

UC Merced, Proposal for a New General Education Program

Executive Summary

The purpose of this document is to propose a new General Education program for UC Merced (UCM). The General Education Subcommittee of Undergraduate Council (GESC) developed the proposal with the involvement of faculty, students, and staff members across campus. This included General Education (GE) retreats in 2014 and 2015, as well as with the guidance of the academic program review of GE in 2014-2015. Substantial feedback on a 2016 draft proposal led to significant changes in the requirements to accommodate concerns from multiple constituencies.

In mid-to-late April, Undergraduate Council asked the GESC to make further changes in light of feedback from Senate committees and other sources (e.g., executive committees). This final version includes those changes. Briefly, the most substantial alterations that the GESC made in this final round of revisions are the following:

- The Approaches to Knowledge distribution has been changed from 2 courses in each of Natural and Engineering Science, Social Science, and Arts and Humanities. It is now divided into two areas (Natural Science and Engineering Science; and Social Science, Arts and Humanities). Students are required to take three courses in each area. Within Natural and Engineering Science, at least one course must be from each subdivision (NS, ES). Within Social Sciences, Arts, and Humanities, at least one course must be from Social Sciences, and one from Arts and Humanities. This allows a student in a natural science major to take, for example, two courses in NS, one in TS, one in SS, and two in A&H. In contrast, a social science student might choose to take one NS, two ES, two SS, and one A&H. These courses may count toward major requirements.
- Crossroads courses no longer need to be cross listed or team taught. They should, however, continue to focus on interdisciplinary scholarship. If two instructors *choose* to team teach, both receive full teaching credit for the course.
- Courses may be certified for more than one Experiences and Activities badges. This has the potential to reduce substantially any added course load associated with that GE component.
- The Culminating Experience was previously described as a three to four unit course within the major. That has changed to a one to four unit course within the major, which allows the Experience to be satisfied by a one-unit add-on to an existing course.

The proposed GE program addresses the need for a unified approach for the campus that provides content and experiences motivated by current research on high impact educational practices.

Unlike the present approach, which, apart from Writing 10 and Core 1, delegates responsibility for GE to the Schools, the new program is designed to provide a common experience for all undergraduates that also meshes with major requirements, GE program learning outcomes (PLOs), hallmarks of the baccalaureate degree, and best practices. Key components include:

- A first year ‘Spark’ seminar that introduces students to the nature of inquiry through multiple disciplinary and interdisciplinary perspectives and experiences;

- Written communication (Writing 10);
- Language (which may include computer coding);
- Quantitative reasoning;
- A junior-year interdisciplinary Crossroads course that presents two disciplinary perspectives on a problem;
- Communication in the discipline;
- An integrative culminating experience;
- Approaches to knowledge courses that introduce students to methods of knowledge acquisition from various disciplinary perspectives;
- Intellectual experiences, addressed by a combination of lower division and upper division courses as well as by co-curricular activities;
- Ethics;
- Activities related to leadership, community, and engaging the world, typically involving student leadership or off-campus activities; and
- Creation of an ePortfolio.

This document provides details on the background of the need for a new program and the rationale for the features of the proposed program. It also offers a detailed description of the program itself, a description of the financial impact and funding model, and a plan for program evaluation.

Rationale

Program Motivation

General Education at UCM has presented challenges almost as long as the campus has been open to students. The original GE plan included two interdisciplinary courses, CORE 001 and CORE 100, as its centerpieces. Soon, though, CORE 100 proved unsustainable. Efforts to create a new, more stable plan date back at least eight years, but until now, none has garnered enough broad support from the faculty and the administration to be adopted as a new GE program.

The current proposal is motivated, in part, by the report of the external review team for GE at UCM, which made it clear that change is needed. The report discussed several key points consistent with Hallmarks of Baccalaureate Degrees at UCM. There was particular emphasis placed on research that identifies high-impact practices. The GESC has focused on addressing these key points in the new curriculum:

1. *UC Merced's GE program should focus on developing students' inquiry and research skills and abilities, preferably organized according to important contemporary issues.*
The reviewers cited research on student success to support this recommendation: "Research from such places as Indiana University's Center for Post-Secondary Research, the Carnegie Foundation for the Advancement of Teaching and Learning and the National Academies of Science is clear and growing that undergraduate research and inquiry is a powerful strategy, a high-impact practice that deepens learning for all students, especially those who come to the university less well prepared than privileged students."

2. *UC Merced's GE program should provide experiences that facilitate students' capacity to integrate learning across courses and between in-class and out-of-class and curricular and co-curricular experiences.* In their words, "Building intentional connections between the curriculum and co-curriculum advances this goal by encouraging students to make connections among ideas and experiences, and to synthesize and transfer learning to new, complex situations within and beyond their coursework. The intentional creation of co-curricular experiences that align with and advance General Education provides reinforcing opportunities for students to integrate their learning throughout their college career." Reviewers also cited WASC accreditation standards to support this recommendation. WSCUC Criterion for Review 2-2A states, "The institution has a program of General Education that is integrated throughout the curriculum, including at the upper division level, together with significant in-depth study in a given area of knowledge (typically described in terms of a program or major)." In their assessment of UC Merced's existing GE requirements, the reviewers said, "In the current GE organizational structure and its relation to the major fields of study, it is difficult to see the integrated and significant dimensions of the WASC accreditation standards."
3. *UC Merced's GE program should create synergy between major programs and GE.* The reviewers noted a "disconnect between the schools and campus-wide GE, which means that students do not have an understanding of the mission and goals of GE, and there is essentially no coherent plan on campus for GE after Writing 10 and Core 1. This separation of GE from the disciplines, and each school from the others, is very much a disadvantage to all students, but particularly for students who change their major. More importantly, by not having a campus-wide GE program, it misses the opportunity to establish the identity of UCM undergraduates, and how they are uniquely educated. Students should have an identifiable, shared experience in GE that they can recognize as broadening their perspectives." Therefore, the GESC included upper-division requirements in the major in the curriculum. This approach also was advocated by faculty members who attended the GE Retreats in May 2014 and June 2015.
4. *UC Merced's GE program should engage students in what research on student success, supported by the Association of American Colleges and Universities (AAC&U) and Indiana University's Center for Postsecondary Research, designates as "high impact educational practices."* These practices are associated with improved learning across a range of desired educational outcomes, particularly for students from underrepresented backgrounds, because they typically (1) demand that students devote time and energy to educationally-purposeful work (e.g., writing intensive courses), (2) put students in situations in which they actively engage with faculty and peers about substantive matters over an extended period of time (e.g., first-year seminars, undergraduate research, service learning), (3) engage students with diversity – of people, ideas, cultures – that challenges them to think in new ways (e.g., coursework focused on diversity and multiculturalism, study abroad), and (4) require students to learn in different settings and apply what they have learned in different settings (e.g., culminating or capstone experiences, community

engagement, student leadership, undergraduate research, course-based interdisciplinary learning communities). (Examples of this research are available on the GE website: <http://ue.ucmerced.edu/ge/introduction> See the bibliography that appears under *additional resources*.) This recommendation led to curricular elements such as Spark Seminars, the Crossroads Course, breadth requirements in Approaches to Knowledge, and Intellectual Experiences.

Although concerns about accreditation should not be the primary driving force behind program changes, GE has received attention in previous evaluations by the Western Association of Schools and Colleges (WASC). This provides yet another reason for creating a new program: It is clear that WASC expects to see substantial progress on GE by their next visit (2017-2018). Hence, the goal has been to have a new program in place by that time. That cannot actually happen, as it will take a year following approval to put the new program in place. However, if the senate and administration approve this proposal, a coherent *plan* will be in place and ready for implementation, which we hope will be seen as appropriate progress.

Finally, the proposal is motivated by the need to prepare our students adequately for the job market. The Association of American Colleges and Universities (AAC&U), a national association focused on liberal learning and general education, conducts bi-annual surveys of employers who hire college graduates. Since 2006, results of the surveys consistently show that employers prefer employees who demonstrate the broad-based knowledge and skills consistent with the Hallmarks of UC Merced Baccalaureate Degrees as well as the PLOs of General Education at UCM. For example, in 2015, 91% of the employers surveyed agreed or strongly agreed that “a candidate’s demonstrated capacity to think critically, communicate clearly, and solve complex problems is more important than his or her undergraduate major.” In addition, when hiring recent graduates, survey respondents placed the highest priority on proficiency in skills and knowledge that cut across majors. “Of the 17 outcome areas tested, written and oral communication, teamwork skills, ethical decision making, critical thinking, and the ability to apply knowledge in real-world settings are the most highly valued by employers.” (See <https://www.aacu.org/leap/public-opinion-research/2015-survey-falling-short> for more detail.)

