 3-credit practicum. Students take two electives: at least one elective must be a PUBA courses. The student in consultation with his or her advisor selects these courses.

Public Policy Center

College of Social Sciences
Saunders Hall 723
2424 Maile Way
Honolulu, HI 96822
Tel: (808) 956-4237
Fax: (808) 956-0950
Email: dcsakai@hawaii.edu
Web: www.publicpolicycenter.hawaii.edu

Faculty

*S. Chandler, PhD (Director)—policy analysis, child welfare, collaborative management, public administration

S. Moriwaki, PhD (Associate Director)—energy policy, sustainability, community development

*M. Johansen, PhD—non-profit research, public management, educational policy, public policy

Cooperating Graduate Faculty

The Public Policy Center has 53 affiliate faculty representing all of the departments within the College of Social Sciences. See

* Graduate Faculty
The Academic Program

The mission of the Public Policy Center is to enhance the quality of community life throughout Hawai‘i, the U.S., and the Asia-Pacific region. This mission is achieved through an interdisciplinary approach to teaching, research, service, and application. The center provides opportunities for students to expand their knowledge and gain experience in public policy. Its premise is that public policy analyses are critical to sound public policy decision-making and that teaching and scholarly work are intertwined and should be continually linked to the community beneficiaries. Public policy is a discipline that seeks to solve public problems through the design, analysis, and advocacy of well thought out, evidence-based research. In all levels of government and globally, public needs and limited resources require policy choices that are economically efficient, socially and technically effective, politically and administratively responsive. Such choices exist across a broad range of critical issues, including health, education, the environment, energy, economic development, social welfare policy, and community resiliency. Students with experience and knowledge about public policy offer their community essential and meaningful skills and tools needed to analyze, design, and evaluate public policy choices. Students trained with these skills are attractive to employers in the public, nonprofit, and business sectors.

Bachelor’s Degree in Public Affairs and Policy Studies

The Public Policy Center (PPC) and the Matsunaga Institute for Peace and Conflict Resolution (MIPCR) offer a flexible, self-designed BA in public affairs and policy. Students may take courses that focus on such fields as leadership, health policy or the environment. Twelve (12) courses (36 credits) must be completed. They are distributed over 5 required courses and 7 electives. Courses are selected in consultation with faculty advisors.

Required foundation courses are offered in governance, Hawai‘i politics and peace studies; policy methods; leadership skills, mediation and facilitation; human rights, international law, and constitutional law. Electives may be chosen from a variety of disciplines across campus. There is a capstone project or internship requirement.

Additional information is available at www.publicpolicycenter.hawaii.edu or from Interdisciplinary Studies at manoa.hawaii.edu/undergrad/is.

Courses in Public Policy

Students can select courses from a wide range of fields in addition to those offered by the Public Policy Center, including: political science, economics, public administration, urban and regional planning, peace studies and conflict resolution.

Related Courses

- PPC 301 Governing, Politics, and Public Policy (3)
- PPC 330 Survey of Public Policy and Analysis (3)*
- PPC 695 Topics in Public Policy (3)*
  - (1) Introduction to Public Policy and Analysis*
- POLS 670 Introduction to Public Policy (3)
- PLAN 603 Economic Analysis for Urban Planning and Policy (3)

*Taught online

For more information

Please visit our website at www.publicpolicycenter.hawaii.edu or call Susan Chandler at (808) 956-4237 or email her at Chandler@hawaii.edu.

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

* M. Mohr, PhD (Chair)—Japanese and Asian religions
* H. J. Baroni, PhD—Japanese and East Asian religions, Buddhism in America
* M. A. Brown, PhD—Hawaiian religion
* J. Frankel, PhD—Islam, Confucianism, comparative religion, mysticism
* R. Lamb, PhD—South Asian religions, Asian monasticism
* J. Lyon, PhD—Christianity, Hebrew Bible, New Testament, history of religion in Hawai‘i
* L. A. Siegel, PhD—Indian religions

Cooperating Graduate Faculty

G. D. Panisnick, PhD—Western religions

Degrees Offered: Undergraduate Certificate in Islamic Studies, BA (including minor) in religion, MA 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.

* Graduate Faculty
Requirements

Students must complete 30 credit hours in religion, including at least 18 credit hours in 300- and 400-level courses. A minimum 2.5 GPA in religion courses must be maintained for graduation. Required course: REL 300.

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

Minor

Requirements

Students must complete 15 credit hours at the 300 level and above. Required course: REL 300.

Undergraduate Certificate in Islamic Studies

The purpose of this certificate is to increase understanding of Islam as a world religion through critical analysis of primary and secondary materials, to foster knowledge about the complexity among Islamic societies and their diverse cultural expressions, and to explore the role of Islam and Muslims in present and past world affairs.

This certificate is housed within the College of Arts and Humanities. The participating departments are Art and Art History, History, Philosophy, and Religion. Minimum prerequisites for acceptance into the program for undergraduates are sophomore or higher standing with a minimum GPA of 2.5 and the completion of at least one introductory course within one of the four participating departments with a grade of B or better.

A more complete description and the requirements are described under the Department of Philosophy.

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.

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.

Advancement to Candidacy: 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) and the language requirement.

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, excluding 499), 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., Chinese, Hawaiian, Hindi, Japanese, Sanskrit, 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 advisor and assessed by two faculty readers (one from the Department of Religion 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, usually taken over two semesters is required. Students must be admitted to candidacy 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.

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. 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 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 Office of Graduate Education.

Plan B

The Plan B degree program provides students with a non-thesis opportunity for graduate research and study in Asian or Polynesian religions. Plan B is designed for students who wish to articulate the results of their research in innovative ways using various available technologies. In place of a thesis, the culminating requirement is a Plan B Project, an original research project as described below. 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 12 graduate credits, including REL 600, have been taken with a GPA of 3.0 or better and that the student has prepared a preliminary proposal and secured the support of two graduate faculty members from the Department of Religion to serve on their committee. Committee members will have the responsibility of approving, supervising, and evaluating the project as completed in REL 688 (Plan B Research).

3. Completion of a research project demonstrating a critical understanding of religion in a particular area of Asia or the Pacific or of a topic within the overall region. The project should reveal original insights into selected religious phenomena or area of concentration. Students will be expected to present the results of their research in innovative ways that utilize the arts, various media, or developing technologies, and thereby show their relevance to scholarly discourse. Research projects will be presented in a public forum during the student’s final semester.

**Required courses (6 credits)**

- REL 600 History and Theory of the Study of Religion (3)
- REL 688 Plan B Research

**Area requirements (9 credits)**

Students must take at least three 600 level courses in a particular region of Asian or in Polynesian religions.

**Electives (15 credits)**

Electives consist of any religion course (400 level and above, excluding 499), 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 advisor and graduate chair. No more than two 400-level courses may be used to satisfy this requirement.

**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., Chinese, Hawaiian, Hindi, Japanese, Sanskrit, 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 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.

