

## General Education Program Review Self-study

Authored by the AY 2014-2015 [GE Subcommittee](#) whose members include Anne Zanzucchi (GE Subcommittee Chair and Merritt Writing Program Co-Director), Charles Nies (Interim Vice Chancellor, Student Affairs), Elizabeth Whitt (Vice Provost and Dean for Undergraduate Education), Harish Bhat (Faculty, Applied Mathematics), Jane Lawrence (Special Assistant to the Chancellor), Katie Brokaw (Faculty, English Literature), Kelvin Lwin (Faculty, Computer Science and Engineering), Laura Martin (Coordinator of Institutional Assessment), Rose Scott (Faculty, Psychology), and Wil Van Breugel (Core 1 Co-Coordinator and Physics Faculty).

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### GE Self-Study Report, General Overview

The overall goal of this report is to describe the present state of General Education (GE) at UC Merced (UCM). In broad terms, the report traces a trajectory of past, present, and future, with greatest attention to the present state of GE as a basis for obtaining feedback. Academic program review at UC Merced involves a set of guiding questions, which are section titles and topics to organize self-study reports generally and this one specifically. Therefore, this report begins with a general overview of the history and context of GE at UCM. In the sections that follow, we address the general academic program review questions: “What are you doing?”, “Who is doing it?”, “How are you doing it?”, and “How well are you doing it?” The report concludes with a description of potential future directions and associated questions about what GE experiences at UC Merced could include at UC Merced. Ultimately, the hopes and purpose of this review are to re-examine GE and to develop a sustainable, integrated program.

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## I. Introduction, Program Mission and History

**Section Synopsis:** What follows is intended to introduce the reader to general education at UCM, including its history and the internal and external contexts that have shaped its development. The section concludes with a brief description of the ways in which current GE planning relates to broader institutional planning.

### GE Program Mission and History

In the University of California system, General Education (GE) by policy constitutes one-third of undergraduate course credit and in practice includes extracurricular activities. General Education requirements in the UC system are related to [California's Master Plan for Higher Education](#), in which GE is foundational (and transferable), providing breadth of study to complement specialization in major programs. At UCM, UC system-wide GE requirements ([Intersegmental General Education Transfer Curriculum](#)) are satisfied with WRI 10: *Reading and College Composition* and a Math / Quantitative Reasoning course<sup>1</sup>. Typically, UC students complete the other ~35-40 units of GE coursework in keeping with a menu-like system of requirements established by the faculty of the school<sup>2</sup> housing an associated major program. Thus, at UC Merced, the majority of a student's GE coursework is determined at the school level and delivered through courses associated with majors (other than their own) both within and outside of their school.

UC Merced's GE program was founded in tandem with our [institutional mission statement](#) which states, "interdisciplinary practice in research will nourish undergraduate learning, building a foundation to connect the ways that academic disciplines understand and grapple with society's problems." A mixture of coursework and co-curricular experiences also are emphasized; UC students will engage in "education inside and outside the classroom, applying what they learn through undergraduate research, service learning and leadership development." Our location in the Central Valley also is highlighted in this mission: "[the] natural laboratory at home can extend what is known in the state, nation and world." These elements of the institutional mission were reflected in early priorities and frameworks for GE.

UC Merced's general education program traces its origins to planning that took place before the first undergraduate class matriculated in 2005. In 2003, to initiate our GE program, a team of senior faculty and administrators participated in an Institute on General Education and Assessment, sponsored by the Association of American Colleges and Universities in Asheville, North Carolina. At this Institute, the team developed a set of principles (the "Eight Guiding Principles") to guide the focus, requirements, design, and assessment of general education at UC Merced, and recommended the basic structure of the GE program (See Appendix A: 2003 GE Plan, p. 3). The structure consisted of a pair of core general education courses, one (Core 1) during freshman year and the second (Core 100) during the junior year, together with a set of breadth requirements specific to each of UC Merced's three schools (Engineering, Natural Sciences, and Social Sciences, Humanities, and Arts) for a total of about 45 units. Under this model, foundational and breadth requirements were to be delivered through school and major-specific

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<sup>1</sup> For math and quantitative literacy, course requirements vary according to major requirements. For a representative requirements summary, please see: <http://ssha-advising.campuscms.ucmerced.edu/students/ssha-general-education/mathematical-quantitative-reasoning-courses>

<sup>2</sup> UC Merced has three schools: The School of Engineering, the School of Natural Sciences, and the School of Social Sciences, Humanities and Arts.

requirements. In 2004 UC Merced's founding faculty members reviewed and modified the team's recommendations, settling on the current decentralized approach. College One, UC Merced's only college, was also founded at this time to be "your home for General Education." Early College One planning (2007) reflected potential interest in a college system at UCM modeled on those at Santa Cruz and San Diego campuses. Now, College One functions as a fiscal and administrative entity within the Office of Undergraduate Education and, in theory, all UC Merced faculty members are considered part of College One.