Program Development

Key Steps in the Design of a New General Education Program

The process of developing a new GE program has been informed by academic program review of GE at UC Merced (both the self-study and the report of the external review committee). There has been significant engagement of faculty, staff members, and student leadership. Further, the proposed program has heeded findings from relevant research on best practices and effective general education.

GE Self-Study and External Review

Academic program review of General Education was launched in spring 2014 as the GESC began a self-study, which was completed in January 2015. In February 2015, an external review team visited campus. Responding to UC Merced’s self-study and results of the site visit, the review team produced a report, “UC Merced General Education Academic Program Review: Report of the Review Team,” in March 2015. Key recommendations in the review team’s report called for a comprehensive General Education Program that

1. Is based on a clear mission and goals, as well as PLOs to achieve those goals;
2. Includes common academic experiences across all four undergraduate years;
3. Is taught primarily by Senate Faculty;
4. Is distinctive to UC Merced and our student body;
5. Is sustainable in terms of UC Merced's financial and human resources; and
6. Includes and integrates curricular and co-curricular experiences.

Faculty-Staff Retreat May 2014: Hallmarks

As part of the process of developing the GE self-study and preparing for the GE program review, the GESC organized a campus retreat to envision the framework of a revised general education program. The primary goal was to define the hallmarks of baccalaureate degrees from UC Merced. Faculty from all three schools and staff members from academic and student affairs participated in the retreat. During AY 2014-2015, the GESC distributed a draft copy of the Hallmarks of the UCM Baccalaureate Degree to faculty members in all three schools for the purposes of obtaining feedback about the draft. After this process, a final version of the Hallmarks was shared with, and endorsed by, Undergraduate Council. The Hallmarks include the following:

1. *Depth and breadth in academic and intellectual preparation, consistent with the values of a research university, such that UC Merced graduates*
 - a. Demonstrate a strong disciplinary foundation;
 - b. Engage in interdisciplinary thinking which could include appreciating different approaches to problem solving, informed by an understanding of humanities, arts, STEM, social sciences;
 - c. Bring a critical, evaluative lens to problems, questions, situations;
 - d. Employ effective problem-solving skills in multiple settings;
 - e. Evaluate facts, knowledge and information, applying the varied aspects of information literacy;
 - f. Know what they know, as well as *how* they know it, and monitor and guide their own learning;
 - g. Describe the origins of knowledge, informed by cultural and disciplinary epistemological and ontological assumptions;
 - h. Demonstrate an inquiry-oriented approach to the world; possess curiosity, employ inquiry, and take appropriate and creative action in response to ambiguity.
2. *Cultural awareness, sensitivity, and responsiveness, such that UC Merced graduates*
 - a. Respect and value diversity;
 - b. Seek and recognize new cultures; join a new community anticipating and engaging in potential cultural differences or intersections.
3. *Community engagement and citizenship -- local and global-- such that UC Merced graduates*
 - a. Understand what it means to be a member of a community, including an academic community;
 - b. Contribute to the communities of which they are members;
 - c. Possess a sense of place, and the ability to determine own place within local community and global context, and affect own community through giving back;

- d. Act ethically, including in the realm of environmental stewardship and sustainability;
 - e. Are responsive to the needs of society – through application of knowledge and research to address problems, challenges, and opportunities.
4. *Interpersonal skills necessary to the outcomes identified above, as well as to lead productive lives after graduation, such that UC Merced graduates*
- a. Demonstrate initiative, including an entrepreneurial, innovative, pioneering spirit;
 - b. Respond with resiliency to obstacles and challenges, and learn from failure;
 - c. Assume responsibility for their own education and develop the skills and attitudes of life-long learners.
5. *Self-awareness and intrapersonal skills, such that UC Merced graduates*
- a. Are proficient in collaboration and teamwork;
 - b. Possess strong communication skills, oral, written, and visual, academic and professional;
 - c. Are leaders in their professional and civic lives; and
 - d. Are ethically aware and proficient in ethical reasoning.

Faculty-Staff Retreat June 2015: Mission Statement and Program Learning Outcomes

To begin the process of responding to, and acting on, the recommendations of the external review team, the GESC conducted a second faculty-staff retreat in June 2015. This retreat was devoted to developing (1) guiding principles and a mission statement for a new GE program at UC Merced and (2) PLOs aligned with that mission. Retreat participants advocated that the mission of GE consider a role for coursework in the majors. The GESC completed a draft of the mission and outcomes in Fall 2015 and, in February 2016, these documents were provided to faculty and staff for commentary and feedback. A final version, based on the feedback received, was completed in March, 2016. That mission states:

UC Merced’s General Education program engages students with the values, practices, and contributions of a research university to provide a framework for integrative learning in the context of the culturally and economically diverse Central Valley. In tandem with the major and the co-curriculum, General Education supports students in achieving the Hallmarks of the Baccalaureate Degree at UC Merced. It nurtures the spirit of inquiry, building students’ knowledge of various fields, cultures, and perspectives. General Education fosters collaboration, communication, and ethical action. It empowers students to share their learning and skills to address the local and global challenges of an interconnected, changing world.

The PLOs that emerged from this process were:

1. *Life at the Research University: Asking Questions*
UC Merced graduates take an inquiry-oriented approach to the world that reflects

engagement with the mission and values of our research university:

- a. They can articulate the benefits of attending a research university for their development as scholars, citizens, life-long learners;
- b. They generate questions, identify problems, and formulate answers by applying appropriate theoretical, evidentiary, analytical and ethical frameworks from multiple intellectual perspectives;
- c. They demonstrate intellectual curiosity and an understanding of the nature of knowledge and of themselves as learners;
- d. They identify and act on their own values and talents through self-reflection; and
- e. They are at ease with the ambiguity that is inherent in the process of discovery.

2. *Reasoning: Thinking Critically*

UC Merced graduates are equipped with multiple tools of analysis that enable them to formulate or assess an opinion or conclusion:

- a. They use analytical tools from scientific, social scientific, and humanistic disciplines;
- b. They are able to identify and evaluate sources of information; and
- c. They identify, interpret and evaluate multiple kinds of data, including texts, media, observations, and experimental results.

3. *Communication: Explaining and Persuading*

UC Merced graduates communicate in a variety of ways to diverse audiences:

- a. They use written, visual, oral and numerical modes of communication to explore and convey ideas;
- b. They can adjust their communications depending on occasion, purpose and audience; and
- c. They can work both independently and collaboratively.

4. *Cultural and Global awareness: Engaging with differences*

UC Merced graduates see themselves in relation to local and global cultures and systems of power, past and present:

- a. They engage with multiple belief systems, social structures, and ways of thinking through attention to societies, languages and cultures of the past and the present;
- b. They can identify the ways in which cultural, political, economic, technological, and environmental dimensions of society interact;
- c. They can place their own experiences in relevant analytical frameworks through attention to the relationships of diverse cultures to each other; and

- d. They gain emotional maturity and resilience by understanding themselves in the world.

5. *Citizenship: Contributing to the Public Good*

UC Merced graduates are engaged with their communities for the benefit of society:

- a. They are engaged citizens, having contributed to the building of academic and co-curricular communities at UC Merced;
- b. They understand and work in diverse communities;
- c. They engage with the ethical dimensions of their various roles; and
- d. They can articulate and act on their responsibilities to the multiple communities in which they participate.

It is noteworthy that the PLOs subsume the WASC guiding principles of information literacy, oral communication, quantitative reasoning, written communication, and critical thinking.

*General Education Program Redesign, September 2015 to Present
Proposal Development*

The Hallmarks and the GE mission and PLOs served as the framework for drafting a new curriculum for GE at UC Merced. In Fall 2015, the GESC formulated an action plan for GE redesign, including a program proposal template. The plan and template were submitted to Undergraduate Council and the Periodic Review Oversight Committee (PROC) via memo on November 19, 2015. Both PROC and UGC approved the plan. Throughout AY 2015-2016, the GESC worked on multiple drafts of a proposed redesign of the UCM GE program. In addition, a subcommittee of the GESC worked on a plan for resources for the new program. Although the draft redesign was not to be determined by resources, resources would be essential to implementing the final program.

Proposal Review

On June 24, 2016, the GESC's final draft proposal was circulated to UGC, Deans Council, and all participants in the May 2014 and June 2015 GE retreats. In AY 2016-2017, the GESC continued the process of obtaining feedback about the draft proposal for the redesigned GE program. Extensive opportunities – both in-person and electronic -- for comments and suggestions were offered to the campus community, including deans, faculty, staff, students, and administration. Interactions with faculty included feedback by email, as well as meetings with program executive committees and curriculum committees. Efforts with staff involved meetings with academic advisors. Representatives of the GESC also met with ASUCM leadership. The GESC incorporated feedback into a final proposal for a new GE program for UC Merced, changing the plan in some substantial ways. These include:

1. Expanding 'Science' in the breadth requirements to include 'Natural Science' and 'Technological Science'; (In response to the feedback from SNS and SOE, in the current revision, the requirement has since been split into two separate required areas of study: Natural Science and Engineering Science.)

