Microbiology (A Graduate Group)

Glenn Young Ph.D., Chairperson of the Group

Course Group. 3143 Tupper Hall (Medical Microbiology and Immunology Dept.)
530-752-0262

Faculty

David Asmuth, M.D., Ph.D., Assistant Professor (UCDHS: Infectious Diseases, Div. of)
Shota Atsumi, Ph.D., Assistant Professor (Chemistry)
Enoch P. Baldwin, Ph.D., Associate Professor (Molecular and Cellular Biology)
Nicole Baumgart, D.V.M., Ph.D., Professor (Center for Comparative Medicine)
Andrew Baumber, Ph.D., Professor (Medical Microbiology and Immunology)
Charles L. Bevin, Ph.D., Professor (Medical Microbiology and Immunology)
Linda F. Bisson, Ph.D., Professor (Viticulture and Enology)
Barbara A. Byrne, D.V.M., Ph.D., Associate Professor (Pathology, Microbiology, and Immunology)
Holly F. Cespedes, Ph.D., Professor (Medical Genetics)
R. Holland Cheng, Ph.D., Professor (Medical Microbiology and Immunology)
V. S. Cho, Ph.D., Associate Professor (Pathology, Microbiology, and Immunology)
SATYA DANDEKAR, Ph.D., Professor (Biological & Agricultural Engineering)
Scott Dawson, Ph.D., Professor (Microbiology)
Katherine DeRiemer, Ph.D., M.P.H., Associate Professor (Medical Microbiology and Immunology)
Jonathan Eisen, Ph.D., Professor (Evolution & Ecological Microbiology & Immunology)
Julia Fan, Ph.D., Assistant Professor (Biological & Agricultural Engineering)
Heather Fritz, D.V.M., Ph.D., Lecturer, Assistant Research Scientist (Pathology, Microbiology & Immunology)
Angela Gelli, Ph.D., Associate Professor (Pharmacology and Toxicology)
Volkan Heinrich, Ph.D., Associate Professor (Biomedical Engineering)
Wolf-Dietrich Heyer, Ph.D., Professor (Microbiology)
Neil Hunter, Ph.D., Professor (Microbiology)
Michele M. Igo, Ph.D., Professor (Microbiology)
Stephen C. Kowalczykowski, Ph.D., Professor (Microbiology)
Rance B. LeFebvre, Ph.D., Professor (Pathology, Microbiology, and Immunology)
Johan Leveau, Ph.D., Assistant Professor (Plant Pathology)
Su-Ju Lin, Ph.D., Associate Professor (Microbiology)
Bo Liu, Ph.D., Professor (Plant Biology)
Frank Luge, Ph.D., Professor (Civil and Environmental Engineering)
Paul Luciv, Ph.D., Professor (Medical Pathology)
Shirley Luckhart, Ph.D., Professor (Medical Microbiology and Immunology)
Maria Marco, Ph.D., Assistant Professor (Food Science & Technology)
John C. Meeks, Ph.D., Professor Emeritus (Microbiology)
Christopher J. Miller, Ph.D., Professor (Pathology, Microbiology, and Immunology)
David A. Mills, Ph.D., Professor (Viticulture and Enology)
Lorena Navarro, Ph.D., Assistant Professor (Microbiology)
Douglas C. Nelson, Ph.D., Professor (Microbiology)
Rebecca E. Parales, Ph.D., Professor (Microbiology)
Niels C. Pedersen, Ph.D., Professor (Plant Pathology, Microbiology)
Satya Dandekar, Ph.D., Professor (Medical Microbiology and Immunology)
Pamela Ronald, Ph.D., Professor (Plant Pathology)
John R. Roth, Ph.D., Professor (Microbiology)
Michael A. Savageau, Ph.D., Professor (Biomedical Engineering)
Barbara L. Shacklett, Ph.D., Associate Professor (Medical Microbiology and Immunology)
Mitchell H. Singer, Ph.D., Professor (Microbiology)
Jay V. Salnick, M.D., Ph.D., Professor (Internal Medicine)
Jeffrey L. Stott, Ph.D., Professor (Pathology, Microbiology, and Immunology)
Dawn Sumner, Ph.D., Professor (Earth and Planetary Sciences)
Michael Syvanen, Ph.D., Professor (Computer Science)
George Thompson, M.D., Assistant Professor (Medical Microbiology & Immunology)
Jose V. Torres, Ph.D., Professor (Medical Microbiology and Immunology)
Renee Tsolis, Ph.D., Associate Professor (Medical Microbiology and Immunology)
Barth Weimer, Ph.D., Professor (Population Health & Reproduction)
Stefan Wurzit, Ph.D., Professor (Civil and Environmental Engineering)
Linong Xu, Ph.D., Assistant Professor (Microbiology)
Tilahun D. Yilma, Ph.D., Professor (Pathology, Microbiology, and Immunology)
Glenn M. Young, Ph.D., Associate Professor (Food Science and Technology)
Huijia Zhau, Ph.D., Associate Professor (Animal Science)

