

UC Merced offers individually tailored Graduate Program with emphases in six areas. These include: Quantitative and Systems Biology; Atomic and Molecular Science and Engineering; Environmental Systems; Social and Cognitive Sciences; World Cultures; and Computer and Information Science. Each of these is highly interdisciplinary in approach and designed to facilitate interactions between faculty and students from a broad scope of traditional academic disciplines. The Graduate Group structure for overseeing each of these emphases is composed of faculty from multiple Schools. This is intended to offer graduate students the flexibility to address major societal problems using the tools of a wide variety of disciplines.

UC Merced will offer the Master of Science (M.S.), Master of Arts (M.A.) and Doctor of Philosophy (Ph.D.) degrees. New students will be assigned a faculty advisor and committee who will assist them in developing a curriculum to meet the requirements. Although considerable flexibility to meet individual needs exists, requirements usually include a core of required material that a student must master.

The M.S. and M.A. degrees are either Plan I or Plan II programs. Plan I requires a minimum of 20 semester units of upper division and graduate courses plus completion of a thesis. Plan II requires at least 24 semester units of upper division and graduate courses, followed by a comprehensive examination administered by the faculty.

Students pursuing M.S. or M.A. Plan I degrees will begin their thesis research at the end of the first year. Although they may continue to take additional graduate seminars or independent study, the majority of the second year will involve thesis research and writing. The thesis committee must approve the scope of the thesis and provide guidance during the process of developing the thesis. Approval of the thesis must be unanimous for the award of the Masters degree.

The Ph.D. degree is designed to prepare students for creative activity and original research. A doctoral degree is awarded in recognition of a student's knowledge of a broad field of learning and for distinguished accomplishment in that field through an original contribution of significant knowledge. The dissertation must demonstrate a high level of critical ability, imagination and synthesis. In contrast to the Masters' degrees, there are no University unit requirements for the doctorate. However, students must complete at least four semesters of academic residence at UC Merced and successfully complete the course requirements before they are allowed to take the qualifying examination.

All students pursuing the Ph.D. degree must pass a Qualifying Examination before admission to candidacy. Students are expected to pass the Qualifying Examination before the beginning of their third year of graduate study unless they successfully petition Graduate Council to take it at a specific later date. The intent of this examination is to ascertain the breadth of a student's comprehension of fundamental facts and principles that apply in their major field of study. It will also determine the student's ability to think critically about the theoretical and practical aspects of the field.

Students will be advanced to candidacy when:

- they have successfully completed the Qualifying Exam,
- have a minimum grade point average of 3.0,
- have no more than two courses with incomplete grades, and

- have fulfilled any language requirement associated with their program.

Once a student is advanced to candidacy it is imperative that he/she begin his/her dissertation studies promptly.

Each of the nascent Graduate Groups has started a strategic planning process intended to highlight the resources that are required to build the grad group to maturity. Four of these plans are represented here.

## **Environmental Systems**

This memorandum outlines the short-term strategic plan for the Environmental Systems (ES) Graduate Group. This document is the result of discussions amongst the ES faculty and non-ES faculty associated with the on-going and prospective faculty searched discussed below. A strong majority of the ES faculty provided input and endorsed the plan. Others were unable to respond within the time frame for this memo, but have provided input in the past.

The overriding goal of the Environmental Systems graduate group is to become an internationally recognized, premier graduate research program that emphasizes interdisciplinary studies of complex environmental systems. To achieve this status, we plan to (1) hire several key faculty members with direct ties to the ES group, (2) invest ES group effort in several current cross-school hiring initiatives to maximize interdisciplinary opportunities across all schools, (3) enhance our existing graduate degree program, and (4) successfully compete for large-scope extramural funding in support of our research and training mission by (i) attracting top graduate students, postdoctoral researchers and research scientists, and (ii) increasing the involvement of adjunct researchers in activities of the group. Each of these activities is discussed further in the following sections.