2. Focusing on courses rather than credits, thus better accommodating majors with predominantly 3-unit courses;
3. Relaxing the requirement that the upper division Crossroads course must always be team taught;
4. Adding the accumulation of ‘Badges’ to identify ‘Experiences and Activities.’

Overview of the Proposed Program

The GE program proposed here by the General Education Subcommittee of Undergraduate Council (GESC) is shaped by an understanding of UCM’s distinctive institutional context as a small research university in the Central Valley with a diverse student body and a small faculty, as well as by the mission statement of GE at UC Merced. In light of our identity as a research university, curiosity and inquiry, and different disciplinary approaches to them, are at the heart of our proposed General Education (GE) program. This program is developed in a sequence of integrative GE learning experiences that respond to the first GE PLO: that students take an inquiry-oriented approach to the world.

Furthermore, the GESC sought to ensure that

1. The program could be completed in four years, and
2. The program could be integrated with the requirements of all of our undergraduate majors.

It will be necessary to create some new courses (e.g., the crossroads courses, culminating experiences for majors that currently lack one them). Resources will be made available through the Office of Undergraduate Education to assist with this.

The proposed GE program is designed to extend over four years, and there is some point of student contact with GE in every year:

Year One: Students will take a Spark seminar, which explores the nature of inquiry through multiple disciplinary and interdisciplinary perspectives and experiences. The Spark seminar is particularly important for our student population, as it provides both an intellectual focus and an introduction to the work and resources of a research university. In addition, such intellectually rigorous small classes, when properly designed and implemented, have been shown to have a significant positive impact on student success.

Year Two: As part of their “jumpstart” meeting with their academic advisor, students will propose a plan for meeting their educational goals, including coursework in GE, their major, minor, as well as co-curricular experiences. This encourages students to take ownership of their own intellectual growth.

Year Three: Students will take an upper division “Crossroads” course that brings the perspectives of two disciplines to bear on a particular topic. Crossroads courses will be cross-listed in the relevant programs. The Crossroads course allows students to see how two different disciplines

approach a shared issue or problem, from evidence to evaluation. It also provides a shared experience for transfer students.

Year Four: Students have a culminating integrative experience in their major. The culminating experience in the major provides an opportunity to integrate students' studies in GE and in the major. The culminating experience may include, but is not limited to, a capstone class, a senior seminar, a service learning project, a portfolio, or a thesis. These experiences will be designed and proposed by the program, not by the GESC.

The common courses in the first and third years provide a foundation for integrative work across the curriculum and for more focused study in the major. These shared courses are supplemented by courses that introduce students to major *Approaches* to knowledge, and a range of *Intellectual Experiences* that allow students to engage with a range of topics and analytical methods.

To ensure the sustainability of the program, courses other than the Spark seminar can be met either by existing courses with slightly modified Course Request Forms (CRFs) and Course Learning Outcomes (CLOs), or by new courses that will meet major requirements. Crossroads courses might require additional resources for discussion sections.

The Program in Detail

(The program is summarized in Table 1, following the detailed description.)

Course Requirements

Lower Division Common Requirements (8-16 credits)

1. *Spark Seminar* (4 credits)
 - a. The Spark seminar has been designed in response to research that demonstrates that rigorous small first-year seminars led by faculty passionate about the topic on which the course is focused have a significant positive impact on student retention.
 - b. Spark seminars introduce students to life at a research university. They ask students to focus on the nature of inquiry by exploring a particular topic over the course of the semester, engaging with campus and/or local resources, generating research questions, and presenting original ideas in writing and other forms of communication (visual, oral, and/or numerical).
 - c. Topics will be broad enough to be viewed from multiple perspectives, but focused enough that students can engage with the issues of the topic in some depth. They should be related to an area of research and/or interest to the instructor: part of the experience of Spark is engaging with a faculty member who is sharing his or her expertise and passions with students, thereby sparking their interest in the topic and/or the spirit of inquiry and research more generally.
 - d. Spark seminars will be taught by Senate Faculty and Unit 18 lecturers, perhaps with the assistance of advanced graduate students and post-docs. At least 20% of the Spark seminars in any given year must be taught by Senate or Non-Senate faculty from each of the three schools; across the schools 20% must be taught by faculty; and no more than 20% may be taught by faculty from any one program. (This is known informally as the 20-20-20 rule.)

- e. Enrollment will be capped at 24 students in each seminar. This cap is primarily for pedagogical purposes; however, it also makes practical sense, as the campus lacks sufficient classrooms to accommodate larger class sizes in the Spark program.
 - f. Spark seminars may be taken concurrently with either WRI 1 or WRI 10.
 - g. Spark seminars address GE PLOs: 1, 2, and 3.
2. *Written Communication* (4 credits)
This is a University requirement. It will be met by Writing 10 (perhaps with a link to a Common Read that is given to all new students at orientation). The written communication requirement addresses GE PLO 3.
 3. *Quantitative Reasoning* (4-5 credits)
This is also a University requirement; it addresses GE PLO 2. Students can satisfy the requirement by taking one of the eight available approved courses.
 4. *Language* (0 to 8 credits)
The study of language exposes students to different ways of structuring thought. Engagement with multiple languages introduces students to a range of ways to structure and express thought. The requirement addresses GE PLOs 3 and 4.

The Language requirement can be met by:

- a. *Coursework*: Successful completion of the second semester of a UCM foreign language class OR successful completion of a computer coding course (CSE 20/21, ME 21), OR
- b. *Campus based test*: Passing the campus-administered Foreign Language test demonstrating proficiency equivalent of one year of college foreign language, OR
- c. *AP/IB Exams*: Earning a score of 3, 4 or 5 on a College Board AP exam in a foreign language; earning a score of 5, 6 or 7 on a Higher Level IB exam in a foreign language or literature; earning a score of 4 or 5 on the College Board AP Exam in Computer Science A, OR
- d. *High School Coursework*: Completing the third year of one language in high school with a course GPA of at least C.

Upper Division Common Requirements

1. *Crossroads Course* (4 credits)
The Crossroads course is an upper division course with enrollments of 24-120 students. Like the Spark seminar, the Crossroads course will focus on a specific topic but from an interdisciplinary perspective: It emphasizes different, yet complementary, disciplinary approaches, methods, and assumptions, and provides opportunity for research and analysis. Crossroads also will provide an entry point for transfer students into GE at UC Merced. Crossroads courses with larger enrollments may include TA-led discussion sections. Crossroads courses address PLOs 1, 2, 3, and 4; it is possible that some may also be relevant to PLO 5.

2. *Writing in the Discipline* (3 or 4 credits)

Students take an upper division writing course, or a writing-intensive course in the major that focuses on how to write for a particular field. A one-credit lab course attached to another course may satisfy this requirement if the primary focus of the lab is writing. This addresses GE PLO 3. Programs that already require (for instance) WRI 101, 116, 117 or 119 have met this requirement.

3. *Integrative Culminating Experience* (one 1 to 4 credit course within the major)

The Integrative Culminating requirement may be fulfilled through traditional capstone courses, senior or advanced seminars, service-learning courses, portfolios, or other methods majors choose to integrate learning in the program. Regardless of the specific format, the Integrative Culminating Experience should have strong components of:

- a. Communication, including at least two different methods;
- b. Research;
- c. Engagement with others (team-building components, collaborative work, student leadership of discussion, etc.).

The Integrative Culminating Experience addresses GE PLOs 1 through 5.

Approaches to Knowledge (6 courses, 22-24 credits)

Courses in this area introduce students to the different ways disciplines (and broad branches of knowledge) ask questions and think about the world. All courses that meet this requirement will (a) address methodological, theoretical, or epistemological issues relevant to the subject and (b) include a project that can be uploaded to the student's ePortfolio. Students may take no more than one course from any academic program. All students will take at least three courses divided between Natural Sciences and Engineering Science, and at least three divided between Social Sciences and Arts/Humanities.

1. Natural Science: courses that take a scientific approach to the study of the world;
2. Engineering Science: courses that take an engineering approach to the study of production and technology;
3. Social Science: courses that take a social scientific approach to the study of individuals and societies; and
4. Arts and Humanities: courses that take artistic and/or humanistic approaches to understanding the self, societies, and cultural products.

This work addresses PLOs 1 and 2.