Affiliated Faculty

Kathryn DeRiemer, Ph.D., MPH, Adjunct Associate Professor (Medical Microbiology & Immunology)
Patrick S. C. Leung, Ph.D., Adjunct Professor (Internal Medicine)
Wotrunia Miller, Ph.D., Assistant Adjunct Professor (WU Pathology, Microbiology, and Immunology)
Ellen E. Sparger, Ph.D., Adjunct Associate Professor (WU Medicine and Epidemiology)

Graduate Study. The Graduate Group in Microbiology offers study and research leading to the M.S. and Ph.D. degrees. Strong preference is given to doctoral applicants. The group offers study in modern molecular approaches to microbiological problems. Areas of research span fundamental, applied, and pathogenic microbiology, including bacterial and viral pathogenesis, microbial microorganisms, microbial genetics and genetics, microbial physiology, and development, microbial ecology and environmental microbiology, cancer biology, and bioengineering and bioremediation. For information on the graduate study and undergraduate...
preparation for the program contact a graduate adviser or the Chairperson of the Group.

Graduate Advisers. S. Dawson (Microbiology), L.F. Busch (Viticulture and Enology), R.E. Parales (Microbiology), E.E. Sparger (Vet Med: Medicine), R. Tsolis (Med:Microbiology & Immunology), B. Weiner (VM:Pop Health & Repro)

Courses in Microbiology (MBI)

Graduate

200A. Microbial Biology (3)
Lecture—3 hours. Prerequisite: course Microbiology 102 or equivalent; prior coursework in Microbiology. Designed to provide an overview of various aspects of microbial physiology and microbial processes. Topics will include microbial genetics and genomics, microbial metabolism, signaling, and adaptations. — I, (I).

201L. Advanced Microbiology Laboratory Rotations (5)
Laboratory—15 hours. Two five-week assignments in microbiology research laboratories. Individual research problems with emphasis on methodologi-cal/procedural experience and experimental design. May be repeated two times for credit. — I, II, III, (I, II, III.)

210. Microbial Interactions (2)
Lecture—2 hours. Prerequisite: course 200A or consent of instructor. Analysis of the molecular level of the interactions of microbes with the environment, microbes with other microbes, and microbes in symbiotic and/or pathogenic associations with eukaryotic hosts. Topics discussed will vary. May be repeated two times for credit. — I, II, III, (I, II, III.)

290C. Advanced Research Conference (1)
Discussion/conference—1 hour. Prerequisite: graduate standing and/or consent of instructor. Presenta-tion and critical discussion of staff research activities. Designed for advanced graduate students. May be repeated for credit. (S/U grading only.)—I, II, III, (I, II, III.)

299. Research (1-12)
Research under the guidance of dissertation commit-tee. (S/U grading only.)

Middle East/South Asia Studies

[College of Letters and Science]
Baki Tazcan, Ph. D., Program Director
Program Office. 1272 Social Science & Humanities 530-754-4926;
http://mesa.ucdavis.edu

 Committee in Charge
Ali Anooshahr, Ph.D. (History)
Omnia El Shafei, Ph.D. (History)
Suad Joseph, Ph.D. (Anthropology, Women and Gender Studies)
Nola Radwan, Ph.D. (Comparative Literature)
Susan Miller, Ph.D. (History)
Sunaina Maira, Ph.D. (Asian American Studies)
Sudipta Sen, Ph.D. (History)
Smiti Srinivas, Ph.D. (Anthropology)

 The Major Program
A study of the Middle East and South Asia as a whole, students will explore a unique set of issues of both historical and contemporary impor-tance. In order to guide students in comparative analysis, faculty help majors deepen their inquiries through coursework on antique, medieval, and early modern empires and political systems. Given the dynamism of modern cultural contexts, majors are invited to concentrate their studies on a wide range of variables including the evolution of states along with new understandings of citizenship, the rise and development of nationalist movements, political con-flicts informed by religious majorities, the nucleariza-tion of India and Pakistan, the growth of information societies and computer industries, the production of oil and its social and cultural legacies, labor migra-tions, urbanization, the emergence of sizeable mid-dle classes, transnational literary movements using sophisticated media technologies, the expansion and intrusion of global security regimes into every-day life, and peace initiatives that shape struggles for justice across the world. Our program’s focus on both the Middle East and South Asia is a pioneering achievement in the United States rivaled by only four other colleges or universities.

By the end of their studies, majors will have acquired an in-depth understanding of the common historical experiences shared between regions and the legacies of culture, social exchange, power and empowerment across diverse settings. Students are also required to complete at least two years of training in a language appropri-ate to their area of expertise.

The major in Middle East/South Asia Studies at UC Davis offers a unique opportunity to study exchanges, complementarities, and correspondences in such fields as history, political economy, culture, literature and film, religion, family structures, gender relations, media, anthropology, law, interna-tional relations, development, diasporas, and urban-ism. Students who complete our major will be well-suited to embark on careers in non-governmental organizations, journalism and media industries, educa-tion and research, governmental service and diplomacy, and law.

Programs, Internships, and Career Alterna-tives. Many internship opportunities are available for the Middle East/South Asia Studies major and minor, consult with your advisor.