**(1) Key Faculty Hires.** The ES faculty recognize that the strength and uniqueness of our program lies in its position at the interface between science and engineering disciplines. As such, an important tenet of our strategic plan for faculty growth is to maintain a complementary balance of faculty in the Schools of Engineering and Natural Sciences, or joint positions, when appropriate, in strategic areas. We have identified the following areas to fill strategic needs in the ES program as either single- or cross-school FTE's towards maintaining this interdisciplinary program-building approach:

Searches in Progress (authorized either from original school allocations or AY '05-'06 cross-unit FTE (1)):

- A. Air Pollution Science and Engineering (2) : ENG position in negotiations; ENG or NS in progress). We are seeking an open-rank professor in the area of environmental science and engineering focused on air pollution in order to allow the ES group to better address regional and national air quality problems. This position is in addition to the recently concluded search for a senior air resources engineering person as an inaugural faculty hire (candidate was identified and negotiations are on-going). Recognizing California's increasingly poor air quality and the resulting negative impact on human health and the environment this area of research is conspicuously

absent at UC Merced. Desirable areas of interest include biogenic emissions, urban and regional aerosols, and atmospheric chemistry, using approaches that may include laboratory or field measurements, or modeling. Ideally, we envision a Natural Science-Engineering joint hire.

- B. Microbial Ecology (NS position): This position was allocated from the original 20 in NS. A candidate was identified and approved by CAP. Negotiations will begin once a spousal issue is resolved. This position has a high priority as we currently have no faculty representation in either NS or ENG in the broad area of microbiology of the environment.
- C. Ecology/Ecosystem Science (NS position): This position was allocated from the original 20 in NS. A search was conducted last year that was not successful. The position was closed and re-opened this fall; applications at the assistant professor level are currently being accepted. This area has a high priority because of the need to supply missing expertise in ecology and strengthen interdisciplinary links between biological and physio-chemical environmental systems.

Requested positions: AY '06-'07:

- D. Environmental Microbiology. Environmental microbiologist is seen by the ES Group as another high priority hire if we are to achieve national competitiveness. This individual is necessary both at the graduate and undergraduate level for teaching (environmental microbiology) and expanding the capabilities of the group. This individual would be expected to provide a connection between ES with biosciences. Leading environmental research programs in the nation include a strong core subgroup of environmental microbiology and microbial ecology, typically 2-3 investigators. Engineering successfully identified a senior candidate for this position in 2004-05, but the candidate's current institution successfully retained that individual. The emphasis on this position is engineering microbiology, including the characterization of microbial communities in both natural and engineered systems. This individual would be expected to team with microbial ecology and ecosystem science faculty from Natural Sciences to give the ES group a strong emphasis in this critical dimension of environmental systems.
- E. Global Change Ecology. Two priorities motivate our critical need for a senior ecologist who uses diverse tools to quantify large-scale ecosystem processes. First, biogeochemical ecology questions and the research to address them are at the forefront of the ecology field. Both significant needs for new knowledge in stressed regional and global ecosystems and new research initiatives in this region make this a compelling opportunity for UC Merced. For example, The California NEON (CALEON) planning group has identified the San Joaquin Valley and Southern Sierra as the proposed focus for new research infrastructure. Second, we need a senior person to nurture and help build our investment in junior colleagues (J. Green, Q. Guo, ongoing search) in ecology-related positions. It is expected that the person we recruit would use satellite and other spatial data, intensive point measurements and modeling to explore issues such as regional-to-global-scale patterns of vegetation-climate

feedbacks, carbon cycle dynamics, primary production, forest management, and fire. It should be noted that the current junior ecology search is open to applicants in global change ecology, as well as in community ecology and other areas. If that hire ends up in global change ecology, some additional focus would be needed for this proposed senior position.

- F. Earth Surface Processes. We also need to continue to build the physical science strengths within ES. An individual working in the area of surficial processes would be appropriate, including areas such as landform/landscape evolution and forecasting, land surface geochronology, sediment transport, and land use-ecosystem interactions. This candidate might be well suited for a hire in Natural Sciences, Engineering, or jointly between the schools. Areas of interest to the ES group will depend on hires during the interim, but may include erosion and/or sediment transport, process geomorphology, ecohydrology, and hydrogeology.