In our short history, meeting the original design aspirations for a GE program has been both rewarding and challenging. Since 2005, WRI 10: *Reading and College Composition* and Core 1: *The World at Home* have been required of all UC Merced students. The rest of the GE curriculum is organized into a school-based distributed course model. Core 1's integrative design features the "two cultures"<sup>3</sup> (humanities and sciences perspectives) and is intended to introduce students to "UC Merced's faculty and research, with outcomes focused on writing, quantitative reasoning, critical thinking, and understanding events in their historical and cultural contexts" (AY [2013-2014 Course Catalog](#)). Core 100: *The World at Home, Planning for a Complex Future* was designed to function as the second half of this Core course sequence with a similar emphasis on interdisciplinary perspectives on course topics with written, quantitative and critical thinking outcomes ([Archived Course Catalog](#), AY 2008). The Core 100 curriculum was delivered by Senate faculty members from each School in 2007, its inaugural year. Subsequent sustainability issues with Senate teaching credit and Core 100's course format led to suspension of this institutional requirement in 2010. See Appendix Item B: 2009 GE report, Appendix Item C: 2011 GE report for details.

To put it another way, our early institutional context influenced our Core ambitions and challenges. On the one hand, our small size created an unusual opportunity for Senate faculty to collaborate across disciplines and Schools to offer Core 1 and Core 100 courses. That size also was a limitation as these same Senate faculty members also had to engage in academic planning to build discipline-specific undergraduate and graduate programs. Thus, interdisciplinary GE courses competed with discipline-specific programs for limited faculty resources, leading to the aforementioned suspension of Core 100. Core 1 still is offered, but, as our enrollment has grown, so has Core 1, and a Core 1 management plan is needed, particularly in light of plans to add another 3,000 students in the next six years<sup>4</sup>. Looking forward, these constraints are not particular only to Core 1 (or Core 100). As the campus seeks to expand its graduate enrollment (as part of planning for 2020) and develop a robust program of graduate education, we will continue to face challenges in delivering an integrated GE experience. Indeed, an overarching question for us as we plan for the future is what experiences GE at UC Merced should include; we elaborate on that question in the final section of this self-study.

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<sup>3</sup> This enduring literary phrase is from C.P. Snow's Cambridge lecture and subsequent book *The Two Cultures* (1959), which emphasized that "the intellectual life of the whole of Western society is increasingly being split into two polar groups," consisting of scientists on the one hand and literary scholars on the other. Although potentially a dated and simplified binary, the two cultures emphasis on the shortcomings of specialization influenced our early GE planning for Core 1 and Core 100, particularly with regard to integrative learning.

<sup>4</sup> In some early plans, Core 1 was to be limited to 5,000 undergraduates, with Core 2 following for the next enrollment phase with an additional 4,000 undergraduates. Given our 2020 trajectory to build the campus population to 9,000 undergraduates, it seems critical to address how Core 1 and other potential iterations will be conceptualized and sustained at our campus. Who is responsible for Core 1's (or a theoretical Core 2's) resources, management and instruction (beyond the Merritt Writing Program). Considerations for additional Core experiences might include an honors track, with more direct contact with research active faculty.

*In sum, although initial plans for a GE program at UCM emphasized interdisciplinary goals, GE has been delivered almost entirely through discipline-specific courses associated with degree program requirements and the menu-based system of breadth offerings specific to each school.*

The current distributed organization of GE also has created barriers to systematic assessment of outcomes. The evaluation of the GE curriculum has been limited to the assessment of two standalone GE required courses, Core 1 and WRI 10, by the Merritt Writing Program. As noted in our [2011 Educational Effectiveness Report, prepared for initial regional accreditation](#): “our efforts to address General Education and to help students with the transition to the university speak profoundly to two major difficulties: 1) breaking down institutional silos so that the institution focuses on integrative learning, and 2) figuring out how to assess integrative learning” (p. 46). In the [Commission Action Letter](#) that followed, team members noted that UC Merced’s faculty ownership over assessment in undergraduate majors and minor programs was remarkable, but they also recommended increased attention to assessing general education, co-curricular programs and administrative units.