**Second Language Studies**

College of Languages, Linguistics and Literature

Moore 570
1890 East-West Road
Honolulu, HI 96822
Tel: (808) 956-9010
Fax: (808) 956-2802
Web: www.hawaii.edu/sls

**Faculty**

- G. Crookes, PhD (Chair)—classroom teaching, classroom-centered research, materials and syllabus design
- G. Kasper, Dr. phil. (Graduate Chair)—language and social interaction, qualitative research
- R. Bley-Vroman, PhD—English syntax, second-language analysis, formal models of language acquisition
- J. D. Brown, PhD—language testing, research methods, curriculum design
- K. Davis, PhD—qualitative research methods, language policy and planning, literacy, bilingual education
- R. Day, PhD—teacher education, teaching of reading, vocabulary, materials development, literature
- E. Gilliland, PhD—writing studies, adolescent literacy, teacher education, qualitative research methods, discourse analysis
- T. Grüter, PhD—morphosyntax and semantics, developmental psycholinguistics, language processing, bilingualism
- C. Higgins, PhD—macro- and micro-sociolinguistics, qualitative research methods, discourse analysis, code-switching
- T. Hudson, PhD—language testing, reading, methods and materials, English for specific purposes, research methods
- B. D. Schwartz, PhD—linguistic theory and second language acquisition, second language analysis, second language processing, child second language acquisition
- D. Zheng, PhD—cognition and instruction, second language technology and pedagogy, bilingual education, instructional media
- N. Ziegler, PhD—second language acquisition, interaction, corrective feedback, task-based language teaching, synchronous computer mediated communication, Maritime English (English as a lingua franca, English for specific purposes in the commercial shipping industry)

**Cooperating Graduate Faculty**

- H. Cook, PhD—Japanese sociolinguistics, discourse analysis, language socialization and pragmatics
- K. Kanno, PhD—Japanese SLA, pedagogical grammar, language analysis
- K. Kondo-Brown, PhD—heritage language learning, assessment, Japanese language learning
- W. O’Grady, PhD—syntactic, first and second language acquisition, Korean
- K. Rehg, PhD—phonology, bilingual education, Micronesian linguistics
- A. J. Schafer, PhD—sentence comprehension and production across languages (including Korean, Japanese, and Austronesian languages); sentence prosody; information structure; psycholinguistic approaches to language documentation and conservation

**Affiliate Graduate Faculty**

- F. Bail, PhD—Human learning and development, instructional formats
- J. M. Bilmes, PhD—cognitive anthropology, human communication, decision-making, conversation analysis, Southeast Asia

* Graduate Faculty
E. Hauser, PhD—conversation analysis
S. McKay, PhD—English as an international language, SL methods and materials, macro-sociolinguistics
H. T. Nguyen, PhD—interactional competence, classroom discourse, conversation analysis
J. Norris, PhD—language program evaluation
L. Ortega, PhD—second language acquisition
R. Schmidt, PhD—(Emeritus) second language acquisition

Degrees Offered: BA in second language studies, MA in second language studies, PhD in second language studies, Advanced Graduate Certificate in Second Language Studies

The Academic Program

The SLS department’s programs prepare students for professional and academic careers in second language and multilingual settings, including but not limited to language education. Through course work and independent research, students acquire a broad knowledge base and familiarity with a range of research approaches and an understanding of ethics and professionalism in second language studies.

Employment opportunities have expanded nationally and internationally to include various types of educational and occupational institutions. In addition to language education and administration at all levels, employment opportunities extend to such domains as publishing, test development for international agencies, and language training programs for businesses.

The department, whose MA program dates back to 1961, is regarded as one of the most prestigious second language programs worldwide. Offerings comprise a wide range of general and specialized courses. SLS faculty members are well respected nationally and internationally through their research, publications, and leadership roles at national and international levels. The department has excellent library resources. It attracts top-quality students and maintains a variety of services and activities that stimulates a high level of student satisfaction and collaboration, including post-graduation employment advice and assistance.

SLS faculty members (J. D. Brown, G. Kasper, and R. Schmidt) have served on the executive boards of the American Association for Applied Linguistics and the Teachers of English to Speakers of Other Languages International Association. Department faculty are also past and present 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 Bachelor of Arts degree program in second language studies provides students with a comprehensive understanding of a wide range of issues related to how second and foreign languages are learned, taught, and used in local and global contexts. This program, in accord with the values of SLS graduate degree programs, takes the broad view that plurilingual and pluricultural societies have greater success at communication in and across languages, which enables mutual understanding and appreciation, conflict resolution, and negotiation of values.

The program addresses theory, research, and practice, and helps prepare students to become second language specialists who understand the nature of second language learning and use in diverse circumstances, and are able to act upon related challenges that emerge in a variety of settings. The BA in SLS also serves as an excellent preparation for entry into a variety of language-related graduate programs.

Requirements

Students must complete 33 credit hours of upper division courses, including:
- 24 credit hours of required courses: SLS 302, 303, 408, 430, 441, 480(alpha), 485, and 490
- 9 credit hours of elective courses: 300-499 courses from SLS, or 300-499 courses from other departments (as approved by an SLS advisor)

For more information about the BA degree in SLS, see www.hawaii.edu/ College of Education for information regarding Resident Tuition Rates. See the “Tuition, Fees, and Financial Aid” section of this Catalog for more information on WICHE programs.

Master’s Degree

The main goal of the Master of Arts degree program is to serve the needs of prospective and practicing teachers, administrators, and researchers in the area of second and foreign language studies. Attention is given to the areas of second and foreign language acquisition, applied psycholinguistics, second language use, second language research, bilingual education, curriculum development, and teacher education, among others.

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 and language learning. The core courses, which are primarily theoretical, are designed to provide an essential foundation on which the more practically oriented courses can build.

The MA in SLS does not result in teaching certification. Contact the College of Education for information regarding State of Hawai‘i teacher certification.

Entry into the MA program is possible in both the fall and spring semesters. The GRE is required for all MA in SLS applicants whose first language is English or who are exempt from taking the TOEFL or IELTS. Most applicants whose first language is not English are required to take the TOEFL or the IELTS.

Application materials are required for both the UH Mānoa Office of Graduate Education and for the Department of Second Language Studies. For details about how to apply, see: www.hawaii.edu/graduate/ma/ma-admissions/.
Requirements

All students in the MA program, whether Plan A, Plan B, or Plan C, are expected to have experience in 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 36-credit MA.

Plan A (Thesis) Requirements
- Four core courses (12 credits): SLS 441, 600, 650, 660
- One core seminar (3 credits): SLS 730, 750, 760, or 775
- Five electives approved by the advisor (15 credits)
- SLS 700 thesis research (6 credits)

Plan B (Non-thesis) Requirements
- Four core courses (12 credits): SLS 441, 600, 650, 660
- One core seminar (3 credits): SLS 730, 750, 760, or 775
- Seven electives approved by the advisor (21 credits)
- Submission of an acceptable scholarly paper

Plan C Requirements
Plan C is an individually planned program for established language scholars who wish to pursue an additional degree. For admission requirements, contact the Graduate Chair.