**(2) Investment in Cross-School Faculty Hiring Initiatives.** The ES group will continue to commit substantial effort to the on-going cross-unit searches aimed at identifying scholars who can bridge strategic gaps between UCM's Schools. These searches were identified as a result of UCM's previous strategic plan, and are in the broad areas of (1) environmental economics, (2) environmental policy, (3) chemistry and nanotechnology (with potential environmental applications), (4) materials and energy, and (5) evolutionary biology. In all cases the faculty appointment may reside within a single School, or may be joint between Schools, depending on the specific hire. In each case, the ES group recognizes potential for synergistic appointments although these individuals may not be principally associated with the ES group. For example, the environmental economist's research would address the economics or political economy of resource allocation, including market approaches to resource allocation; human impacts on the environment; economic effects of environmental change; the economic impact and design of environmental regulation; or the economics and finance of regulatory policy or infrastructure related to natural resource allocation. Similarly, the environmental policy candidate may be identified with interests in resource management policy; spatial aspects of environmental change; environmental consequences of urbanism and development; environmental justice; health and the environment; or cultural, political or economic dimensions of environmental policy.

**(3) Graduate Degree Program.** A vigorous graduate degree program underlies all successful academic research programs, and the successful development of such programs will be the cornerstone of UCM's legacy as a research institution. Our short-term goal is to increase our graduate enrollment of high quality domestic and international graduate students in the ES program by (1) increasing our recruiting efforts in terms of both Web-based presence and extramural recruiting materials and presence, and by (2) solidifying and expanding (contingent on additional faculty hires) our graduate and co-listed course offerings to attract a larger number of M.S. students focused on career development (professional M.S. degree).

To attract quality graduate students consistently, we recognize that the ES group will need to offer a reasonable number of fundamental/core and advanced research-level courses on a consistent basis. We are currently exploring the best plan for such course offerings. Regardless, it is clear that such a plan will impact the number of undergraduate courses that

ES faculty are able to offer. For example, one reasonable plan might see a typical ES faculty member alternating between 2 undergraduate plus 1 graduate course in year 1, followed by 2 graduate courses and 1 undergraduate course in year 2, and so on. In order to develop nationally recognized professional M.S. programs that consistently attract top quality students, we need sufficient faculty in key areas to balance teaching load with research, and complementary faculty associated with the School of Management. We envision several areas that would be popular M.S. professional programs, e.g., Environmental systems engineering; water resources engineering and management; geospatial analysis; public lands conservation and management.

Maintaining a graduate program requires that we have a repository for student files, administrative help in creating forms, maintaining files, scheduling meetings, handling course requests, particularly as we expand program offerings at the M.S. level. In a traditional university, these were handled on the department level. Currently we have no such support. We anticipate needing someone 0.25 time in the incoming year and increasing this support as the graduate program grows. In addition, we recommend naming an Assistant Dean of Graduate Studies to assist Graduate Dean Alley in overseeing the graduate curricula before the number of programs increases.

**4) Extramural Support for Research.** The ES group has already enjoyed enormous success in acquiring extramural funding in support of its laboratory facilities and field research (more than \$6M total over the past 2.5 years!). Funding aside, however, there is a sentiment that we are currently supporting as many students as we can personally handle given the high administrative overhead taxing faculty at UCM, and by the lack of research space for personnel, laboratory experiments, and equipment. As the ES group grows to a critical mass by making the types of interdisciplinary hires noted above, we expect the administrative load to normalize. We are then in a strong position to become nationally competitive for major research grants and centers. We have already begun to lay the foundation for such efforts in the context of our interactions with large-scale hydrologic and environmental engineering observatory initiatives, consistently successful grant proposals to the NSF's Major Research Instrumentation (MRI) program, and numerous individual investigator awards. Furthermore, expansion of research in the context of larger centers, initiatives, or centralized laboratory facilities requires adequate research space for a variety of research activities (offices, wet labs, computing labs, equipment).

At this point the 9 ES faculty are building active research groups (Table 1). The current census includes 6 M.S. and 12 Ph.D. students, as well as 11 postdocs and 3.5 staff researchers (e.g., programmers, lab technicians and managers). As the number of graduate students is expected to continue to increase, a high priority need is to hire a full-time laboratory manager for the environmental analytical laboratory. This need will be met in the current year, in part, through an NSF grant. It is important to make this a continuing, sustainable position, along with continued support for the manager for the electron microscopy facility, which is heavily used by ES research groups.. With growth of the extramural research program it will become necessary to provide additional continuity in some of the long-term research activities through professional researchers affiliated with the group. This is being explored with some of the current postdocs.