Experiences and Activities

1. *Intellectual Experiences*

In addition to the broad divisions of knowledge represented by Approaches courses, there are general intellectual outcomes UCM students are expected to achieve as part of the Hallmarks of the UC Merced Baccalaureate Degree. The intellectual knowledge and tools

leading to these outcomes are made explicit in the proposed GE program to ensure they are part of all students' curricular and co-curricular experiences. These Experiences can be fulfilled in courses, including Approaches courses, Spark seminars, Crossroads courses, courses in the major, elective courses, and co-curricular activities. To emphasize the ways GE is part of the entire curriculum, at least three of the courses used to fulfill Intellectual Experiences must be at the upper division. The Crossroads course and the culminating experience in the major satisfy two of these upper division requirements. In addition, the Experiences can be fulfilled in the co-curriculum. These intellectual experiences are:

- a. Scientific Method (GE PLOs 1 and 2)
Students learn how the scientific method leads to new knowledge about the natural world by correcting and integrating previous knowledge using empirical evidence.
- b. Literary and Textual Analysis (GE PLOs 1, 2 and, 3)
Students learn how language creates meaning and ambiguity.
- c. Media and Visual Analysis (GE PLOs 1, 2, and 3)
Students explore how media and images create, shape, and express meaning.
- d. Quantitative and Numerical Analysis (GE PLOs 2 and 3)
Students evaluate data and develop quantitative reasoning skills.
- e. Societies and Cultures of the Past (GE PLO 4)
Students explore the interactions between multiple dimensions of past societies.
- f. Diversity and Identity (GE PLOs 4 and 5)
Students consider how multiple kinds of difference – ethnic, racial, gender, and sexual – impact individuals and societies in the past and present.
- g. Global Awareness (GE PLOs 4 and 5)
Students learn about environments, cultures, and issues in nations and regions outside the US. This experience may be met by courses about other parts of the world (including intermediate or advanced language study that includes culture), or by study abroad.
- h. Sustainability (GE PLOs 4 and 5)
Students explore the ways in which humans affect and are affected by the natural world.
- i. Practical and Applied Knowledge (GE PLO 2) Students carry out field work, laboratory experimentation, or artistic practice.
- j. Ethics (GE PLOs 1 and 5)
Students investigate the ethical implications of research, policy, or behavior. This requirement can be met either by a course that specifically focuses on ethics, or by a methods course in the major that makes research ethics a central theme.
- k. Leadership, Community, and Engaging the World (GE PLO 5)
Students take their work at UC Merced off the campus in one of multiple ways: they may engage in at least one of a variety of experiences including study abroad, UCDC, UC Sacramento, leadership in campus organization, community engaged research or service, or off-campus internships.

Courses can satisfy more than one GE Intellectual Experiences requirement. For example, a study-abroad experience could fulfill both the “Global Awareness”

requirement and the “Leadership, Community, and Engaging the World” requirement. The processes of recording and keeping track of students’ fulfillment of the Intellectual Experiences requirement will include the Degree Audit System, as well as the ePortfolio described in the next section. When students complete Experiences, regardless of whether this is through coursework or through the co-curriculum, they will receive a ‘Badge’ certifying the achievement in the degree audit system. Student Affairs already has in place a mechanism for verifying co-curricular activities. Transfer students, like all UCM students, will be required to meet three Experiences at the upper division level.

2. *Activity: ePortfolio*

To keep track of their learning, students will compile an ePortfolio. The purpose of the ePortfolio (which is part of CatCourses) is to give students a chance to review the development of their education. Every course that meets a GE requirement will have an assignment related to that requirement that will be uploaded into the student’s ePortfolio on CatCourses. Students may add other projects if they wish. The portfolio will provide the basis for reflection on learning to be integrated into the culminating experience in the major; it will also be used to help students prepare for life after graduation. Portfolio development and assessment will be coordinated by the Office of Undergraduate Education in collaboration with the GESC and faculty members in the majors. This activity addresses GE PLO 1. The ePortfolio does not require action by the faculty beyond identifying an assignment that will be uploaded for particular GE requirements.

The ePortfolio will be used in three ways. First, students will use it, in collaboration with advisors, faculty, and staff in the Center for Career and Professional Advancement, to help in developing post-graduation plans, and (where relevant) to put together a focused portfolio to support job or graduate school applications. Second, it will be used by the GE subcommittee for purposes of assessment. Third, it can be used by major and minor programs for their program assessment.

Table 1: Summary of Program Features

Required Courses	
A. Lower Division Common Requirements <ol style="list-style-type: none"> 1. Spark Seminar 2. Writing 10 3. Quantitative Reasoning 4. Language 	12-20 credits 4 4 4-5 0-8
B. Upper Division Common Requirements <ol style="list-style-type: none"> 1. Crossroads Course 2. Writing in the Discipline 3. Integrative culminating experience in the major 	9-12 credits 3-4 3-4 1-4
C. Approaches to Knowledge (3-3) <ol style="list-style-type: none"> 1. Natural Sciences and Engineering Science (3 courses, at least 1 from each) 2. Social Science and Arts/Humanities (3 courses, at least 1 from each) 	22-24 Credits 10-12 12
Experiences and Activities	
A. Intellectual Experiences <ol style="list-style-type: none"> 1. Scientific Method 2. Literary and Textual Analysis 3. Media and Visual Analysis 4. Numerical and Quantitative Analysis 5. Societies and Cultures of the Past 6. Diversity and Identity 7. Global Awareness 8. Sustainability 9. Practical and Applied Knowledge 10. Ethics 11. Leadership, Community, and Engaging the World 	Credits depend on how many courses with multiple Experiences certifications a student takes.
B. EPortfolio	

Distinctive Program Characteristics in the UC System

UC campuses take widely varying approaches to GE. All campuses must satisfy the University-wide requirements. Some campuses (e.g. Irvine and Riverside) take a traditional smorgasbord approach to breadth. Some require a small number of special skills (e.g. Davis, which requires diverse communication skills). Santa Barbara has a more extensive list of special foci that resemble aspects of UCM's proposed upper division GE program. Several campuses have different requirements depending on the School or College (e.g. Berkeley, San Diego). At Riverside, the requirements vary depending on whether the student is pursuing a BA or a BS. Santa Cruz states its breadth requirements by requiring courses that are certified to offer various perspectives and skills (e.g. cross-cultural analysis, ethnicity and race, mathematics and formal reasoning). San Diego incorporates freshman seminars that are similar to the Spark seminars. However, no other campus has a unified program for all schools that incorporates freshman seminars, the co-curriculum, upper division writing, a culminating experience, direct interaction with the world, courses in the major, and the creation of a portfolio. Thus, the GESC sees the proposed GE program as a model that other campuses may choose to emulate.

Alignment with UCM priorities

The proposed GE program is consistent with UCM priorities. The interdisciplinary focus is compatible with the interdisciplinary connections of SAFI. The program and its funding model can be sustained in context of the campus's 2020 growth plan. The program is carefully designed to address the hallmarks of a baccalaureate degree at UCM. Requirements for off-campus and extracurricular activities and engagement with the community address UCM's goal of contributing to the San Joaquin Valley, California, and the world at large. The focus on disciplinary and cross-disciplinary methods of inquiry supports UCM's mission as a research university, and should also help prepare students for graduate education. The use of best practices that have been shown to have positive effects on student retention and graduation rates serves our challenging undergraduate population well. Overall, then, the GESC sees the proposed program as fully compatible with campus goals.

Program Administration

In addition to oversight by the GESC and the Office of Undergraduate Education, the program will require two administrators to manage the Spark seminars. Those positions are also required for the current CORE 001 program, so that there is no apparent change in administrative requirements.

Funding the Program

With the aid of an economist who does not currently sit on the GESC, two alternative interim plans for resourcing the proposed GE program have been developed. The Provost has endorsed a combination of both plans as a short-term model, and is committed to working with the Senate to find a long-term solution to providing needed resources for the GE program.

The GESC has focused on the development of a revised GE curriculum that will best serve the future undergraduates at UC Merced. Now that the subcommittee has developed this curriculum, our institution is faced with a need to develop a plan for resourcing the revised GE curriculum that is efficient and sustainable. In order to achieve this objective, we need to develop a model

for resourcing GE that meets both short-run needs as well as the long-run sustainability of the GE curriculum.

There are going to be approximately 2,250 (9,000/4) undergraduates that we need to serve in 2020, and we estimate that we will need approximately 94 sections of the Spark seminar offered with a class size of 24 students. The revised GE curriculum outlines the need to increase Senate Faculty involvement in the Spark seminar offerings. We are targeting 50% of the Spark seminars being taught by Senate Faculty with the remaining sections being taught by lecturers. Table 2 provides a breakdown of our anticipated Senate Faculty involvement in Spark seminars broken down by the different Senate Faculty ranks. Although this is the initial breakdown for the execution of the seminars, we have also outlined a process where graduate student involvement is possible, pending financial support for these students *through external fundraising efforts*.

In the following sections we outline separately resource models that meet the short-term and long-term needs of the GE curriculum.