Specialization

As an option, the 36-credit MA program allows students to concentrate in a particular area of specialization. Each specialization requires a distinct selection of four courses from among various electives, as well as a related core seminar. Five areas of specialization are available:
- Critical second language studies
- Language assessment, measurement, and program evaluation
- Language and social interaction
- Language education ("English" can be designated)
- Second language acquisition

For further information about these specializations and the MA program, see: www.hawaii.edu/sls/graduate/ma/.

Advanced Graduate Certificate

The Advanced Graduate Certificate program in second language studies provides advanced training to those who already have a graduate degree (master's or 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. 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 Mānoa before entering the certificate program. Graduate students enrolled in other programs at UH Mānoa are permitted to apply for the certificate while they concurrently complete another graduate degree. For specific information and guidelines on the AGC application process, see: www.hawaii.edu/sls/graduate/agc/.

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. Transfer credits are not applicable toward graduate certificate requirements. However, up to six UH Mānoa PBU credits may be applied. Students who complete the graduate certificate in SLS will obtain knowledge and skills in second language studies with possibilities including second language analysis, learning, pedagogy, and use, in utilization of research findings, and application of research methods.

As a culminating activity in the program, students are required to submit a paper that demonstrates the student’s ability to conduct independent, high-quality scholarly research. This paper must be new research (i.e., different from prior graduate work) conducted under the supervision of the program’s faculty.

Doctoral Degree

The PhD program in second language studies at UH Mānoa was established in 1988. The graduate faculty of the PhD program comprises all members of the SLS faculty, as well as faculty members of the Departments of Anthropology, East Asian Languages and Literatures, and Linguistics.

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; interlanguage; processes of comprehension and production.
3. Second language use—Studies of social functions of second and foreign languages; pidgins, creoles, and dialect variation; roles of social and geographical contexts; pragmatics; discourse analysis; cross-cultural and interethnic communication; sociopolitical factors; language policy and planning.
4. Second language pedagogy—Research into learners’ language needs (including immigrant needs); formulation of needs-based curriculum objectives and syllabi; task-based and content-based language teaching; computer-aided instruction; program administration; evaluation and language assessment; critical pedagogy.

The basic requirement for admission into the PhD program is the completion of an MA in second language studies, applied linguistics, or second or foreign language education. Applicants with graduate degrees in related disciplines such as anthropology, education, modern languages, linguistics, and psychology are also welcome.

Entry into the PhD program is possible in both the fall and spring semesters. The GRE is required for all PhD program applicants. Most applicants whose first language is not English are required to take the TOEFL or the IELTS. Additionally, those required to take the TOEFL or IELTS have the following minimum scores to work as a teaching graduate assistant (GA): 600 TOEFL PBT; 250 TOEFL CBT; 100 TOEFL iBT, with subtest scores 25-26 on each of speaking and 25-26 on reading. 7.0 IELTS.

Prospective PhD students are automatically considered for a graduate assistantship at the time of application. Each year, four years of guaranteed funding are offered to the four most qualified applicants to the PhD in SLS program, pending availability of funds.

Application materials are required for both the UH Mānoa Office of Graduate Education and for the Department of Second Language Studies. For details about how to apply, go to: www.hawaii.edu/sls/graduate/phd/phd-admissions/.
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 PhD students’ MA training is at least one graduate-level course in each of the four areas of specialization. Beyond basic preparation, each doctoral student’s program must include a minimum of two graduate-level courses in three of the four areas of specialization and a minimum of two graduate-level courses in research methods. At least two seminars (700-level) are required.

Doctoral candidates must pass a comprehensive examination before the dissertation, and a final oral examination defending the dissertation.

Students must also document and reflect on substantial, diverse learning experiences in two languages other than their first language. This requirement is fulfilled by submitting a 3- to 5-page reflective essay during the first two years of study and before advancement to candidacy. Examples of substantial and diverse language learning experience include the following:

- Attaining L2 competence for functioning successfully in an L2 academic context
- Completing a primary, secondary, or higher education degree in a language other than the first language
- Growing up with two or more languages
- Teaching a language (or in a language) other than the first language
- Engaging in research that involves the analysis of data in another language

For further information about the PhD program, see: www.hawaii.edu/sls/graduate/phd/.

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
Email: 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, to facilitate their academic studies at UH Mānoa. The ELI program is only for students who have been admitted to UH Mānoa.

All potential ELI students admitted to UH Mānoa 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 director for further information. All ELI courses must be completed within the first year of study at UH Mānoa. Students who do not complete ELI course work as planned may not be allowed to graduate.

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, a score of 250 or better on the computer-based TOEFL, or a score of 600 or better on the paper-based TOEFL (taken within the last 2 years); (c) the student has received a score of 7.0 or better on the IELTS (taken within the last 2 years); (d) the student has received a score of 460 or better on the verbal section of the GRE; (e) the student has received a score of 540 or better on the verbal section of the SAT if taken before March 2005, or a score of 540 or better on the critical reading section if taken in March 2005 or thereafter; (f) 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; (g) graduate students who have received within the last five years a bachelor’s degree or an advanced degree from an accredited/recognized college in the U.S., United Kingdom, Canada (except Quebec), New Zealand, Singapore, Australia, or Ireland; (h) the student has an Associate of Arts degree from a community college within the UH System; (i) 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 UH Mānoa and where English is the primary language of instruction; or (j) 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 UH Mānoa. An exemption on the basis of one of these criteria may be automatically granted by UH Mānoa, 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 potential ELI students who have been admitted to UH Mānoa 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 director for further information. All ELI courses must be completed within the first year of study at UH Mānoa. Students who do not complete ELI course work 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 Mānoa 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
Email: eslhelp@hawaii.edu
Web: manoa.hawaii.edu/eslhelp

The Hawai`i English Language Program (HELP), located in the Department of SLS, is a noncredit, intensive academic English skills program for students who wish to improve their English language proficiency for academic, business, or professional pursuits. HELP offers a pathway into the UH System for students who need to sharpen their academic English skills before starting credit course work at UH Mānoa or in another American college or university. HELP students who complete two terms at the highest level may receive conditional admission to UH Mānoa without a TOEFL score, after which they may take the ELL placement exam to see if further English preparation is needed. HELP has four levels to meet the needs of students from beginning to advanced.

HELP is also an ESL teacher training center and offers customized teacher workshops to groups, as well as the globally recognized Certificate in English Language Teaching to Adults (CELTA) certification course.

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, March, August, and October. HELP also offers 6-week summer programs in May and July.

See manoa.hawaii.edu/eslhelp/ for more information.