Middle East/South Asia Studies Abroad Program. University of California Education Abroad Program. More information can be found at http://eap.ucop.edu/ and http://summer-abroad.ucdavis.edu/.

A.B. Major Program Requirements:

Preparatory Subject Matter ................. 8-38
History, 6, 8, 18, 19A, 19B, 19C, 19D, 20A, 22A, 22B, 23, Arabic 1, 2, 3, 21, 22, 23, Hebrew 1, 2, 3, 21, 22, 23, Hindi/ Urdu 1, 2, 3, 21, 22, 23, 30

Depth Subject Matter ...................... 40-42
Middle East/South Asia Studies 100 ........ 4
Middle East/South Asia Studies 180 ........ 4
Two courses from: Anthropology 142; Comparative Literature 160; History 113, 190A, 190B, 190C, 190A, 193A, 193B; Political Science 135, 136; Religious Studies 160, 162; Women’s Studies 178A, 184 ........ 8
Two courses from: Anthropology 145; History 102Q, 196A, 196B; Religious Studies 170; Women’s Studies 178B ........ 8
Additional Electives from Core Course list (below) ........ 16-18

Total Units for Major..................... 48-80
Care Core Course List:
Anthropology 142, 145; Arabic 1, 2, 3, 21, 22, 23; Art History 1E, 155; Asian American Studies 150F, 189E; Classics 1; Comparative Literature 528; History 180A, 180B, 180C, 180D; Middle East/South Asia Studies 190A, 192, 198, 199, 180, 192, 198, 199, Music 129B, 148, Political Science 135, 136; Religious Studies 21, 23, 60, 65C, 68, 160, 161, 162, 170; Women’s Studies 180, 184 ........ 8
Note: With prior consultation with an advisor, students can petition in the Program Committee in advance to accept other elective courses toward the major program, including language courses.
Note: While some courses are identified as fulfilling more than one requirement, a given course can only fulfill one such requirement.
Restriction: No more than six units of MSA 92, 98, 99, 192, 198, 199 may be offered in satisfaction of the major requirements.

Major Advisor. Consult the Middle East/South Asia Studies Program in 1272 Social Science & Humanities 330-754-4926 or the Middle East/South Asia Studies website at http://mesa.ucdavis.edu.

Minor Program Requirements:

UNITS
Middle East/South Asia Studies .......... 20-24
Middle East/South Asia Studies 100 ........ 4
Choose one course from: Anthropology 142; Asian American Studies 189E; Comparative Literature 166; History 113, 190A, 190B, 190C, 193A, 193B; Music 129B; Religious Studies 160, 161, 162; Women’s Studies 178A, 184 ........ 4
Choose one course from: Anthropology 145; Asian American Studies 150F, 189E; History 102Q, 196A, 196B; Music 129B, 148; Religious Studies 168; Women’s Studies 178B ........ 4
Additional Electives from Core Course list for minor (above) ........ 8-12
Note: With prior consultation with an advisor, students can petition the Program Committee in advance to accept other elective courses toward the minor program. Under no circumstances may more than one lower division course be offered in satisfaction of requirements for the minor.
Note: With prior consultation with an advisor, students can petition the Program Committee to accept more than four units of Middle East/South Asia Studies 192, 198, and/or 199 towards the minor program.
Note: While some courses are identified as fulfilling more than one requirement, a given course can only fulfill one such requirement.

Minor Adviser. Consult the Middle East/South Asia Studies Program in 1272 Social Science & Humanities 330-754-4926 or the Middle East/South Asia Studies website at http://mesa.ucdavis.edu.

Courses in Middle East/South Asia Studies (MSA)

Lower Division
92. Internship in Middle East/South Asia Studies (3-15)
Internship. Prerequisite: consent of instructor. Work experience on and off campus in all subject areas offered as part of the ME/SA Studies program. Internship supervised by a member of the ME/SA faculty. May be repeated for credit up to 15 units. (P/NP grading only)—I, II, III, IV, (I, II, III, IV)

98. Directed Group Study (1-5)
Prerequisite: consent of instructor. Work experience on and off campus in all subject areas offered as part of the ME/SA Studies program. (P/NP grading only)

99. Special Study for Undergraduates (1-5)
Prerequisite: consent of instructor (P/NP grading only)

Upper Division
100. Middle East and South Asia: Comparative Perspectives (4)
Lecture—3 hours, extensive writing. Ethnographic and historical points of integration and divergence in various aspects of the Middle East and South Asia in precolonial, colonial, and postcolonial societies.

Quarter Offered: T-Fall, II-Winter, III-Spring, IV-Summer; 2015-2016 offering in parentheses
Pre-Fall 2011 General Education (GE): ArtHum—Arts and Humanities; SciEng—Science and Engineering; SocSci—Social Sciences; DivDom-Domestic Diversity; Writ-Writing Experience
Fall 2011 and on Revised General Education (GE): AH—Arts and Humanities; SE—Science and Engineering; SS—Social Sciences; ACGH—American Cultures; DD—Domestic Diversity; OL—Oral Skills; Q—Quantitative; SL—Scientific; VL—Visual; WC—World Cultures; Writ—Writing Experience