Short-term resource models

Two short-term solutions are under consideration; the Provost will work with the Senate to identify long-term solutions. The two short-run resourcing options that we recommend for supporting the GE curriculum. We expect that both of these models will be used in concert to ensure broad faculty participation in the Spark seminars. The first model uses a one-year off-scale salary adjustment for participating faculty. The second model compensates a faculty member’s unit to provide resources that will pay for a lecturer to cover a participating faculty member’s course, with the remaining compensation (difference between the faculty compensation and lecturer’s salary) being retained by the originating unit for unit-level purposes (e.g., seminars, faculty support, student support).

Under the first model, all Senate Faculty compensation will be provided as a one-year off scale salary adjustment. Alternatively, faculty can elect to have the money put in their research accounts if they prefer to use these funds to support their research agendas. Table 1 outlines the proposed levels of funding for each of the different Senate Faculty ranks.

Table 2: Projected costs per a Senate Faculty member and anticipated distribution of teaching load across the Senate Faculty ranks.

Rank	Assistant	Associate	Full	LPSOE	LSOE	Sen. SOE
# of SPARK	4	9	10	13	10	1
Est. Salary	\$10,000	\$13,000	\$16,000	\$10,000	\$13,000	\$16,000
Salary plus Fringe*	\$12,165	\$15,815	\$19,464	\$12,165	\$15,815	\$19,464

*Fringe calculated at 21.65% of faculty salary. The number may vary by faculty.

The important resource question is: What is the additional expense under this model of replacing CORE1 with Spark seminars? In the 2020-21 academic year, the anticipated cost of operating CORE1 as currently executed would be approximately \$1.13 Million. If we assume that 47 of

our 94 SPARK sections are offered by lecturers, the existing labor force used in CORE1, this will cost us approximately \$597,264 with a teaching load of six courses for each lecturer and an average annual salary, including fringe, of \$74,658 (8 FTE).¹ This implies that we have approximately \$539,782 remaining in our planned CORE1 budget.

The projected CORE1 budget also includes two administrative salaries that are expected to cost approximately \$161,187 in 2020-21. The Spark program will also require these administrative costs, so this further reduces our remaining budget to approximately \$378,595 to support the Senate Faculty teaching. Given the cost break down for the Spark seminars outlined in Table 2 and the anticipated break down across the Senate Faculty ranks, the estimated cost is approximately \$712,394 for the one-year off scale adjustments and fringe salary. This puts us approximately \$333,799 over the currently planned costs for CORE1 in 2020-21. It is important to note, though, that faculty may also teach Spark seminars as part of their normal teaching load, which would reduce that figure.

The second short-term model uses the same compensation levels for all of the participating ranks, but transfers the funds for the faculty member's participation to their unit's funds. The unit then utilizes the funds to pay for a lecturer to teach the faculty member's course while the faculty member teaches a Spark seminar. To provide an incentive for a unit to embrace this compensation mechanism, we propose that all remaining funds after the lecturer is paid be retained by the originating unit (i.e., for senior professors, \$19,464 on average, minus the cost of the lecturer, is the remaining balance). These funds could then be used as discretionary funds in the originating unit to support the unit's teaching and research efforts.

There are a number of advantages to that second model combined with the first model. The second model will not increase the teaching load for participating faculty, as a lecturer will cover the faculty member's original course in exchange for teaching a Spark seminar. This will ensure that it does not compromise one's research profile, which may help to increase the participation of junior faculty. This model will also allow units to convert non-full-time lecturers to full-time lecturers by increasing their teaching loads. That may help to provide a more secure labor force as well as better serve the needs of our unit-18 lecturers. Finally, the flexibility for originating units to retain the balance of funds used to support a faculty member's participation in the Spark seminars incentivizes units to offer additional Spark offerings because the balance of the resources can be used to support their other unit efforts (e.g., seminars, faculty support, student support).

¹ Lecturers in the Writing Program teach 5 courses a year. Although some of these lecturers may end up teaching SPARK seminars we anticipate that lecturers from many programs across campus will be teaching SPARK seminars so we elected to use the 6-course teaching load. Should a larger portion of these courses be taught by lecturers in the Writing Program the cost will marginally increase.

Long-term resource models

The long-run sustainability of the GE curriculum is going to require a campus-wide paradigm shift regarding our commitment to the execution of GE and our efforts to best serve our undergraduate students. This can be achieved only through a partnership between the faculty and the administration. It is therefore our recommendation that the Academic Senate and the administration work together to incorporate the resource needs of the GE curriculum (e.g., instructional personnel and staff) into our current resource-allocation process. This is not to suggest that resources will be allocated to a unit solely for the support of the GE curriculum. It suggests that the unit's contribution to GE be evaluated in terms of its importance to the university as part of our teaching and research mission. This is a long-run solution that will ensure the sustainability of the GE curriculum moving forward.

Potential Graduate Student Participation

The Spark seminars could become a good opportunity for our graduate students to acquire valuable teaching experience.² However, graduate students are also the most expensive resource to allocate to the Spark seminars. The expected cost per year for a graduate student is approximately \$53,750. Therefore, their direct involvement from the inception of the Spark seminars is monetarily infeasible. On the other hand, this does create a unique fundraising opportunity for the campus. Ideally, graduate student involvement in the Spark seminars would be part of a larger professional development program focused on pedagogy and curriculum to enhance the participating students' academic portfolios. This program could serve as a fundraising opportunity to support graduate students on campus. We propose that for every graduate student that is supported via external fundraising efforts we reduce Senate Faculty involvement by one course as well, with an equilibrium target of having 10% of the Spark seminars being taught by graduate students (i.e., need to raise funds for approximately 9 graduate students).

The average cost of a Senate Faculty member teaching a SPARK seminar is approximately \$15,349. Therefore, every graduate student funded via external fundraising will lower the cost of the Spark seminars in the future by this amount. Should we be successful in this fundraising effort it will reduce the additional costs for the Spark seminars from \$333,799 to \$195,658 while at the same time providing valuable training and teaching opportunities for our graduate students.

Assessment Plan for General Education

The GE program will undergo both annual assessment and periodic review like any other program. There are certain elements that make the GE Program unique, however. First, it extends over the whole campus; second, it integrates curricular and co-curricular learning. Thus assessment will have multiple strands: Not only will there be assessments of both the co-curriculum and the academic curriculum, but the academic assessment will also track *Elements* of the program, *PLOs*, and *WASC Core Competencies* on separate tracks.

² In addition to graduate students, this may be a good opportunity for post-docs on campus.

Academic Assessment

The GE FAO and the GESC will draw data from student assignments in GE courses (recorded in the ePortfolios as well as syllabi, focus groups, surveys and other evidence of student outcomes. In the first two years, during initial deployment of the new GE program, assessment will focus on particular elements of the program (Spark Seminars, Crossroads Courses) to see how well they are meeting the program goals, and to allow us to make adjustments as needed. In addition, beginning in the second year, we will assess one learning outcome annually, beginning with transfer graduates.

Assessment outcomes will be reviewed by the FAO and GESC. The FAO and GESC will then determine course and programmatic refinements on an iterative basis. Prior to the first Program Review, these refinements will focus on issues of practice or resources. The outcomes of the assessment cycle and guidance for faculty will be shared with UGC on an annual basis. The guidance will be circulated to faculty in a timely fashion to allow changes to be made before the next term begins.

In addition to the formal assessment process, the Chair and FAO of General Education will meet with faculty who are teaching various GE courses to collect and share insights from both formal assessment and surveys of faculty who have taught these courses. This will allow small tweaks in instruction without a revision of the program.

Any course that meets either “Approaches to Knowledge” or “Experiences and Activities” will have at least one assessable learning activity that addresses relevant PLOs. The activity will be identified in the syllabus so that students can upload their fulfillment of the learning activity into their ePortfolio.

For [assessments](#) of elements of the GE program, and of [WASC Core Competencies](#), we will use *program clustered random samples* of students, ensuring that we are assessing with appropriate breadth and depth the efficacy of the GE program. The entries for ePortfolios will be directly integrated into course syllabi and requirements; the assignments will be submitted at each stage of the students’ progress. Maintaining the ePortfolio is a student responsibility. Students may use the ePortfolio to structure a discussion when meeting both with their advisors and with the Center for Career and Professional Advancement. These ePortfolios will be assessed to ensure that each student is properly satisfying the GE program goals. A focused sampling strategy will ensure that all students are meeting all WASC Core Competencies.

Finally, in assessment of the WASC Core Competencies in student work, we will use the [AAC&U Value Rubrics](#) as a template. All students should meet the minimum of the equivalent of Milestone 2 on *all* core competencies, though we expect them to be at least at level 3; and they should meet the capstone level on *at least one* core competency. In assessing any individual WASC core-competency, we expect to have an average between Milestone 2 and Milestone 3 in the AAC&U Value Rubrics template.

Assessment Cycle (Cycle to resume after Program Review and then continue for the foreseeable future.)