At present there are 2 adjunct researchers (Duffy, Quinn) affiliated with the ES group, and have already contributed by way of authoring successful extramural grants and co-

advising UCM graduate students. Four additional government scientists have expressed interest in being involved with supervising graduate students, teaching, or being Co-PI's on grants. Over the next year we expect to affiliate at least two more government scientists with the Environmental Systems Group.

### **Atomic and Molecular Science and Engineering**

The Atomic and Molecular Science and Engineering group currently includes Anne Kelley, David Kelley, Valerie Leppert, Matt Meyer, Kevin Mitchell, Christopher Viney, and Roland Winston. The group is offering three graduate courses during Fall 2005: AMSE 290, Current Topics (A. Kelley/group faculty); AMSE 291, Graduate Seminar (D. Kelley/group faculty); AMSE 231, Molecular Spectroscopy (D. Kelley). We plan to offer AMSE 290 and AMSE 291 again in the Spring. It would be desirable to offer further graduate courses in Spring 2006, but it does not appear that we have the faculty to do this.

#### Immediate goals of the group

Given the necessarily diverse and fundamentally interdisciplinary nature of this group, and the desirability of building on and extending current strengths, we would like to see recruitment of new faculty in fields that encompass and bridge condensed matter physics, materials chemistry, and engineering, with a particular focus on nanoscale processes. We need to recruit faculty with related but complementary research interests in order to build a program that can attract graduate students, offer modern and compelling programs for both undergraduate and graduate students, successfully compete for funding, and achieve national and international prominence in research.

#### Additions important to the development of the group

Several of the searches that are underway or have been approved for the current year are likely to yield faculty who would contribute toward building the AMSE program. These include:

- Organic chemist (search underway at Assistant Prof. level). One of the two targeted areas for this search is organic materials.
- Analytical/surface chemist (search underway at Assistant Prof. level). Targeted areas of interest are microfluidics, photoelectrochemistry, synthesis and characterization of surface nanostructures, single-molecule and single-particle techniques, molecular electronics, and ultrasensitive chemical, biochemical or nanoparticle-based sensors.
- "Materials #1" (approved at Assistant Prof. level). Targeted toward synthesis and/or processing of inorganic materials (ceramic, semiconducting and/or metallic) including nanowires, inorganic photovoltaics, photonic materials, dielectric materials, glasses and glass-ceramics, and layered materials.

- “Materials #2” (approved at Assistant Prof. level). Targeted areas include inorganic-organic composite systems, synthetic polymers, macromolecular materials, or biologically inspired nanomaterials.
- Interdisciplinary physical science (search underway at Professor level). While the targeted areas of biochemistry, biophysics, biophysical or bioanalytical chemistry, fluid dynamics, geophysics, or environmental or atmospheric sciences do not particularly fit within AMSE, this search is intended to be very broad.
- Energy (approved at Assistant Prof. level). This search is targeted at solar energy, and is therefore very broad. Some of the specific targeted areas, such as photovoltaics, could contribute to AMSE.

It is anticipated that these searches, if unsuccessful, will be repeated the following year.

Other general areas in which we would like to recruit during the one- to three-year time frame include:

- Inorganic chemistry: development of materials, synthetic methods, and characterization techniques.
- Organic polymer chemistry: development of materials, synthetic methods, and characterization techniques.
- Physical chemistry /physics: optical properties of metallic nanostructures.
- Chemistry/physics/engineering: molecular electronics, materials and devices.
- Solid state/condensed matter physics: optical and electronic properties of surface nanostructures.
- Chemical engineering: scaled-up synthesis and processing of nanomaterials for large-scale production.
- Mechanical or electrical engineering: nano- and/or micro-electromechanical systems.
- Mechanical engineering and/or analytical chemistry: fabrication and applications of microfluidic systems.
- Theoretical chemistry/physics: multiscale computational modeling.