Sociology
College of Social Sciences
Saunders Hall 247
2424 Maile Way
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Tel: (808) 956-7693
Fax: (808) 956-3707
Email: socdept@hawaii.edu
Web: www.sociology.hawaii.edu

Faculty
*D. W. Wood, PhD (Chair)—medical sociology, evaluation research, quantitative methodology, substance abuse prevention and treatment
*K. Mossakowski, PhD (Graduate Chair)—medical sociology, stress and mental health, life course and aging, social psychology, social epidemiology, race/ethnicity
*S. K. Chai, PhD—social theory, economic development, comparative sociology (Asia)
*K. Irwin, PhD—criminology, deviance and social control, qualitative methodology
*D. T. Johnson, PhD—criminal justice, comparative sociology (Japan), law and society
B. Joyce, PhD—undergraduate advisor
*V. K. Kanuha, PhD—multicultural issues, gender violence, native Hawaiian health, HIV

* Graduate Faculty

*H. Koo, PhD—comparative sociology (Korea), social stratification, development
*Y. J. Lee, PhD—quantitative methodology, demography, gender stratification, aging and health
*N. Sharma, PhD—race/ethnic/minority relations, theory/migration and immigration
*P. G. Steinhoff, PhD—collective behavior/social movements, comparative sociology (Japan), political sociology
*L. Uperesa, PhD—race and race relations, global anthropology, sociology and ethnic studies
*W. Zhang, PhD—medical sociology, social epidemiology, research methods

Cooperating Graduate Faculty
M. Brown—UH Hilo criminology, gender and women’s issues
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, PhD—sociology of education
A. Kimura, PhD—women’s studies

Affiliate Graduate Faculty
D. Chandler, PhD—sociology; conflict resolution
S. Kanaiapuni, PhD—demography, education, Native Hawaiians
A. Pobutsky, PhD—medical sociology, epidemiology
A. B. Robillard, PhD—ethnomethodology, medical sociology, comparative disability (Pacific Islands)

Adjunct Faculty
P. Adler, PhD—conflict management, community studies
J. Dannenfeld, JD—law and society
J. Manis, PhD—social psychology, social problems

Degrees Offered: 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, medical sociology and aging, criminology, 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; 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:
- three 400-level courses
- 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.

For further information on the Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

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

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 and do not list all aspects of procedures and requirements; the department provides a complete statement of its graduate degree program on its website at www.sociology.hawaii.edu. All requirements specified by the Graduate Education and general university regulations also apply.

Applicants for graduate study in the department must specify whether they wish to enter the MA or PhD program. University transcripts, a Statement of Objectives, letters of recommendation, and GRE General Test scores are required of all applicants. The TOEFL or IELTS test is required for applicants who are not native speakers of English. A sample of written work is also required of applicants to the PhD program and recommended for applicants to the MA program. An undergraduate major in sociology is not required for admission, but 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 are January 15 (international students) and February 1 (domestic students) for the fall semester and August 1 (international) and September 1 (domestic) for the spring semester. Please see the department website for more information and links to appropriate graduate education pages.

Master's Degree

The department offers an MA Plan A (thesis) program.

Plan A (Thesis) Requirements

The MA curriculum in sociology (Plan A) should prepare the student for positions involving expertise in social research. In addition, preparatory training is provided to those who are thinking of aspiring to a doctoral degree, but feel they need more preparation. However, an MA candidate cannot assume that satisfactory completion of this curriculum will 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 and statistics, as well as their application to the study of various substantive aspects of society.

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 at the 400 level or higher, as well as five substantive courses, of which four must be at the 600 level or higher. In addition, students must take 6 credits of Thesis Research (SOC 700). The thesis is a substantial research project that shows a student’s ability to produce original substantive and intellectual work. All courses credited toward the 30 credit hour minimum required for the MA degree must be passed with a grade of B or better.

The first semester’s work is planned in consultation with the graduate chair and a temporary advisor appointed by the graduate chair. During the first semester, under the guidance of the temporary 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. By the end of the second semester, the student should form a thesis committee of three or more faculty members, generally drawn primarily from the department.

The thesis committee assists the student in deciding upon a thesis topic. The student then writes a thesis proposal, which must be approved by the committee. Under the supervision of the committee, the student carries out the proposed research and writes the MA thesis. When the committee feels the student is ready, the student submits the final draft of the thesis, and the committee conducts a final oral examination. Both the oral examination and the written paper must meet the committee’s approval for an MA to be awarded.

Plan B (Non-thesis) Requirements

A Plan B (non-thesis) MA is also offered only in special circumstances. Students are only admitted to the Plan A MA program.

Doctoral Degree

This is an academically-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 PhD program is designed to give the student systematic exposure to sociological theories, methods, and statistics, as well their application to a number of substantive areas of society. It also provides the opportunity to develop special, high-level competence within an area of research, and the training to publish and present this research in professional settings.
The first phase of the PhD program provides basic training in theory, methods, and research. The course requirement in this phase is to complete five required courses in theory, methods, and statistics, as well as 15 additional course credits consisting of substantive courses and up to three credits of SOC 699. All courses that count towards PhD requirements must be at the 600 level or higher and passed with a grade of B or above. The minimum total number of course credits necessary for graduation is 33, but most PhD students take more than the minimum in order to gain adequate knowledge. Completing non-course requirements (QR, 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.

By the third semester, the student should form a guidance committee consisting of at least three faculty members, typically drawn primarily from within the department. By approximately the fourth semester, the student submits two of their best course papers for their qualifying review. The papers are judged by a specially constituted qualifying review panel. The qualifying review must be passed before proceeding onto Phase II of the PhD program.

The second phase provides advanced training in areas of concentration and dissertation research. The course requirement in this phase is to take three additional credits of substantive courses at the 600 level or above. In addition, the student is required to take a written and oral comprehensive examination on two selected areas of concentration, write a dissertation proposal, perform the approved dissertation research, finish writing and orally defend a dissertation.

Early in the second phase, the student must organize a dissertation committee consisting of at least five members of graduate faculty, including the official university representative from the Graduate Education's list of eligible university representatives for sociology, in accordance with the Graduate Education policies.

Preferably by the fifth semester, all PhD students must take a comprehensive examination from the dissertation committee. The written examination covers two broadly defined research areas, as determined by the student and the dissertation committee. The student develops a bibliography for each area, and the dissertation committee makes up questions from each. After the student has taken the written examination, the dissertation committee evaluates the results and proceeds to hold a closed oral examination to determine whether or not the student is prepared to undertake dissertation research.

Following successful completion of the comprehensive examination, the student prepares a dissertation proposal. This proposal describes the theoretical basis and the research strategy to be employed in the study of the dissertation problem. When it has been successfully defended before the doctoral committee, the student proceeds to the research and writing phase of the dissertation. The dissertation should represent a major original scholarly contribution to the field of sociology suitable for publication in the form of a monograph book. A PhD is given only after completion of the dissertation text and oral defense to the satisfaction of the dissertation committee.
from a comprehensive curriculum that includes the world’s most noted Asian theatre program, a nationally respected TYA program, and our Hawaiian theatre offerings.

Dance is the art of human motion. It encompasses the study of human movement as it relates to the physical sciences, music, theatre 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, production, 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 culture and performance studies and Asian and Pacific dance.