In the following table we outline the assessment cycle. Please note that the GE Program Element, PLO and WASC core competencies are evaluated separately to ensure total programmatic success.

YEAR	To Be Assessed Separately on an Annual Basis:			Evidence: Direct	Evidence: Indirect
	GE PROGRAM ELEMENT	PLO	WASC CORE (Assessed near time of graduation)		
1	Spark Seminars	---	---	Student work, Student Portfolios	Syllabi, Focus Groups with Students and Faculty; Surveys* (course and culminating)
2	Crossroads	1 (Transfer graduates)	Quantitative Reasoning	Syllabi, Student Portfolios, Student work Video of Presentations	Syllabi, Focus Groups with Students and Faculty; Surveys* (course and culminating)
3	Spark Seminars	2 (Transfer graduates)	Oral Communication	Student work, Student Portfolios	Syllabi, Focus Groups with Students and Faculty; Surveys* (course and culminating)
4	Approaches to Knowledge	3	Information Literacy	Student work, Student Portfolios	Syllabi, Focus Groups with Students and Faculty; Surveys* (course and culminating)
5	Badges	4	Written Communication	Student work, Student Portfolios	Syllabi, Focus Groups with Students and Faculty; Surveys* (course and culminating)
6	Crossroads	5	Critical Thinking	Student work, Student Portfolios	Syllabi, Focus Groups with Students and Faculty; Surveys* (course and culminating)
7	PROGRAM REVIEW				
8	Crossroads	1	Quantitative Reasoning	Syllabi, Student Portfolios, Student work Video of Presentations	Syllabi, Focus Groups with Students and Faculty; Surveys* (course and culminating)
9	Spark Seminars	2	Oral Communication	Student work, Student Portfolios	Syllabi, Focus Groups with Students and Faculty; Surveys* (course and culminating)
10	Approaches to Knowledge	3	Information Literacy	Student work, Student Portfolios	Syllabi, Focus Groups with Students and Faculty; Surveys* (course and culminating)
11	Badges	4	Written Communication	Student work, Student Portfolios	Syllabi, Focus Groups with Students and Faculty; Surveys* (course and culminating)
12	Crossroads	5	Critical Thinking	Student work, Student Portfolios	Syllabi, Focus Groups with Students and Faculty; Surveys (course and culminating)

* Surveys include (as available) NSSE, UCUES, and Graduating Student surveys.

Co-Curricular Assessment

A co-curricular GE assessment committee will work with the GESB. In assessing co-curricular elements that may fulfill Experiences or Activities, we will use the [AAC&U Value Rubrics](#) as a template. In particular, the focus will be the Value Rubrics of (1) civic engagement-local and global, (2) teamwork, (3) intercultural knowledge and competence, (4) global learning, and (4) integrative learning. As with the core competencies, all students should meet the minimum of the equivalent of Milestone 2 on all core competencies, and they should meet the capstone level on at least 1 core competency.

Additionally, UC Merced will be participating in the [Multi-Institutional Study of Leadership](#) (MSL) beginning in 2018. MSL is one of the largest studies of college student leadership and theoretically grounded measures to understand student leadership development and institutional effectiveness through benchmarking with local and national data.

The Experiences and Activities connected to co-curricular involvement are most aligned with Leadership, Community and Engaging the World. However, there will be opportunities for approved experiences fulfilling Global Awareness, as well as Practical and Applied Knowledge. The co-curricular GE evaluation committee will assist the GESB with the review of these experiences to ensure quality.

Co-curricular experiences will be tracked through a co-curricular transcript data base and linked to GE requirements established through the student information system, Banner.

Appendix 1: Sample Course Sequencing

In this appendix, there are two sample course sequences that illustrate how the GE program could coexist with current major requirements.

LD=Lower Division; UD=Upper Division; IE=Intellectual Experiences

All courses are 3 or 4 units unless otherwise indicated; the course load is always 16 to 17 units per semester.

(GE requirement categories are in parenthesis. Note that Sci. is an abbreviation for Natural and Technological Science.)

Underscored text indicates GE requirements.

Bold text indicates Major requirements.

Some are both.

Theoretical English (ENG) Major:

Student tests out of WRI 001 but no Foreign Language.

Fall 1st year

- Spark Seminar
- **LD ENG lecture (Arts&Hum 1)**
- WRI 010
- **Foreign Language (Language 1)**

Spring 1st year

- **LD ENG seminar**
- **Foreign Language (Language 2)**
- Elective
- Elective

Fall 2nd year

- **LD ENG seminar (IE Literary Analysis)**
- **ENG 101: Medieval and Renaissance**
- **Lit (IE Past Societies)**
- LD Chem course (Sci 1; IE Quant, Scientific method)

Spring 2nd year

- **ENG 102**
- GASP Drawing course (IE Practical)
- EnvE 10: The Environment in Crisis (Eng 1)
- Elective

Fall 3rd year

- Ecology (Sci 2; IE Sustainability)
- **ENG 100: Engaging Texts (IE Ethics)**
- Crossroads
- **ENG 103**

Spring 3rd year

- **ENG 104**
- **UD ENG seminar (Communication in Disc)**
- Anthro course (IE Global Awareness)
- UD Political Sci course (SocSci 1)

Fall 4th year

- **UD ENG seminar: James Baldwin and Toni Morrison (IE Diversity)**
- **UD ENG seminar**
- UD sociology course (SocSci 2)
- Elective

Spring 4th year

- **ENG Senior Thesis (Cumulating Exp.)**
- Elective
- UD GASP course (Arts&Hum 2; IE Media Analysis)
- Elective

Co-Curricular:

Student is president of club senior year (IE Leadership).

Theoretical Sociology (SOC) Major:

Student tests out of neither WRI 001 nor any foreign language, doesn't declare a major until sophomore year, and does a semester abroad.

Fall 1st year (16 units)

- LD ENG (Arts&Hum 1; IE Literary analysis)
- **SOC Intro 001(SocSci)**
- WRI 001
- Foreign Language (Language 1)

Spring 1st year (16 units)

- Spark Seminar
- Foreign Language (Language 2)
- Elective
- WRI 010

Fall 2nd year (16 units)

- **Soc Research Methods (IE Ethics)**
- LD Soc
- LD Chem course with lab (Sci 1; IE Practical, Scientific Method)

- Elective

Spring 2nd year (16 units)

- LD Soc
- **Statistics for Soc (Quantitative Reason)**
- **IE Quant**
- History course (Arts&Hum 1; IE Past Societies)
- **Sociological Theory**

Fall 3rd year (13-16 units)

- Ecology (Sci 2; IE Sustainability)
- Elective
- Crossroads
- **UD SOC writing heavy course (Communication in Disc)**

Spring 3rd year

SEMESTER ABROAD: (IE Global Awareness; IE Leadership)

Fall 4th year (16 units)

- **UD SOC seminar on race (IE Diversity)**
- UD SOC course
- UD SOC course
- CSE 020: Introduction to Computing

Spring 4th year (16 units)

- **SOC Senior Thesis (Cumulating Exp.)**
- UD GASP course (Arts&Hum 2; IE Media Analysis)
- UD Political Sci course (SocSci 2)
- **UD SOC course**

Theoretical Mechanical Engineering (ME) Major:

Student tests out of Language 1 but not WRI 001 or MATH 005 or CHEM 001. (This represents a worst-case scenario, where the student enters the university with deficiencies in three important areas. The high first-year workload could be alleviated by taking longer to satisfy the degree requirements, as many ME majors already do.)

Fall 1st year (20 units)

- MATH 005
- CHEM 001
- Spark Seminar
- Engineering Science Course (ES 1)
- WRI 001

Spring 1st year (20 units)

- MATH 021
- PHYS 008 (Natural Science 1, IE Scientific Method)
- WRI 010
- Arts&Hum GE 1 (IE Past Societies; IE Literary Analysis)
- Social Science GE 1 (IE Diversity)

Fall 2nd year (16 units)

- CHEM 002
- MATH 022
- PHYS 009 (Natural Science 2)
- Social Science GE 2 (IE Ethics)

Spring 2nd year (16 units)

- **ENGR 045**
- MATH 024
- **ENGR 057**
- ME 021

Fall 3rd year (16 units)

- **ENGR 151**
- MATH 023 (IE Quantitative)
- **ENGR 120**
- Crossroads

Spring 3rd year (15 units)

- **ENGR 130**
- **MATH 131**
- **ENGR 065**
- MATH 032

Fall 4th year (17 units)

- **ME 137**
- **ME 120**
- **ENGR 135**
- **ENGR 155 (IE Global)**
- **ME Technical Elective 1**

Spring 4th year (17 units)

- **ME 140**
- **ENGR 190**
- ENGR 191 (IE Cumulating Exp.; IE Leadership)
- **ME Technical Elective 2 (IE Media/Visual Analysis)**
- **ME Technical Elective 3**

Theoretical Biological Sciences: Ecology Emphasis (BIO-EEB) Major:

Student tests out of neither WRI 001 nor foreign language nor MATH 005, and requires two NATSCI prerequisites.