At least half of these positions should be filled at the tenured level (Associate or Full Professor) to provide recognition for our program, a solid funding base, mentorship for junior faculty, and leadership within the graduate group, the schools, and the university as a whole.

#### Strategic opportunities

- *If an appropriate model for interdisciplinary research at UC Merced can be developed*, the opportunity exists for real integration of the basic chemical and physical sciences with engineering to develop industrial scale nanotechnology materials and systems for real applications. This can span the range from theory to basic material synthesis and characterization to system integration to industrial scale-up, and would constitute a unique graduate program. In addition, an interdisciplinary environment offers the opportunity to work closely with

colleagues in biology to develop nanoscale devices and materials (sensors, engineered tissues).

- The existing AMSE faculty, plus those we hope to hire this year, already bring considerable expertise and funding in the area of materials and nanoscience. Programs based in AMSE should be competitive for Center funding from a variety of federal agencies once we reach the faculty numbers to justify a Merced-based center. Until that time, we can leverage involvement in groups based elsewhere, including the NSF Nanoscale Science and Engineering Center: Center of Integrated Nanomechanical Systems. (For example, the COINS center was used to leverage a NSF Major Research Instrumentation grant for cryomicroscopy equipment.) We already have excellent characterization capabilities for nanoscale materials in the core imaging and microscopy facility, and can build on this strength to make Merced attractive to prospective faculty in these areas.

### Impediments

- Current administrative and funding models (budgeting process, faculty hires and teaching load allocations) do not support interdisciplinary graduate research and education.
- Current UC system policies and procedures may limit the extent of interdisciplinary graduate research and education, and the ability to innovate.
- Graduate education and research is under-funded, threatening our status as a comprehensive university.
- Because of our small faculty numbers in most areas, the AMSE group has been forced to play the role of a “catch-all” for all faculty in the sciences and engineering who do not have strong environmental or biological interests. The group is too diffuse, in both research interests and disciplinary cultures, to function as a cohesive unit. Theoretical atomic physics (Mitchell), mechanistic biochemistry (Meyer), and characterization of nanomaterials (Leppert) have rather little in common. It appears that AMSE should split into two or three different graduate groups as soon as faculty strength permits.

### Cognitive science and related fields

This document proposes how to structure our future graduate groups in social and cognitive sciences (SCS), and related fields such as computer science, and according to what timetable. The document also describes several short term proposals for enrolling graduate students while we develop these more permanent graduate groups.

#### **Current status**

There is currently an individual PhD program in SCS, with temporary status. This group essentially includes the psychology, cognitive science, and economics faculty (Chouinard, Heit, Kantor, Matlock, Reyes, Shadish, Winder, Woodward, Yoshimi) and could possibly include other social science areas (e.g., policy, management). This group has by-laws in place and there is one (economics) student enrolled. There is also an

individual PhD program in computer science, with temporary status, now being organized (Cerpa, Kallmann, Newsam).

### **Goals**

1. To recruit quality graduate students in areas such as psychology, cognitive science, economics, and computer science, to start in 2006. The faculty in SCS and computer science want graduate students, although there are questions about what is feasible before we have elaborated more formal graduate groups.
2. To focus advertising and recruitment specifically on topics of current faculty interest. E.g., we don't want to encourage psychology applications in areas we don't cover.
3. To encourage interdisciplinary collaboration between areas with common intellectual interests (e.g., cognitive science and computer science, natural sciences), such as shared graduate courses and shared advising of graduate students.
4. To develop intellectually coherent graduate groups, e.g., economics plus psychology might not be the most coherent grouping.
5. To provide training (coursework and research advising) that will be attractive to potential students (e.g., a program of study covering major areas of cognitive science).
6. To attract sufficiently excellent graduate students that a significant proportion of them can obtain extramural funding such as NSF, Ford, or Javits fellowships.
7. To offer degrees with attractive and marketable names, such as PhD in Psychology, PhD in Cognitive Science, PhD in Computer Science.