Now UC Merced is engaged in [strategic academic planning focused on 2020](#), the point at which the institution is expected to have increased total student enrollment from 6,000 to 10,000 students. The 10,000 total is anticipated to include 1000 graduate students, nearly three times what we have in fall 2014. This important moment in our short campus history creates an opportunity to re-examine GE and to develop a sustainable GE program, including a plan for assessment of GE, for the future.

The hopes and purpose of this review are to re-examine GE and to develop a sustainable, integrated program. Therefore, as part of the program review of GE, we seek guidance in the following areas:

- Development of a broadly inclusive GE program that is reflective of our institutional context
- Processes for systematic and sustainable assessment of GE
- Structures for allocating appropriate resources and incentives to engage Senate faculty in the oversight and delivery of GE

## II. What Do You Think You Are Doing?

**Section Synopsis:** This section provides an overview of how GE has been designed and implemented at UC Merced and what frameworks and principles have informed its design and implementation. At UCM, Eight Guiding Principles have organized a focus for GE outcomes. A discussion of our university and school catalog, in tandem with early planning documents, outlines a mission and set of goals for GE.

**Guiding Principles and GE Curricula:** At UC Merced, GE's concepts and outcomes are defined by the [Eight Guiding Principles for General Education](#):

- Scientific Literacy: To have a functional understanding of scientific, technological and quantitative information, and to know both how to interpret scientific information and effectively apply quantitative tools;
- Decision Making: To appreciate the various and diverse factors bearing on decisions and the know-how to assemble, evaluate, interpret and use information effectively for critical analysis and problem solving;
- Communication: To convey information to and communicate and interact effectively with multiple audiences, using advanced skills in written and other modes of communication;
- Self and Society: To understand and value diverse perspectives in both the global and community contexts of modern society in order to work knowledgeably and effectively in an ethnically and culturally rich setting;
- Ethics and Responsibility: To follow ethical practices in their professions and communities, and care for future generations through sustainable living and environmental and societal responsibility;
- Leadership and Teamwork: To work effectively in both leadership and team roles, capably making connections and integrating their expertise with the expertise of others;
- Aesthetic Understanding and Creativity: To appreciate and be knowledgeable about human creative expression, including literature and the arts; and
- Development of Personal Potential: To be responsible for achieving the full promise of their abilities, including psychological and physical well-being.

The Eight Guiding Principles are intended to be comprehensive. Scientific literacy and aesthetic appreciation reflect disciplinary contexts, applicable across fields of inquiry. Communication, Teamwork, and Decision Making relate to concepts of critical thinking. Finally, Ethics, Personal Potential, and Self and Society highlight civic engagement themes.

These Eight Guiding Principles have played an important but limited role in organizing undergraduate education and general education emphases since 2003. For example, Student Affairs worked towards intentional alignment of [outcome statements for the Division of Student Affairs](#) with the Eight Guiding Principles, which reflects early consideration of the role co-curriculum plays in student development of shared learning outcomes. Further, the Eight Guiding Principles functioned as institutional outcomes, at least for undergraduate education as highlighted in our 2011 Educational Effectiveness Review report<sup>5</sup>.

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<sup>5</sup> For planning associated with our initial accreditation processes, Faculty Assessment Organizers completed a curriculum map to illustrate how Program Learning Outcomes map onto GE goals (as defined by the Eight Guiding Principles). This curriculum map has been the extent of formal GE assessment in majors and minor programs.