Fall 1st year (17 units)

- LD ENG: Shakespeare (SS, Arts&Hum 1; IE Past Societies; IE Literary Analysis)
- **BIO 001 (IE Scientific Method)**
- **BIO 001L**
- WRI 001
- Spark Seminar

Spring 1st year (18 units)

- Math 5 (Quantitative Reasoning: IE Quant)
- **BIO 002**
- **BIO 002L**
- **CHEM 001**
- WRI 010

Fall 2nd year (16 units)

- **BIO 110**
- **CHEM 002**
- **MATH 011**
- Foreign Language (Language 1)

Spring 2nd year (17 units)

- **CHEM 008**
- **CHEM 008L**
- **MATH 012**
- SOE ENVE 10
- Foreign Language (Language 2)

Fall 3rd year (16 units)

- **MATH 015**
- **BIO 148 (IE Sustainability)**
- **BIO 148D**
- Crossroads in SocSci (SS, Arts&Hum 2, IE Diversity)
- LD GASP (003: Intro Visual Culture) SS, Arts&Hum 3; IE Global; IE Media/Visual Analysis)

Spring 3rd year (16 units)

- **MATH 018**
- **PHYS 018**
- **UD Sci Course**
- **BIO 140**

Fall 4th year (16 units)

- **BIO 124**
- **PHYS 019**
- **BIO 149**
- **BIO 149F**
- **BIO 130**

Spring 4th year (16 units)

- **ESS 170**
- **ESS 170L (Writing in the discipline)**
- BIO 190 (Culminating Exp; IE Ethics)
- **BIO 144**

Student does an off-campus internship before senior year (IE Leadership).

Appendix 2: Sample Spark Seminar Syllabi and Template

Note: Genuine Spark syllabi have not yet been created; these are hypothetical examples.

Generic SPARK Seminar Template (/course outline for CRF)

SPARK seminars introduce students to life at a research university. They ask students to focus on the nature of inquiry by exploring a particular topic over the course of the semester, engaging with campus and/or local resources, generating research questions, and presenting original ideas in writing and other forms of communication (visual, oral, and/or numerical).

Topics will be broad enough to be viewed from multiple perspectives, but focused enough that students can engage with the issues of the topic in some depth. They should be related to an area of research and/or interest to the instructor: part of the experience of SPARK is engaging with a faculty member who is sharing their expertise and passions with students, thereby sparking their interest in the topic and/or the spirit of inquiry and research more generally.

A sampling of topic ideas: Approaching Ethical Dilemmas; National Parks and their Conservation; Food for the Planet; What is Poetry For?; Why Stories Matter; Hip-hop as Music and Poetry; Women's Rights; History Now; Money and Politics; Poverty; Art and Social Change; Challenges of Global Engineering; Water; Dirt and Soil; Intersectional Identities in the Central Valley; America's Education System; Health Disparities in California; Political Rhetoric.

General Course Learning Outcomes are categorized by three larger Outcomes and Keyed to the GE program learning outcomes:

A. Students take an inquiry-oriented approach to the world that reflects engagement with the mission and values of our research university.

They achieve this being able to do the following:

1. They generate questions, identify problems, and formulate answers by applying appropriate theoretical, evidentiary, analytical and ethical frameworks from multiple intellectual perspectives
2. They demonstrate intellectual curiosity and an understanding of the nature of knowledge, discovery, and ambiguity and of themselves as learners, identifying their own values and talents.

B. Students become equipped with multiple tools of analysis to support accepting or formulating an opinion or conclusion.

They achieve this by being able to do the following:

3. They can identify and use analytical tools from scientific, social scientific, or humanistic disciplines.
4. They are able to identify and evaluate sources of information.

Students communicate in a variety of ways to diverse audiences.

They achieve this by being able to do the following:

5. They use written, visual, oral and/or numerical modes of communication to explore and convey ideas, adjusting their communications depending on occasion, purpose and audience.
6. They work both independently and collaboratively.

Activity and Assessment:

- Courses will center around discussion-based session seminars that model collaborative inquiry based on shared readings and experiences.
- Additionally, each seminar asks students to engage in research by doing at least two small projects, which are assessed by the instructor. Between the two projects, students must do the following:

1. Define a research question.

The research question should be related to the section's topic, and the instructor will guide students in developing these questions.

2. Identify and engage with a campus or community resource.

For example: getting books out of library and writing annotated bibliography; lab tour or small experiment and written observations or report; vernal pools tour and write-up or graph of collected data and observation; attendance at a theatre production or concert and analytical review; visit to UCM art gallery and visual analysis; attendance at a campus lecture and response.

3. Conduct research.

Conducting research can involve finding books and articles and reading them; interviews; social or scientific observation, etc.

4. Communicate research in two ways, one of which is written.

For example: a lab report and a spreadsheet; an essay and an oral presentation; a written visual analysis and a PowerPoint presentation; a review and a performance; a written analysis and a data graph.

5. Reflect on ethical, local, and global issues related to the topic.

Students might do this by writing a written reflection at the end of the course, or by participating in a roundtable discussion in which they must contribute, for example.

Sample Syllabus for a UCM SPARK Seminar

“All the World’s a Stage”: Studying Performance

SPARK 010, Section 64

In this course, you will learn how to generate research questions related to performance, practice strategies for understanding and interpreting difficult texts and various types of performance, use composition as a tool for learning, improve your ability to write successful academic papers on any subject, and improve your oral delivery skills. To accomplish these goals, you will read and critique plays and essays about performance, watch theatrical, musical, and dance performances and films with a critical eye, and evaluate and respond to other aspects of daily life (football games, lectures, political debates, identity-forming) as performative gestures. In addition to thinking about what you might traditionally think of as “performance,” we will be writing about the way in which, as Shakespeare wrote, *all* the world is a stage.

In particular, we will focus on a number of forms of media, and the performance of identity in various facets of American life. We will identify the extent to which politics, the news, academia, sports, gender and racial identities, and writing itself are all performances. As such, these performances employ rhetoric, gesture, and persuasive power to convey their messages. You will have the opportunity to write about and argue for or against various social performances in this class, from the first months of the Clinton administration to March Madness, from a play *Downtown Merced* to your own identity as a Bobcat. And by the end of the semester, you will be perfecting your performance as a confident thinker, researcher, and writer who can effectively argue your viewpoint in the academic arena and wider world.

Course Learning Outcomes:

1. You will generate questions and identify problems regarding performance by engaging with course readings and viewings.
2. By exploring performance from multiple angles, you will demonstrate intellectual curiosity and an understanding of the nature of knowledge, discovery, and ambiguity and reflecting on yourself as a learner, identifying your own values and talents.
3. You will identify and in some cases use analytical tools from the disciplines of theatre studies, literature, rhetoric, linguistics, sociology, and anthropology.
4. You will identify and evaluate sources of information about performance.
5. You will convey your research and ideas in written and oral forms, with due sensitivity to audience and context.
6. You will work both independently and collaboratively.

Required Texts:

A Pocket Manual of Style, 5th edition. By Diana Hacker. Bedford, 2008.

A Coursepack containing additional readings.

In addition, students must see one theatrical production in Downtown Merced as well as one additional performative event (sports match, concert, lecture, political debate, etc.)

Requirements:

- Paper 1: Review of a Performance: Evaluation and Persuasion 20%
After reading several theatrical and film reviews, attending a theatrical performance, and recording your observation, you will write a 3-4 page analytical review.
- Paper 2: Research Paper and Argumentative Analysis 30%
You will identify a research question, find resources (books, articles, potentially media) related to your topic, create an annotated bibliography, and then produce a draft and final version of a 5-6 page research paper.
- Oral Presentation 20%
You will share your research orally (and, if you would like, visually) with the class in a 10-minute presentation.
- Reading and viewing quizzes 15%
- Participation, including in-class group activities 15%

Weekly Schedule

Reading, viewing, and assignments are to be completed by the day they appear on the syllabus.
This class is divided into two related units: during the first half of the semester, we will be looking at various performative **media**: theatre, politics, sports, advertising, music, and movies. We will then examine performances of **identities**.

Unit A: Media

Week one: All the World's a Stage

Wed, January 7:

Discuss: William Shakespeare, from *As You Like It*

Week two: Theatre and Acting

Mon, January 12:

Discuss: "Interview with Judi Dench," "Interview with Sir Ian McKellen," from *Performing Shakespeare* by Oliver Ford Davies

This week: meet with me for individual conferences about your first paper.