### **Short-term proposals (2005-2006)**

1. Write a proposal for a cognitive science graduate group, to come into existence in 2006-2007. This group will include faculty from cognitive science, computer science, psychology, and natural sciences.
2. For the current year, develop emphasis tracks within SCS PhD, such as psychology, cognitive science, and economics. These would have informal status within this group, but could be implemented with relatively little paperwork. Tracks might, for example, have different graduate courses, and different primary faculty. Eventually these tracks could form the basis for more official groups and degrees. The tracks could be proto-graduate groups. The cognitive science track, in particular, would mirror the actual cognitive science graduate group, to appear in a year's time.
3. Increase cooperation between cognitive science and computer science, at the level of overlapping membership in graduate groups. E.g., some computer scientists could be invited to join the SCS graduate group, and vice versa.
4. Recruit graduate students now by highlighting current faculty research interests, in addition to courses to be developed. More detail is needed on recruitment strategy. Although having some more structure, such as tracks or groups in place, could help with recruitment, structure alone is not sufficient. As a rough heuristic, we need to spend an equal amount of time creating structures (such as writing proposals for graduate groups) and doing recruitment. For cognitive science, there should be one faculty member in charge of writing the proposal and another in charge of recruitment (although of course all faculty should be involved in both).
4. Seek further input on program structure from external bodies and advisors,

e.g., other UC campuses, business and industry, cognitive science external board of advisors. Investigate how graduate groups are structured on other UC campuses.

### **Medium-term proposals (2005-2008)**

1. Cognitive science graduate group comes into existence in 2006-2007.
2. Other tracks (e.g., psychology, economics) continue, either within SCS or in the cognitive science group. These can be considered for conversion to graduate groups, depending on faculty resources.
3. Seek external funding, such as an NSF training grant or foundation support, to fund a coherent graduate program. Can this be started in 2005-2006, or wait until 2006-2007? There would need to be a faculty member leading this. Otherwise, the default plan is to fund graduate students through TA-ships.
3. Develop terminal Masters degree programs, e.g., undergraduates stay a fifth year to get a Masters degree in cognitive science, which might be 50% based on a research project and 50% based on coursework. We are already allowed to give Masters degrees, but the programs are not specified in detail and we have not recruited for these degrees.
4. Develop other cooperative arrangements with other UC campuses, business and industry.

## **WORLD CULTURES GRADUATE PROGRAM**

### **1. BACKGROUND**

Presently, the WCGP supports a talented and eclectic cohort of nine graduate students. Their interests span archeology, humanities informatics, documentary filmmaking, anthropology, literature, and history.

The WCGP currently has concentrations in History and Literature. All of these concentrations are animated by a commitment to interdisciplinary cultural studies. For instance, an innovative introductory seminar required of all graduate students, "The University as an Institution," approaches the study of culture by turning the lens on the culture that all of the students share: that of the university itself, examining it through texts from history, literature, journalism, education, sociology, and other fields.

The Graduate Group is currently working on a proposal for a stand-alone graduate program, to be submitted this year.

### **Hallmarks of the Future Planned Program**

Carnegie Corporation President Vartan Gregorian, in a recent report on the need for new "public scholarship," writes that "Americans need to know more about diversity than uniformity; more about centrifugal forces than centrality; and more about other people's ideals, aspirations, and anxieties in order to understand the rest of the world." The planned growth of the World Cultures Graduate Group responds to Gregorian's call in two ways: by locating the study of culture in the context of public engagement, and by developing programs that focus on global, diverse, and centrifugal characteristics of culture. The philosophy of the program is:

- Transnational. The program is international, multilingual, and comparative. It has a focus on multiethnic and diasporic cultures. It examines (im)migration worldwide, as well as transnational cultural movements.
- Historical. Culture is not fixed in time or in space. Migration and mobility, politics and economics, and changes to the environment and technology all have a fundamental effect on the articulation of subjectivity and society.
- Interdisciplinary. The program bridges multiple approaches from the humanities and cultural studies, and also incorporates the social sciences, engineering and the sciences, in fields like environmental studies, public health, and informatics. Students and scholars in this program read literature and cultural theory, but will also study demographic and other quantitative data, develop computer models, and communicate ideas in movies and on websites.
- Applied. The program prepares M.A. and Ph.D. students for academic careers, and also for positions as public and engaged scholars. Graduates of this program may find work as park rangers, cultural resource managers, librarians, or officials in non-governmental organizations.