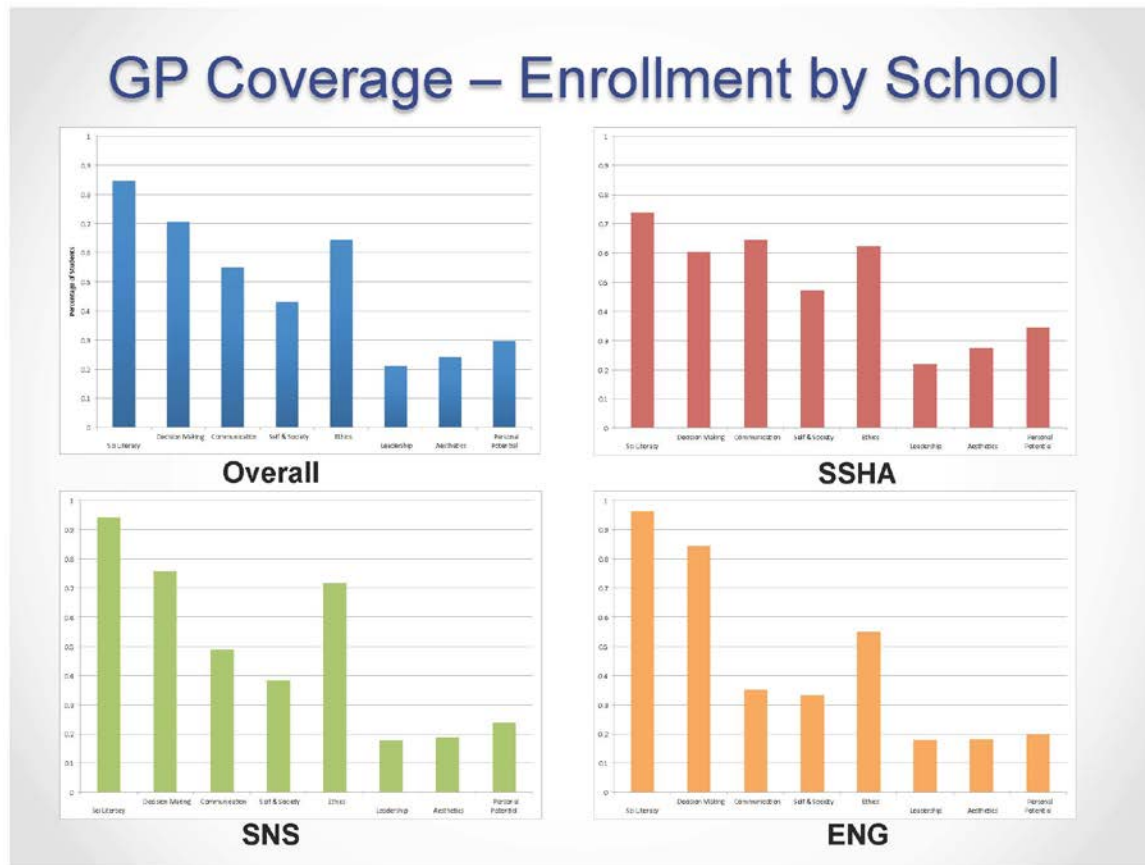
Guiding Principles primarily serve as a reference point for [proposing a new GE course](#). To be approved as a GE course, the course must address at least three of the Eight Guiding Principles as assessed upon course review and approval by Undergraduate Council. At this point in our campus history, then, the Eight Guiding Principles primarily inform new GE course development but not its assessment. Generally, these Eight Guiding Principles have not yet directly integrated into formal assessment processes, with the exception of required GE courses.

At the course proposal level, we can contextualize how Guiding Principles are addressed thus far. From Banner data (from 2008-2013), we have had at least 350 GE courses offered at least once, with 335 in SSHA and fewer than 15 in SNS and ENGR. When analyzed by course and associated guiding principles, 88% of GE courses identified as supporting Communication, 78% for Self and Society, and 67% for Aesthetics. (For more information, see Appendix D: Banner GE Enrollment and Analysis.) This analysis, then, tells us something about what faculty desire each course to include and then cumulatively what emphasis emerges.

College One and School GE descriptions reflect early program concepts. The UC Merced catalog describes our GE program as supporting “the practical skills and diverse knowledge base that [a student] will need to become an informed citizen and good problem solver after graduation” (AY 2013, p. 55). School requirements in the catalog also emphasize GE programming, noting required credits and emphasis areas for course selection. Core 1 is described in the School of Engineering (SE) and School of Natural Sciences (SNS) catalog sections: “This course lays the foundation in skills and ideals articulated in the UC Merced Guiding Principles for General Education (see General Education section of this catalog). These include decision-making, communication, ethics, responsibility, leadership, teamwork, aesthetic understanding, creativity and an appreciation of diverse perspectives in both the global and community contexts. All UC Merced students take Core 1 during their freshman year” (SE, p. 59 & SNS, p. 69). Each school includes an educational philosophy statement. Since GE is largely delivered by the schools, these educational philosophies seem relevant to understanding the broader context of GE at our campus. For example SNS emphasizes themes of discovery, stewardship and innovation; the School of Social Sciences, Humanities and Arts (SSHA) features civic responsibility, decision-making, and applied learning opportunities (SNS, p. 69; SSHA, p. 84). This panoply of school-based GE requirements, with broad educational philosophies, provides some insight into how educational experiences are conceptualized across schools.