**Affiliations**

The department belongs to the Hawai‘i State Theatre Council, is an institutional member of the U.S. Institute for Theatre Technology, and participates in the Kennedy Center American College Theatre Festival. The Asian theatre 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 theatre program, undergraduates must consult each semester with the theatre undergraduate advisor. Each theatre major also chooses a faculty mentor to supervise their progress and help in preparation of graduation portfolio. Newly admitted theatre graduate students should consult for the first one or two semesters with the director of graduate studies in theatre for initial advising, after which each 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**

This degree is designed for students with a broad interest in theatre and allows maximum flexibility to satisfy requirements in the greatest areas of interest. Incoming students may declare a BA major in Theatre on their university application.

Students must complete 42 credit hours, determined in consultation with an advisor and based on the student’s desired focus within dance, such as teaching, choreography, dance culture and performance studies, or technical theatre production.

**Course Requirements**

- DNCE 151, 255, 260, 360 or 361, 370 or 490, 452, or 453
- THEA 200C, 200D, or 200E
- 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 and at least one of these in Asian dance
- 11 credits of focus electives to be selected from:

**Other Requirements**

BA Dance students are required to participate in at least one (1) UH dance production per year (e.g., student dance concerts, main stage dance concerts, as performers or crew members). BA majors are required to attend the annual end-of-year assessment class. BA majors are required to register for and attend at least one technique class per semester.

Graduation requirements include the submission of a portfolio of student work, assessment essay, exit interview, and completion of a survey.

For information on a Bachelor Degree Program Sheet, go to www manoahawaii edu/ovcaa/programsheets/.

**BFA in Dance**

This degree is designed for students with a broad interest in dance and allows them maximum flexibility to satisfy requirements in their greatest areas of interest. Incoming students may declare a BA major in Dance on their university application.

Students must complete 40 credit hours: 29 credits of required courses and 11 of elective courses. Elective credit hours are determined in consultation with an advisor and based on the student’s desired focus within dance, such as teaching, choreography, dance culture and performance studies, or technical theatre production.

**Course Requirements**

- THEA 200, Asian and Pacific performance courses, related courses in ethnomusicology, Asian theatre, anthropology, Hawaiian studies, Pacific Island studies, or ethnic studies

- 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.

For information on a Bachelor Degree Program Sheet, go to www manoahawaii edu/ovcaa/programsheets/.

**BFA in Dance**

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, usually in April. Incoming students may declare a BA major in Dance on their university application, then audition for the BFA degree during spring semester of their first year at UH Mānoa, if interested in the BFA degree program.

**Course Requirements**

Students must complete 62 credit hours, including:

- DNCE 151, 250, 360, 361, 370, 371, 372, 452, 453, 495
- 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 and at least one of those in Asian dance
- 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 200C, 200D, or 200E

Other Requirements

BFA Dance students are required to participate in at least two (2) UH dance productions per year. At least one must be in a performance capacity. Attendance at the BFA audition/end of year assessment class is required each year by the BFA major. Prior to the senior project, BFA students must audition choreography for a fall or spring student concert by the sixth semester of the dance major. BFA majors are required to register for a technique course every semester.

Graduation requirements include the submission of a portfolio of student work, assessment essay, exit interview, and completion of a survey.

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

Minor in Dance

Course Requirements

Students must complete 15 credit hours numbered 200 level and above, including nine credit hours in courses numbered 300 or above. A maximum of 9 credit hours from dance technique courses may be designated for the minor. Dance minors should consult with the undergraduate advisor.

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. Courses must include one from performance, one from technical theatre, and one from history/literature. Participation in two departmental productions is required. Theatre minors should consult with the undergraduate advisor.

Graduate Study

Most graduates, especially those with PhD degrees, pursue teaching careers, but there are many career opportunities in professional theatres and dance companies, radio, television, films, and community theatres, as well as the wide variety of other fields which actively recruit those with theatre degrees.

The degrees in Asian theatre 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 therefore eligible, upon admission, to enroll at Hawai‘i-resident tuition rates.

Master’s Degrees in Theatre

Master’s degrees offered in theatre include the MA Plan A (thesis) in two areas: (a) Theatre, and (b) Performance Studies; Plan B (non-thesis), and the MFA Plan B (creative/performance).

For the MA Plan A, the candidate writes a thesis in Asian or Western theatre (history, theory, or dramatic literature), or in Performance Studies. 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 seven concentrations: acting, directing, design, and playwriting (each of these four may include Western, Asian, Hawaiian, and TYA), Asian performance, Hawaiian Theatre, and TYA.

Applicants must present an adequate undergraduate background and submit three letters of recommendation. The department expects that all incoming graduate students will have taken at least two courses in dramatic literature or theatre history, and one course in each of the following three areas: acting, directing, and design or technical theatre. 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 500/61 (paper/internet) or IELTS overall band test result of 6.00 (600/100 for TOEFL and 7.0 for IELTS for Graduate Assistantship applicants). 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 portfolios, video of acting audition material or material directed, or play scripts.

Application deadline for the fall semester is January 15. Spring semester application deadline is August 15. 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); practicum in teaching (THEA 692); Asian theatre theory/history; Western theatre theory/history; and graduate theatre 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; and must complete 6 credit hours of THEA 700 Thesis Research. MA (Non-Thesis) students take 3 credit hours each of TYA, creative drama, creative movement, or Western puppetry; Asian or Western acting or directing; design/technical theatre. A minimum of 18 credit hours must be in courses numbered 600 to 798; a minimum of 6 credit hours must be in Asian theatre (excluding 690); credit for 699 may not exceed 9 credit hours. Students pursuing an MA (Thesis) in Performance Studies 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 or DNCE 651); performance theory (THEA 615); seminar in performance studies (THEA/DNCE 617); theory (THEA 653 or THEA 611); practicum in teaching (THEA 692); and a 3-credit course in a creative area. For all 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 foundation courses (3 credits in research, 6-9 practicum in teaching); 39 credit hours of concentration courses, including enrollment in THEA 690 Graduate Theatre 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 single or a series of culminating projects, depending on concentration, for which the student will enroll in a total of 6 credit hours of THEA 695 Creative Project; and 6-9 credit hours of electives (total number depending on concentration). 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 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); 3 credits of THEA 692; 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 theatre, or playwriting; 6 credits of THEA 690 Graduate Theatre Workshop (a minimum of 4 credits in acting and 1 credit in technical theatre; 1 credit may be in design, directing, playwriting, etc.), and 6 credits of THEA 695 Creative Project.

**Design**

For the concentration in design, students must complete 3 credits in research; 6 credits in history and/or theory, Asian and/or Western (minimum one 3 credit seminar); 3 credits of THEA 692; minimum 6 credits in intermediate design (400 level or above) and minimum 3 credits in advanced design (600 level), excluding other requirements below; 6 credits of THEA 657 Seminar in Design; 6 credits in creative/performance courses (400 level or above) (may include acting, directing, dance, playwriting, puppetry, or others as approved); 9 credits of THEA 690 Graduate Theatre Workshop (as approved by graduate committee chair); minimum 3 credits in Asian theatre (excluding THEA 690); 6 credits of THEA 695 Creative Project (including qualifying and final projects); and minimum 3 credits THEA 699 Directed Research.