Wed, January 14:

Discuss: Lee Strasberg, "A Dream of Passion"

Week three: Performing Presidential Politics

Mon, January 19:

No class: Martin Luther King Jr. observance

Wed, January 21:

Discuss: Abraham Lincoln, "Second Inaugural Address"; Articles on Clinton's Inauguration

Week four: Sports as Performance

Mon, January 26:

Discuss: Michael Sokolove, "Football is a Sucker's Game"

Wed, January 28:

Discuss: Ted Kirk, for *Time*, "Where are the Women Coaches?"

Sunday, February 1: Superbowl XLIII on NBC

Week five: Advertising

Mon, February 2:

Discuss: Matthew McAllister, "Super Bowl Advertising as Commercial Celebration"

Wed, Feb 4:

Discuss: Martín Espada, “Coca Cola and Coco Frío”
“Nike’s Letter to Martín Espada,” “Martín Espada’s Reply to Nike”

Week six: Music

Mon, Feb 9:

Discuss: Steve Earle, “In Praise of Woodie Guthrie”
Bakari Kitwana, “The Challenge of Rap Music”

Wed, Feb 11:

Paper Workshops

Week seven: Movies

Mon, Feb 16:

Discuss: Reviews of Oscar nominated films, TBD

Wed, Feb 18:

Discuss: Reviews of Oscar nominated films, TBD

Sunday, February 22: The Academy Awards

Unit B: Identities

Week eight: Performing Life

Mon, March 2:

Discuss: Erving Goffman, “Performances: Belief in the part one is playing”

Wed, March 4:

Discuss: Walt Whitman, “Song of Myself”; Elizabeth Bishop, “In the Waiting Room”

Week nine: Academic Identities

Mon, March 9:

Discuss: “Doing Research” from *Rhetorical Visions*, by Wendy Hesford and Brenda Jo Brueggemann”

Wed, March 11:

Readings related to your research projects, TBD

Week ten: Nationality

Mon, March 16:

Discuss: Thomas Jefferson, “The Declaration of Independence”

Excerpts from *Hamilton*

Wed, March 18:

Discuss: Barbara Kingsolver, “And Our Flag Was Still There”

Week eleven: Virtual Identities

Mon, March 23:

Discuss: EJ Westlake, “Friend me if you Facebook: Generation Y and Performative Surveillance”

Wed, March 25:

Workshops

Week twelve: Gender

Mon, March 30:

Discuss: Steven Pinker, “Gender”

Wed, April 1:

Discuss: Deborah Tannen, "Sex, Lies, and Conversation"

Week thirteen: Racial Identities

Mon, April 6:

Discuss: Martin Luther King jr, "Letter from Birmingham Jail"

Excerpts from Ta-Nehisi Coates, *Between the World and Me*

Wed, April 8:

Discuss: Nora Naranjo-Morse, "Ta"

Dagoberto Gilb, "You Know Him by his Labors, but not his Face"

Week fourteen: Local Identities

Mon, April 13:

Discuss: Excerpts from Cherrie Moràga, *Heroes and Saints*

Wed, April 15:

Presentation of speeches

Week fifteen: The End

Mon, April 20:

Presentation of speeches

Wed, April 22:

Final reflections

Sample Syllabi from Illinois Wesleyan University's Gateway Courses:

Gateway 100 What Is Poetry For?

Prof. Kathleen O'Gorman
Fall, 2009

Category Description

Gateway Colloquia are small, discussion-oriented classes designed to develop students' proficiency in writing academic and public discourse. Although each colloquium investigates its own issue or question, all focus on writing as a major component of intellectual inquiry. Students are expected to participate in discussion and to analyze, integrate, and evaluate competing ideas to formulate their own arguments about an issue. Topics will vary by section. Students must complete a Gateway by the end of the freshman year.

Goals

- To learn to use writing as a method of discovery.
- To learn strategies of receptive, responsive, and critical reading.
- To learn to use writing to participate in public discussion.
- To practice effective small-group discussion.
- To develop strategies for producing substantial, thoughtful writing.

What Is Poetry For?

This course is an investigation into what critics and poets have said about the uses and importance of poetry, for the individual and for society. By the end of the course the students should have developed a sense of why poetry persists, of the diversity of poetic uses, and of how emphasis on the importance of some uses over others may change over time. Note that this is not a creative writing course, but the student who has never tried to write a poem, or who has never read poems for pleasure, probably has not a sufficient curiosity about the subject to be happy in this study.

Required Text

Hall, Donald, ed. **Claims for Poetry** U of Michigan Press.

Course Requirements

1. Assigned reading in above texts and all hand-out material.
2. Completion of all writing assignments.
3. Completion of mid-term and final exams.
4. Strict compliance with attendance policy.

(This one is included exactly as-is, with somewhat non-optimal formatting.)

Gateway Colloquium: “Why Talk If We Disagree?”

Spring 2016 • Instructor: Narendra Jaggi

Textbooks:

Required: *Science and its Ways of Knowing* by John Hatton and Paul B. Plouffe

Supplemental materials will be drawn from other books, but you will not need to buy these books; you can refer to them in the Ames library.

Course Overview

In this discussion-oriented and writing-intensive course, we will try to analyze some contemporary debates that continue to divide our society. The specific topics/questions will be finalized after consulting with students in the class. But, in order that you may get a sense of the class, here are some examples of issues discussed by students when the course was last offered, eight years ago. What distinguishes science from nonscience?

Should the National Science Foundation support research in homeopathic medicine?

Should same-sex marriage be legalized? Should Creationism or Intelligent Design be taught in science classrooms in our high schools? Here are two other issues of great contemporary significance that we might choose to discuss this year. What should we do to address the issue of greenhouse gases and global warming? Many conservatives are claiming that nuclear energy is the new Green: Really?

The goal of these discussions is to develop and sustain a shared commitment to evidence and reason, to create a mutually respectful semantic community where we can have authentic communication even when we disagree on substantive issues and have competing ideas.

We will use iterative writing and responsive listening as tools for discovering and shaping our own ideas and to effectively communicate them to our peers. During the semester, you will generate more than 30 pages of writing, including informal writing, drafts, and revisions. You will write four formal essays or editorials of varying lengths. I will determine the topics for two of these, but the topics of the remaining two essays will be decided in a more collaborative fashion that invites input from students. These writing assignments will give you multiple opportunities to learn, practice and develop your critical thinking skills, i.e., investigation, speculation, drawing inferences, arguing logically, thinking independently, analyzing claims, and synthesizing ideas and information into coherent essays.

The guiding principle for writing in this course is captured by the following quote from Hemingway. (Really?)

Another writer, not as well known as Hemingway, said the same thing but in a much less eloquent fashion: “There is nothing called writing, only rewriting.” ~ Narendra Jaggi

Therefore, we will engage with your writing as a process that will include the following steps: creating an outline, getting feedback, draft, getting feedback, revision, getting feedback, and then submitting the final version. For your final essay however, you will NOT receive any feedback.

Our first discussion topic, which will lead to the first essay assignment, will be the question of how one might, or ought to, think and talk about the distinction between science, non-science, pseudoscience, and junk science, and how this, in turn, might or ought to inform many important personal and public choices. The primary text for this topic will be a skinny collection of twenty short essays, titled: *Science and its Ways of Knowing* by John Hatton and Paul B. Plouffe. Of these 20 essays, we will engage three directly, and in depth, during class. The rest will serve as

pertinent writings to draw upon as you deem fit for your writing assignments.

Grading Criteria

The following articulation of the grading criteria is intended to communicate to you what are widely considered to be markers of good and effective writing. So, you should read this section closely.

Your grade will be determined by the quality of your input during in-class discussions, and by the quality of two kinds of written work that you will produce during the course of the semester.

Re: In-class discussions

You will be expected to make substantive contributions, on a regular basis, to the in-class discussions. Regarding your contributions, I will ask myself a number of questions. Does your participation help move the conversation forward? There are many ways to do this: by bringing in pertinent evidence, by clarifying or sharpening the question at hand, by challenging claims, by questioning and revealing hidden assumptions, by drawing connections, by locating inconsistencies in arguments, by reframing questions, by sharing pertinent experiences, by synthesizing arguments, by dissecting claims, and so on. Are you able to disagree with your classmates and your instructor without being disagreeable?

To what degree do you have the intellectual courage, and the humility, to rethink your opinions when persuasive evidence for the opposing viewpoint becomes available?

Re: Written work:

During this course, you will be expected to produce two kinds of written work: daily “meta-thoughts” and four formal essays.

“Meta-thoughts”:

During the first three weeks, after each class period, you will compose a brief reflection upon what you think transpired in the class on that day, how it affected you personally, and where you would like the discussion to go during the following class period. These will be due at 11:59 P.M. on that very evening. I call this exercise “meta-thoughts of the day”, a made-up word by which I try to convey that I want you to think about what you (and your class-mates) were thinking. Clearly, this writing will be informal in structure, but often quite substantive in content. For most students, it ends up being an intellectual diary of sorts.