### 3. Planned Areas of Concentration

*Literature and Cultural Studies (MA/PhD)*. The Literature and Cultural Studies concentration explores the processes by which print cultures have adjusted to and resulted from experiences of migration, diasporas, exile, travel, relocation, globalization, and resistance to globalization. This concentration analyzes literature as part of the larger world of cultural practices and pre- and post-print texts that do not rely (solely) on the written word. As such, it benefits from the insights and methodologies of literary theory and analysis, as well as from those more recently associated with Cultural and Media Studies. The Literature and Cultural Studies concentration offers courses that connect geographical areas, document cultural exchanges, and trace transnational and transoceanic literary developments. Even when the focus is on a particular country or region, courses strive to reach beyond its geo-cultural limits by exploring zones of contact and external influxes. This concentration offers three emphases:

- The Literatures of the Americas emphasizes a hemispheric approach to the literature and cultures of the Americas, exploring commonalities and differences between autochthonous, colonial, and postcolonial cultures in North America, Central America, South America, and the Caribbean. This broad multilingual, multicultural area is seldom studied in all its complexity, as more traditional programs tend to focus on specific linguistic or geographic areas.
- The Literatures and Cultures of the Hispanic World has a global reach and focus of interest. It includes peninsular (Spanish), American, African, and Asian literatures in Spanish. In addition, this emphasis opens up to other cultures and languages that have entered into contact with the Hispanic world at different points in history, such as the Portuguese-speaking world, Islamic and Jewish cultures, pre-Hispanic cultures of the Americas, North American cultures, and Catalan, Basque, and Galician literatures, among others. Most courses in this area of emphasis will be taught in Spanish (with some eventually in Portuguese).
- The Literatures and Cultures of the English-speaking World also has a global reach and interest, and it includes American, British, colonial, and postcolonial literatures. This emphasis also includes American Studies, with a particular focus on Central Valley and California literatures and cultures. As with the other two emphases, the

Literatures and Cultures of the English-speaking World is open to exploring connections with relevant literatures and cultures around the globe.

All emphases will share courses on literary theory and methods of analysis, Cultural Studies, and literary history. Additionally, individual courses may be relevant to more than one of these emphases.

*Public Humanities and Material Culture (MA/PhD)*. The program in Public Humanities and Material Culture will combine several recognized areas in the applied humanities: Cultural Resource Management, Museum Studies, Tourism Studies, Public History, and Library and Information Science. The program has several elements:

- Foregrounding Material Culture: The program will approach the study of contemporary and historical cultures through study of the objects they have produced—sites, documents and artifacts—in an interdisciplinary context that will include archaeology, anthropology, art, cultural studies, environmental studies, geography, history, and related fields.
- Presenting and Representing Culture: The program will encourage scholars and students to use, critique and produce films, archives, digital resources, maps, exhibitions, tours, and other interpretive genres and media that challenge audiences inside and outside the university to rethink their definitions of culture and its meaning in everyday life.
- Managing Cultural Resources: The program is concerned with the preservation and stewardship of parks, monuments, and objects in the face of threats such as development, erosion, war, theft, or unsustainable visitor numbers. It will incorporate training in management, cataloging, site surveying, law, policy, and other areas related to the protection and preservation of cultural resources.
- Critical Studies: The program examines the cultural practices that produce museums, ethnographic films, parks, monuments, and related artifacts as objects of consumption, aestheticization and distinction for the global leisure class.

The program will prepare students for careers in academia, government, museums, heritage sites, NGOs, and historical societies.

Medium- to long-term developments also include the following program:

*Global Conflict and Cooperation (MA)*. The Global Conflict and Cooperation concentration recasts the study of security for a multilateral and multicultural world. The program focuses on the role of climate change, natural resources, demographic trends, pandemic disease, economics, and other factors that transcend the study of governments in determining security and well-being. The role that cooperation, as well as conflict, has played and can play in world systems will likewise be a focus. Drawing on the uniquely interdisciplinary approach of UC Merced, the program will include history, economics, cultural studies, political science, policy, and international law; but also contributions from UCM faculty in the natural sciences and engineering. As the program develops it is expected that coursework for the degree will include collaboration with University of California colleagues doing unclassified research at the nearby Lawrence Livermore National Laboratory. Graduates of the GCCS concentration will be expected to have expertise in history and cultural studies that allows them to better understand decision making and processes of social transformation. In addition, they are expected to be able to apply quantitative data to issues of conflict and cooperation by using remotely sensed data, geographic information, and quantitative data to develop computer models.