**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 of THEA 692; 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 theatre (in two areas—theatre design, costume, lighting, or set); 6 credits in creative/performance courses (at least two areas—acting, choreography, dance, movement, music, playwriting, puppetry, or voice); 6 credits of THEA 690 Graduate Theatre 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); 3 credits of THEA 692; 9 credits in playwriting (excluding THEA 318); 3 credits in script analysis; 3 credits in contemporary dramatic literature or theatre history; 6 credits in design/technical theatre (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 theatre; 3 credits of THEA 690 Graduate Theatre 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 theatre history/theory; 3 credits of THEA 692; 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 theatre 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 Theatre 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.

**Theatre for Young Audiences (TYA)**

For the concentration in TYA, students must complete 3 credits in research; 9 credits in Asian and/or Western history and/or theory; 3 credits of THEA 692; 3 credits in creative drama/dance; 3 credits in theatre for young audiences; 3 credits in a teaching seminar; and 3 credits in a TYA seminar. Areas of specialty in the TYA concentration include acting, curriculum, directing, playwriting, and puppetry. Candidates must take 9 credits in any one of these areas along with minimum of 4 credits of Graduate Theatre Workshop (THEA 690) and 6 credits of Creative Project (THEA 695). An additional 12 credit hours of electives are available, although a minimum of 3 credits in Asian theatre (excluding THEA 690) are required.

**Hawaiian Theatre**

For the concentration in Hawaiian theatre, students must complete 3 credits in research; 3 credits in Hawaiian theatre history/theory; 3 credits in Pacific theatre history/theory; 3 additional credits in Western/Asian history/theory; 3 credits
THEA 692; 3 credits in Hawaiian acting; 3 credits in Hawaiian puppetry/hula ki‘i; 3 credits in Hawaiian dance/hula; 3 credits in Hawaiian music/papa mele; 3 credits in design/technical theatre or playwriting; 3 credits in directing; 3 credits in youth theatre/puppetry; 3 credits of additional creative/performance courses in above areas or courses at the graduate level; 6 credits of THEA 690 Graduate Theatre Workshop; 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, MA Plan B, and the MFA. 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. The MA Plan B requires a capstone project. MFA Plan A and MA Plan B require comprehensive examinations and an oral defense of the examination. MA Plan A and MFA Plan A require an oral defense of the thesis. Intended dance candidates for all degrees must present an acceptable example of creative work (the qualifying dance) the student may be admitted to candidacy.

**Dance Culture and Performance**

The MA Plan A (dance culture and performance emphasis) requires a minimum of 36 credit hours, including DNCE 651, 652, 653, 654, 655, or 661 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. Language courses may be required if necessary for the student’s thesis research.

**Dance Education**

MA Plan B (dance education emphasis) requires a minimum of 36 credit hours, including DNCE 460 or 490, 651, 652, 691, 693, and 699; 9 credit hours from DNCE 321, 331, 421, 431; 3 credit hours in 300 to 400 level Asian or Pacific dance courses; and 6 credit hours of electives (3 credits at the 600 level).

**Performance and Choreography**

The MFA 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; DNCE 672 (4 credit hours); DNCE 679 (2 credit hours); DNCE 691; DNCE 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 and attend a technique course each semester. It is expected that MFA candidates present choreography every semester.

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 theatre history, theory, or criticism, not creative or artistic work, is offered in four areas: (a) Western theatre, (b) Asian theatre, (c) comparative Asian-Western theatre, and (d) performance studies. 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 at least one non-English language, 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 UH Mānoa. At the end of the second semester in residence, the graduate faculty will provide the candidate with an assessment of his or her progress to date.

Required courses in the Western area are THEA 600, THEA 692, plus three other 600 to 700 level courses from a departmental list of approved courses; required courses in the Asian area are THEA 692, 464, 465, and 466, as well as THEA 660 if the candidate’s dissertation requires field research; required courses in performance studies area are DNCE 651 or THEA 600; THEA 615; DNCE/THEA 671; DNCE 653 or THEA 611; THEA 692; and 3 credits in a creative area. The curriculum of the comparative Asian-Western theatre area is determined by the student’s doctoral committee and must include THEA 692. A high level of accomplishment in the foreign language or languages appropriate to the proposed area of research (as determined by the advisor) is required, and language competency 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 and by serving as teaching assistants.

Written comprehensive examinations and two and a half 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. The comprehensive includes questions on both Asian and Western drama and theatre and/or performance studies; further guidelines are available from the graduate advisor. The questions on the written portion are posed by the theatre 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. There is a seven-year time limit for PhD students to complete all requirements. For unusual circumstances, one extension may be granted.

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 and a sample of their research (such as a seminar paper or a master’s thesis). The application deadline for admission in the fall semester is January 15 for U.S. and foreign applicants. Spring semester application deadline is August 15 for U.S. and foreign applicants. Requirements include a broad background in the humanities, a master’s degree in theatre or its equivalent, and competence in dramatic production.

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Faculty
*D. Foley, PhD (Chair)—strategies of citizen participation, collaboration, nonprofit planning and management, community building, and community-based planning
*M. Coffman, PhD—environmental economics and planning, energy and climate change policy, resource management, general equilibrium modeling
*A. Das, PhD—community participation and empowerment, slum upgrading, decentralization and local governance, role of civil society in development
*P. Das, PhD—urban development, basic environmental services and governance in South Asia, design and planning of the built environment
*P. Flachsbart, PhD—planning methods and models, environmental planning, energy, land use planning, and urban transportation planning
*K. E. Kim, PhD—planning theory, planning methods, infrastructure planning, and alternative tourism planning
*R. Kwok, PhD—urbanization in China, East Asian development, spatial planning and urban design, development and regional economics
*L. Minerbi, Dott Arch, MUP—comparative urbanism, settlement planning, environmental planning, urban design, community development, planning with indigenous people, and Pacific Island planning
*S. Shen, PhD—geographical information systems; climate change adaptation and transportation planning
*D. Spirandelli, PhD—patterns of urban development, interface between terrestrial and marine ecosystems; community planning for integrated water management and coastal ecosystem services
*K. Umemoto, 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
B. Halley, PhD—congressional war powers, humanitarian intervention, terrorism
A. Kaufman, PhD—fundamentals of landscape design and planting design

* Graduate Faculty

M. McDonald, PhD—agricultural change, social theory, political geography, Japan
L. H. Nitz, PhD—public policy and political economics
D. Nixon, PhD—bureaucratic politics, statistical methodology, public policy
C. Papacostas, PhD—transportation engineering and design
K. Suryanata, PhD—political ecology, agriculture, rural development in Asia, environment and development, community-based resource management
B. Szuster, PhD—coastal land conservation, impact of human development activities
W. Wood, PhD—international public health planning
S. Yamada, PhD—disaster management and humanitarian assistance