Course enrollment data (2008-2013) reveal the three predominant Guiding Principles are Scientific Literacy, Decision Making, and Ethics. This is particularly so for ENGR and SNS. Enrollments in SSHA, however, are fairly evenly distributed across five of the eight (see Figure A below). Experiences differ considerably by school, particularly in the School of Engineering. Whereas the catalog suggests that students will experience breadth and depth, with broad exposure to the Guiding Principles (see Appendix Item E: School Catalog, GE Requirements), the following data summary suggests limited accomplishment of these goals.

**Figure A: Enrollment Data for Guiding Principles, by School**



Ultimately these data about course proposed Guiding Principles have limited value, in that this information can only illustrate initial faculty intent to emphasize some number of guiding principles. There is no evidence that a course proposal process is a meaningful activity or that the outcomes are subsequently part of course planning. Further, course approvals alone do not relate to what students actually experience or learn. What is important to emphasize here is that we have no mechanism or assurance that our students' educational experiences address all (or even a subset) of the Eight Guiding Principles. Further, there is no evidence that these Eight Guiding Principles are accomplished (or "covered") in proposed courses. Development of a more intentional GE program, including ongoing engagement with outcomes, is an important priority at UC Merced.

### III. Who is doing it?

**Section Synopsis:** This section highlights which academic programs deliver GE curricula and provides an overview of the distribution of faculty groups who offer instruction in GE courses.

**Program Delivery:** While Schools deliver most GE content, College One is described in our course catalogs and campus website as “your home for General Education.” As noted the previous section, College One was originally intended as the first of several undergraduate colleges at UCM, but additional colleges were not developed. Its role as “home for General Education” – what that could mean for GE at UCM, for example -- also has not been developed systematically. Now, College One is part of the Office of Undergraduate Education, which administers Core 1. Undergraduate Education also is the administrative and fiscal home for the Merritt Writing Program, which -- among other GE and disciplinary priorities -- offers WRI 10: *Reading and College Composition*. Therefore, UCM’s two institutional GE requirements are located in the Office of Undergraduate Education. The rest of GE coursework is delivered in the schools.

Who teaches GE is connected to our early campus history, characteristics of current faculty (ladder rank and lecturing), and growth of undergraduate and graduate programs. Based on [2013 institutional data](#) “Faculty Headcounts,” UC Merced employs 168 Senate faculty and 149 Unit 18 lecturers (Non-Senate faculty). In 2014, the campus recruited about 40 new Senate hires. With 210 Senate faculty at the time of writing, our Senate numbers are about two-fifths the size of the next largest UC campus (Santa Cruz) and less than one-eighth the size of the largest (UCLA). Our 2020 target is 400 Senate faculty members. Our limited faculty size is to scale with a small undergraduate and graduate population; however, it is worth noting that we still need to deliver a full-scale UC campus with relatively few faculty members. This means, then, our campus employs a relatively small number of ladder rank (Senate) faculty members to develop and deliver the campus’ general education, undergraduate and graduate programming, relative to this faculty group also engaging in personnel reviews, new hire recruitment, committee service (system-wide, local Senate, program, and school), course and program assessment, and faculty administrative responsibilities.

**Faculty Instructors:** At UC Merced, the extent to which GE instruction is distributed among ladder and lecturing faculty has not been systematically examined. To identify “Who is doing” GE at UCM, the GE Subcommittee collaborated with Institutional Research and Decision Support to generate and analyze instructor data for the 23 GE courses that are taken most frequently to fulfill GE requirements. These top 23 GE courses constitute approximately 70% of coursework in our current GE program (see Appendix D: Banner GE Enrollment Analysis). According to the results of analysis of instructor-type data, 92% of instructors in those 23 courses are Unit 18 lecturers (see Appendix F: GE Instructor Type). Thus, at UC Merced, Unit 18 lecturers play a significant role in the delivery of undergraduate education.

Since UC Merced’s start-up phase could seem anomalous relative to more established UC sister campuses, to what extent are these faculty patterns comparable to other UC campuses? According to the Academic Personnel Manual, teaching loads are heaviest for lecturers as part of the rationale for the appointment (see [Academic Personnel Manual 238, 20.C](#)). More often than not Unit 18 lecturers teach lower-division, foundational courses and nearly all writing and language courses ([UC Accountability Report](#), p. 124). Currently about 2,100 full-time Unit 18 lecturers teach with 8,700 Senate faculty colleagues (UC Office of the President: [FTE, April 2014](#)). In general, based on foundational and



writing/language course data, it seems reasonable to presume that Unit 18 lecturers play a significant role in the delivery of GE at UC campuses, however not to the same extent as currently is the case at UC Merced.