These seemingly diverse programs have extensive links with one another. For instance:

- Global Conflict and Cooperation and Public Humanities and Material Culture students may collaborate to investigate the looting of archaeological sites and museums in war zones.
- Global Conflict and Cooperation and Literature and Cultural Studies may both look at the social and cultural effects of a natural disaster like Hurricane Katrina—its implications for political stability, and the effect of its dispersal of artists and musicians on cultural production.
- Literature and Cultural Studies and Public Humanities and Material Culture might collaborate on identifying, archiving and preserving rare and delicate films, photographs, or books, and analyzing them in their guise as significant objects.

In addition, all of them are tied together by their common links to a variety of fields that are not traditionally articulated with the humanities, including arts, anthropology, geography, environmental studies, and film/new media.

## **B. RESOURCES NEEDED**

### **1. FACULTY LINES**

#### **Necessary Hires in the Next Five Years (Literature and Cultural Studies concentration)**

(this list assumes successful senior-level hirings in British and in Latin American literature)

- North American Literature (senior)
- Golden Age / Colonial Hispanic Literature
- Asian American Literature, Native American Literatures/Cultures, and Africana/African American Literature [More than one position needed—three ideally]
- Literary Archive Recovery and Preservation [Overlaps with PHMC]
- Travel and Exploration Literature [Possible link with Natural Sciences]
- English-language Postcolonial Literature
- Spanish Medieval Literature (including Arabic and Jewish literature)
- The Francophone and/or Creole Caribbean
- Spanish Linguistics (preferred emphasis: sociolinguistics and/or Spanish of the Southwest) [Shared with the Spanish major/minor]

#### **Hiring Plan (Public Humanities & Material Culture)**

Anthropology/Cultural Studies—Tourism Studies

Anthropology/Film—Visual Anthropology/ethnographic film and photography

Archaeology—theory/methods

Archaeology--Cultural Resource Management

Art history—history and ideology of museums (x with Art)

History—Public History

Law/Policy—CRM law (x with Policy)

Library Science/Information Management—Digital libraries and e-publishing

Literature—specialty in archives/editions/book history [Overlaps with LCS]

Museum Studies—Management and curation

→Hires in all these areas and at all ranks must be able to demonstrate experience working in or consulting with governments, tribes, NGOs, parks, museums, heritage sites, film studios, or other relevant institutions outside of academia in addition to outstanding scholarship in their field.  
→ Candidates with expertise in multiple media and new technologies are strongly preferred. These areas may include virtual reality, GIS, film, database management, web application development, or other areas.

## 2. OTHER RESOURCES

Graduate student support (fellowships and assistantships)

Fund for Graduate Student travel to conferences/research

Computer and Media Lab. (including workstations, specialty equipment including a server, a plotter (poster-size printer), and needed hardware and software for virtual reality, image management, film, and GIS. Along with the hardware and software, it also needs a full-time staff person who can assist with design and implementation of digital projects.

Graduate student lounge

Language Study. It is impossible to conceive of the global and transnational approach to culture laid out here without serious and immediate attention to the development of language study. This entails:

- Support current WCP graduate students who need language training by offering funding for tutors and enrollment in intensive summer programs.
- Hire an administrator for a study abroad program to assist students who need to go abroad to develop fluency in languages and make connections with foreign scholars.
- Support revision of the current languages requirements to create a cross-school undergraduate language requirement in line with those at other UC campuses.
- Expand foreign language offerings to include Chinese and Arabic, and develop policies and funding mechanisms to meet requests for additional languages as well.

## 3. RELATED PROGRAMS/AREAS

Our program would benefit from a functioning World Cultures Institute with a director, a white paper to guide future priorities, a steering committee, an administrative staff person, and access to existing funds.