Affiliate Graduate Faculty
J. Fox, PhD—land use, forest resources and management, geographical information systems and spatial information technology, South and Southeast Asia
G. Marten, PhD—population dynamics, ecosystem ecology, animal behavior, statistics, mathematical modeling, population genetics, human ecology, environmental management
S. Saksena, PhD—human exposure assessment to air pollution, health impacts of energy use, air quality policy, public perceptions of environmental risks

Degree and Certificates Offered: MURP, PhD, Certificate in Planning Studies, Professional Certificate in Urban and Regional Planning and the Certificate in Planning Studies, Graduate Certificate in Disaster Management and Humanitarian Assistance

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 Mānoa Master of Urban and Regional Planning (MURP) graduates, of whom there are about 466, 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; Department of Health; Land Use Commission; Legislative auditor; Department of Hawaiian Home Lands; House Majority Research Office; Hawai‘i Community Development Authority; Housing Finance and Development Corporation; Department of Public Safety; Department of Land and Natural Resources; U.S. Department of Housing and Urban Development; Honolulu City and County Departments of Planning and Permitting, Land Utilization, Housing and Community Development, and Parks and Recreation, Office of the Managing Director, Office of Council Services; Planning Departments of the counties of Hawai‘i, Kaua‘i, and Maui; 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, 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 UH Mānoa.

**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, 601, and 603, 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 Education 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.

**Graduate Certificate in Disaster Management and Humanitarian Assistance (DMHA)**

UH Mānoa provides a logical location for an Asia Pacific disaster risk reduction research and institutional capacity-building program. The program responds to the compelling need to improve hazard and disaster mitigation and response in the face of increasingly frequent and severe disaster events. The Asia Pacific region suffers the greatest impact of disaster events worldwide, and Hawai‘i shares many of these same vulnerabilities. By interacting with hazard and disaster researchers at UH Mānoa and Hawai‘i’s existing dynamic community of disaster management organizations, students learn how to help build disaster resilient communities.
The Graduate Certificate Program in DMHA is housed in the Department of Urban and Regional Planning and is open to all graduate students. Our interdisciplinary students come from the physical and natural sciences, engineering, geography, public administration, social work, political science, and other disciplines. Some are pursuing professional degrees in law, medicine, architecture, or public health. Our students tend to be highly motivated to apply their respective disciplinary backgrounds to the problems of reducing the impacts of disaster on people and communities.

Graduate students are required to take at least three of the DMHA core courses for a base of nine units. Additional six units are selected with advisement from courses related to hazards and disaster management and response. A one unit capstone completes the requirement. Many departments offer courses which can complement the core course sequence in a coherent, rigorous, and pedagogically valid way. Contact the program director or program coordinator for more information.

Women’s Studies
College of Social Sciences
722 Saunders Hall
2424 Maile Way
Honolulu, HI 96822
Tel: (808) 956-7464
Fax: (808) 956-9616
Web: www.womenstudies.hawaii.edu

**Faculty**
*M. Chesney-Lind, PhD (Chair)—criminology, sociology of gender*
*M. Das Gupta, PhD—feminist theory and methods, immigration, race relations in the U.S.*
*K. Ferguson, PhD—feminist theory and methods, political theory*
*S. Hippensteele, PhD, JD—psychology, law, civil rights, dispute resolution*
*A. Kimura, PhD—feminist perspectives on science and technology, food, health and environmental issues*
*M. Koikari, PhD—sociology, Asia-Pacific studies*
*A. Saraswati, PhD—feminist media and new media studies, race, globalization, and cultural studies of emotion*

**Affiliate Faculty**
H. Aikau—political science
B. Andaya—Asian Studies
B. Aquino—political science
C. Bacchilega—English
C. Browne—social work
J. Brunson—anthropology
V. Dalmiya—philosophy
L. Despain—English
P. Flowers—political science
C. Franklin—English
M. Ghosh—librarian
J. Goldberg-Hiller—political science
N. Goodyear-Ka’opua—political science
M. Hara—English
K. Heyer—political science
R. Hsu—English
K. Irwin—sociology
K. Kane—Center for Teaching Excellence
V. Kanuha—sociology

* Graduate Faculty

**B. Keever—communications**
V. Lanzona—history
N. Lewis—East-West Center and geography
L. Lyons—English
N. Mokuau—social work
K. Phillips—English
S. Rai—Study Abroad Program
K. Reynolds—Japanese
M. Romaniello—history
L. Santiago—Indo-Pacific languages and literatures
M. Sharma—Asian studies
N. Silva—political science
C. Sinavaiana—English
M. Stark—anthropology
P. Steinhoff—sociology
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
M. Yue—Chinese literature

**Degree and Certificates Offered:** Undergraduate Certificate in Women’s Studies, BA in women’s studies, Graduate Certificate in Advanced Women’s Studies

**The Academic Program**
The Department of Women’s Studies offers an interdisciplinary transnational feminist approach to the study of women and gender issues. The purpose of the department 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 with special emphasis on Asia-Pacific and Hawai’i. With a faculty trained in a variety of fields, the program investigates gender as it intersects with race, class, sexuality, 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, political insight, and 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 two tracks for majors: either a student-designed special concentration within the field of women’s studies, or a general focus on the broad field of women’s studies. 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 both tracks is to promote
a coherent program of study in contemporary interdisciplinary scholarship in feminist and gender studies. A key purpose of the major is to provide an integrated academic experience for students interested in transnational feminist scholarship and gender issues, while offering flexibility and freedom in planning the degree.

**Requirements**

Although students are strongly encouraged to seek departmental academic advising promptly when considering a major in women’s studies, a summary of undergraduate program information is also available at www.womenstudies.hawaii.edu. General and special women's studies degree requirements are as follows:

**General Women's Studies Degree Focus**

Students must complete thirty (30) credit hours of total course work, with a grade of C (not C-) or better, including:

1. Feminist Theory (WS 439/POLS 339);
2. Feminist Methods and Research (WS 440); 
3. At least 3 courses from among the WS courses focusing on gender, race and ethnicity in transnational perspective;
4. A minimum of 9 total credit hours from 300 level WS courses (any 300 level course taken in #3 counts toward this total);
5. A minimum of 9 credit hours from 400 level WS courses (WS 439, 440, and any 400 level courses from #3 count toward this total);
6. Additional course work as necessary to complete 30 total hours of course work.

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

**Special Women's Studies Degree Focus**

Students must complete 30 credit hours of total course work, including:

1. Feminist Theory (WS 439/POLS 339);
2. Feminist Methods and Research (WS 440); 
3. At least 3 courses from among the WS courses focusing on gender, race and ethnicity in transnational perspective;
4. A minimum of 6 total credit hours from 300 level WS courses (any 300 level course taken in #3 counts toward this total);
5. Up to 15 outside credits at 300 and 400 level, subject to approval by women's studies' advisor; 
6. Additional course work as necessary to complete 30 total hours of course work.