There are two comments to make about the instructor type data. First, the reliance on Unit18 lecturers for delivery of the top 23 GE courses has occurred due to campus growth, not because of any explicit institutional policy. Second, the data support the view, articulated in Section I of this self-study, that the early years of campus growth have focused the energies of Senate faculty on building disciplinary undergraduate and graduate programs. Because the campus has now entered a new phase of growth (evidenced, for instance, by Project 2020 strategic academic focusing), it is an opportune moment to reconcile the instructor type data with the fact that Senate faculty have authority and supervision over the curriculum (via the [Standing Orders of the Regents, 105.2 b](#)). This data may warrant Senate and Administrative attention to inform concrete recommendations about Senate engagement in the design and delivery of GE.

#### IV. How are you doing it?

**Section Synopsis:** This section describes curricular experiences associated with GE courses at UCM. Of particular focus will be how GE is currently designed and implemented.

**Overview:** General Education at UC Merced involves requirements that are system-wide, institutional, and school-based. Each of these three types of requirements is described in this section. System-wide, the University of California requires foundational courses in writing and math, and our campus requires Core 1 of all undergraduate students. Each school has its own set of GE requirements, all of which generally focus on coursework to introduce or reinforce skill development or encourage participation in breadth and cross-disciplinary experiences. These breadth and cross-disciplinary GE requirements tend to be open choice (e.g. an upper-division humanities course) and are fulfilled almost entirely through courses offered by the School of Social Sciences, Humanities, and Arts (SSHA).

As we have noted elsewhere in this report, UC Merced’s GE requirements are almost entirely driven by major and school requirements; however, we have little information about how GE courses integrate with each major, or whether they are intended to do so. In theory, GE can provide the coherence and integrative opportunities to complement the more narrow focus of disciplinary degree programs, but the extent to which coherence and integration are features of GE at UC Merced is not yet clear.

**GE Courses Required of All UC Merced Undergraduates:** The following descriptions highlight elements of GE courses, required of all UC Merced undergraduates. As a reminder, WRI 10 and Mathematical/Quantitative Reasoning are UC GE requirements and Core 1 is a UCM GE requirement. The following descriptions, then, highlight key elements of our required GE courses (Core 1, WRI 10, and Mathematical / Quantitative Reasoning) with a focus on how this foundation is designed to serve majors.

**Core 1:** Core 1 has been a campus requirement since fall 2005. From 2009 to 2013<sup>6</sup>, 5439 UCM undergraduates completed Core, with an 84% first-time pass rate and a grade mean of 2.8 (see Appendix G: Core 1 and WRI 10 Enrollment and Grade Data).

Core 1 is a writing-intensive lecture and discussion course designed to introduce students to UC Merced’s faculty research expertise. The lecture portions of the course meet in our large (350-seat) lecture hall; and two lecture sections of Core 1 are offered in the fall and three lectures are offered in the spring. The weekly one-hour lecture is presented by guest speakers, most of whom are UC Merced faculty members. The discussion section instructor is the instructor of record and she or he meets with students twice weekly for a total of three hours. Discussion sections enrollments are capped at 20 students; approximately 26 sections are offered in the fall and 52 sections in the spring. Core 1 is also offered in the summer (2-3 sections); summer demand has been limited so far but may increase as a result of the unit limit policy, which is described below and in Appendix H: Core 1 Unit Limit Policy.

The course takes an interdisciplinary approach to explore how different experts view the world and analyze information both qualitatively and quantitatively, based on C. P. Snow’s “two cultures” of –

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<sup>6</sup> Our institutional analysis of required GE grade and enrollment data is from 2009 to 2013, within a typical program review period of five years.

roughly -- science and literature. Core 1 is organized into modules by topics of faculty research interest. These modules address, broadly, the overall theme of Core 1, “The World at Home,” beginning with origins of the universe. For example, the “origins” module includes lectures and readings about local Maidu Indian cosmology (from Anthropology and History faculty) and the Big Bang theory (from Physics and Astronomy faculty). Core 1 draws on a range of disciplinary knowledge and practice—from varieties of statistical analysis and explanation that are common in the sciences (including but not limited to such fields as astronomy, computational biology, environmental hydrology, geoenvironment, and public health) to means of language and argument analysis that are common in the humanities and social sciences (including but not limited to such fields as cognitive science, political science, sociology, anthropology, literature, and art). Course assignments include journals about readings, two quantitative assignments, an analysis piece, a collaborative project, and a cumulative essay.

***WRI 10: Reading and College Composition*** focuses on “effective use of language, analysis and argumentation, organization and strategies for creation, revision and editing” ([UCM Catalog, AY 2012-2013](#), p. 179). With an emphasis on rhetorical traditions, WRI 10 is designed to prepare students to write evidence-based argumentative texts. Intended course outcomes include synthesizing complex ideas, arguing with a rhetorical purpose, integrating feedback and primary/secondary evidence, and collaborating successfully with peers. These course outcomes relate to all of [UCM’s Eight Guiding Principles](#), particularly Communication, Decision Making, and Self and Society.

Capped at 20 students per section, WRI 10 includes essays, oral presentations, an annotated bibliography, research paper and final portfolio that culminate in at least 8,000 words. Portfolios and diagnostic essays are reviewed twice a semester by all full-time MWP lecturers for program assessment, grading calibration, and curriculum review. From 2009-2013, 4342 undergraduates completed WRI 10, with 91.5% pass rate (in most cases on first try) and a grade mean of 2.92 (see Appendix G: Core 1 and WRI 10 Enrollment and Grades Data).

Core 1 and WRI 10 were designed to be first-year courses (Core 1, in particular, by catalog description). Without institutional requirement policies, though, enrollment trends are inconsistent with what was intended. During 2011-2013, for example, about 40% of Core 1 enrollment was sophomore-level. School of Engineering students complete WRI 10 in their sophomore year and many take Core 1 in the sophomore year as well; this is explained by SOE advisors as a result of the need to take SOE prerequisites in the first year. In May 2013 the GE Subcommittee, with approval of the Undergraduate Council, instituted a Core 1 unit limit to encourage freshman enrollment, which seems to be shifting the focus to a first-year experience course (see Appendix H: Core 1 Unit Limit Policy). Continued efforts are needed to position WRI 10 and Core 1 in an effective, deliberate GE course sequence.

***Mathematical / Quantitative Reasoning:*** The focus and content of this requirement differ by a student’s area of study -- potential emphases include calculus, logic, spatial analysis, and statistics. For example, majors in the School of Social Sciences, Humanities, and Arts often satisfy this requirement through applied data analysis courses in disciplines such as economics, psychology, sociology, and political science. An example of such a course is Psychology 10: *Analysis of Psychology Data*; this course satisfies the Mathematical / Quantitative Reasoning requirement and is taken primarily by SSHA majors, Psychology minors and Human Biology majors. PSY 10 has served a considerable number of GE

students<sup>7</sup>, second only to the calculus series (Math 11 and 12 and Math 21 and 22) offered by the Applied Mathematics department.

The benefit of having major programs develop applied mathematics courses that suit disciplinary needs is the potential for high levels of integration and relevance. Some disciplines, though, are disadvantaged by this arrangement, particularly Humanities programs (English, History, Arts, and Spanish) that typically do not include quantitative literacy among intended outcomes of the major.

**GE School and Major Requirements:** At UC Merced, school requirements include 35-40 units of GE coursework in addition to the institutional GE requirements. Major requirements may define, more or less prescriptively, what GE courses are needed to be completed and why.

*Catalog Descriptions and Grading Standards:* The three schools at UCM have established grading standards for GE requirements as well as for the major (see Appendix I: UCM Catalog, Grade Policies). In the UC system, a C is considered fair work and is often the passing standard; a D+ to D- range is technically passing and without further qualification would be considered satisfactory. With respect to successful completion of major requirements, all three UCM Schools require at least a C-. At UCM, then, C- is the standard for major course completion. For GE course completion, however, the standards vary considerably. In the School of Engineering, a C- is the minimum standard for all coursework: pre-requisite, major, or GE. In the School of Natural Sciences (SNS), a C- is the minimum standard for all SNS and major courses, while a D- is the minimum for GE courses taken outside of the school. This implies a double standard, as some courses taken within the school are satisfied with a C range grade; whereas those courses outside of the school can be satisfied by a D range grade. Similarly in the School of Social Sciences, Humanities, Arts (SSHA), the catalog states that a C- is required to satisfy pre-requisites to courses and major courses; the catalog does not make any statement about minimum grade requirements for GE courses for SSHA majors. Thus, the minimum requirement defaults to institutional policy, leaving a D- as acceptable for GE courses completed in and outside of SSHA.