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

**Advising**

Students who plan to pursue a women’s studies major should meet with the women’s studies undergraduate program advisor (currently Dr. Kathy Ferguson) 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 gender and 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.

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 transnational 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 across cultures and through time, and analyze theories and assumptions about women that particularly relate to their majors.

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 analyses. 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 biological, sociopolitical, 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 issues including coalition practices, nationalism and imperialism, and social policy.
Sex/gender and sociopolitical categories of power and privilege. Students will examine the interaction of sex/gender with race/ethnicity, class, sexuality, and other 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.

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.

The department website lists research interests and publications of the members of the women’s studies graduate faculty, and describes admissions and program requirements (see www.womenstudies.hawaii.edu). The following sections summarize the admissions and program requirements, but the program website 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 WS 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. Ayu Saraswati). 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 216
2538 McCarthy Mall
Honolulu, HI 96822
Tel: (808) 956-9017 / (808) 956-7315
Fax: (808) 956-9812
Email: biology@hawaii.edu
Web: manoa.hawaii.edu/biology

Faculty

*K. Cole, PhD (Chair)—ichthyology, behavioral ecology, reproductive biology, morphology and morphogenesis, microgravity biology
*J. H. Bailey-Brock, PhD—invertebrate zoology, reef ecology, Polychaetes
*K. M. Bennett, PhD—neuroscience and nephrology utilizing magnetic resonance imaging
*K. Cole, PhD—ichthyology, behavioral ecology, reproductive biology, morphology and morphogenesis, microgravity biology
*H. G. de Couet, PhD—molecular cell biology, development biology, evolution
*L. A. Freed, PhD—evolutionary and behavioral ecology, ornithology, conservation biology
*M. A. Hixon, PhD—marine ecology and conservation biology
*C. L. Hunter, PhD—conservation biology, coral reef ecology, biology and ecology of marine invertebrates
*S. D. Kraft-Terry, PhD—academic advising and assessment
*P. B. J. Marko, PhD—biogeography, evolution and conservation
*A. L. Moran, PhD—marine ecology and evolution
*M. Porter, PhD—evolution and ecology of vision, crustacean phylotypic
*R. A. Reed, PhD—population genetics
*S. Robinow, PhD—neurogenetics
*A. D. Taylor, PhD—population, theoretical, and insect ecology
*R. Thomson, PhD—evolutionary biology and phylagenetics
*T. Tricas, PhD—marine animal behavior
*L. Watling, PhD—impacts of humans on benthic environments; crustacean biology
*C. Z. Womersley, PhD—environmental physiology, biochemical adaptation, parasitology
*A. N. Wright, PhD—population ecology, community ecology, conservation biology
*M. Yoshizawa, PhD—evolutionary developmental biology, neuroscience, quantitative genomics

Cooperating Graduate Faculty

R. Alegado, PhD—bacterial pathogenesis, microbial evolution and ecology
W. Au, PhD—bioacoustics and ecological acoustics of the marine environment
B. Bowen, PhD—evolution and conservation genetics of marine organisms
R. Cowie, PhD—evolutionary biology, biogeography, ecological genetics, snails, termites
M. Donahue, PhD—spatial population dynamics; marine community ecology; integrative theory and data using likelihood methods; habitat selection; scaling of ecological processes
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

* Graduate Faculty
D. K. Hartline, PhD—quantitative neurophysiology and simulation of simple networks
B. S. Holland, PhD—conservation biology of Native Hawaiian tree snails
K. N. Holland, PhD—physiology, behavior, ecology of aquatic organisms
P. J. Jokiel, PhD—coral reef biology, biogeography and ecology
K. Y. Kaneshiro, PhD—systematics, evolution, insect behavior
S. A. Karl, PhD—molecular ecology, systematics, and phylogeography of marine animals
P. Lenz, PhD—neuroecology of zooplankton sensory systems
P. E. Nachtigall, PhD—behavior and sensory processes of marine mammals
A. Pack, PhD—human and animal cognition
R. Richmond, PhD—invertebrate zoology, conservation biology
F. I. Thomas, PhD—marine ecology, biology of larvae
R. Toonen, PhD—molecular genetics of marine organisms

Affiliate Graduate Faculty
G. Aeby, PhD—coral reef ecology
R. Allison, PhD—systematics, biogeography and ecology
C. Birkeland, PhD—conservation biology regarding coral
A. Friedlander, PhD—marine ecology, marine conservation biology
S. Miller, PhD—ecosystem and population conservation biology

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

The Academic Program
The Department of Biology at UH Mānoa offers 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.

Undergraduate Study
There is no admittance to the BA and BS in Zoology degrees effective Spring 2013.

BA Degree
Requirements
- BIOL 171/171L and 172/172L
- BIOL 265/265L
- BIOL 275/275L
- CHEM 161/161L and 162/162L
- CHEM 272/272L and 273
- BIOC 441 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 407 or 408/408L)
  - Ecology and Behavior (ZOOL 306/306L, 439/439L, or 470/470L)
  - Genetics (BIOL 375/375L)
  - Morphology and Taxonomy (ZOOL 320/320L, 340/340L, 465/465L, or 475/475L; PEPS 363)
- Non-laboratory courses applicable toward (20 credits): ZOOL 399, 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.

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

BS Degree
Requirements
Students must complete 78 to 82 credit hours, including:
- BIOL 171/171L and 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 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 or 252A
- ZOOL 320/320L, or 475/475L, or PEPS 363
- ZOOL 430/430L
- ZOOL 490
- ZOOL 492 (1 credit hour)
- ZOOL 499 (Minimum of 4 credit hours)
- Nine 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).

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

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

III. Physiology
- BIOL 275/275L, 407, ZOOL 430/430L, 432

IV. Ecology and Behavior

V. Morphology and Taxonomy

Other Courses Applicable Toward Minor in Zoology
- BIOL 408
- Any ZOOL courses numbered 300 and above

For information on a Bachelor Degree Program Sheet, go to www.manoa.hawaii.edu/ovcaa/programsheets/.

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’s marine invertebrates, terrestrial arthropods, fishes, and birds.

Graduate students in zoology may join two interdisciplinary graduate specializations; the Cellular and Molecular Biology (CMB); and the Ecology, Evolution, and Conservation Biology (EECB) Program. The department has active affiliations with Hawai‘i Institute of Marine Biology, Kewalo Marine Laboratory, 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. 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 January 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

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.

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 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 course work should be in 600-700 level courses, not counting ZOOL 699. The Department of Biology requires that 1 of the 24 course work credits include ZOOL 691C. Of the 24 required credit hours, student may include a maximum of 2 credit hours from ZOOL 699. 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 5 semesters of entering the program; this examination will emphasize the student’s research area but may cover any facet of zoology. Upon passing the comprehensive exam, the student is advanced to candidacy for the PhD program.

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 biology department or at manoa.hawaii.edu/biology. Other inquiries may be sent to biology@hawaii.edu.