These inconsistent expectations introduce difficult questions: Why do our standards for satisfactory performance for GE differ across schools and differ from major programs? Why are expectations for major courses and prerequisites in SNS and SSHA higher than for GE courses? One might interpret these inconsistencies to imply GE would benefit from institutional conversations, and planning, about expectations for GE and student performance in GE across the schools and across majors.

*Menu System:* To conduct enrollment analysis, the GE Subcommittee worked with the Office of the Registrar in 2013 to identify all GE courses and create Banner fields for related Guiding Principles. Our focus was on (1) how many courses are designated as GE, (2) which Guiding Principles were identified with GE course approvals and (3) how often students take each GE course (with option to disaggregate information by school, major, and other factors). From our review of this data, we were able to identify the scale of UCM's menu system, particularly given our early history and limited number of undergraduate major programs. Nearly every proposed SSHA course is identified as GE (~400). Fewer than 12 science (SNS) and engineering (ENGR) courses are identified as GE; all 12 are lower-division, foundational requirements. As noted elsewhere in the report, 23 courses account for approximately 70%

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<sup>7</sup> According to institutional course enrollment data, 2,011 GE students were served by PSY 10 (2009-2013). Given our current scale of 6,000 students, this is a considerable piece of quantitative / mathematical reasoning GE credit.

of GE enrollments. Taken together, these data suggest the need to examine the extent to which current practices achieve the goals for breadth we claim for GE.

**Upper-Division GE:** As emphasized throughout the self-study, upper-division GE is almost entirely a menu-based system. Our campus has attempted two models for a common GE course experience at the upper-division level, with Core 100 and Writing in the Disciplines.

*Core 100:* A required upper-division Core model (Core 100) was offered in 2007 and then suspended by Undergraduate Council in 2010 for further review and recommendations. Core 100 was intended to provide a common intellectual experience, focused on collaborative learning opportunities with an interdisciplinary team-authored report on a local issue relevant to UCM research expertise. Similar to Core 1, the course included a lecture with credit-bearing discussion sections. Core 100 was led by Senate faculty, with MWP leadership on the planning committee and volunteer writing workshops to support teams. Because of concerns about the sustainability of the course as student enrollments grew, Core 100 was suspended by Undergraduate Council in 2010 for further review and recommendations. In 2011, the Interim Vice Provost of Undergraduate Education (Jack Vevea) coordinated a team of UCM faculty to participate in an AAC&U retreat to determine if there were cost-effective alternative GE models that could sustain the Core 100 ideal (Appendix C: 2011 GE Report).

*Writing in the Disciplines:* After the first year of Core 100 and prior to its suspension by Undergraduate Council (UGC), an interim solution was to require WRI 100: Advanced Composition as an upper-division alternative. This interim requirement created a focus on writing in the disciplines within majors and schools. The WRI 100 requirement was dissolved with the suspension of Core 100 by UGC in 2010; however, upper-division writing courses are required by some majors or by schools. Since 2006, the School of Natural Sciences has had a communications requirement that is significantly met by WRI 116: Writing in the Natural Sciences. The Psychology program collaborated with the MWP in 2010 to require WRI 101: Writing in Psychology. In 2012, the School of Engineering required that all Engineering majors take an upper-division writing course, WRI 119: Writing in Engineering.

With Core 100 and interim solutions, upper-division GE has included a writing emphasis. A comprehensive and sustained discussion about how to define and resource upper-division GE experiences is a continued need.

## V. How well are you doing it, and how do you know?

**Section Synopsis:** This section provides an overview of current GE assessment practices, with attention to UCM student, faculty and staff perspectives on GE learning outcomes. This part of the report concludes with a summary of issues we face in defining and assessing GE learning outcomes.

To establish baseline GE data, the GE Subcommittee initiated several assessment projects to document faculty feedback, student experiences, and significant enrollment patterns. In general, we have learned from this self-study process that UCM does not have a defined GE program, either by organization or recognition by current faculty, staff and students. Students, staff and faculty struggle to describe GE at UCM, and there seems to be little consensus or awareness of what GE is, how it's implemented, or what purposes it serves.

**Perspectives on General Education:** To understand how faculty, staff, and students at UCM experience GE, we conducted focus groups and analyzed relevant data from the UCM Graduating Senior Survey.

**Faculty and Staff Perspectives:** The GE Subcommittee held focus group meetings with faculty and staff, followed by a brief survey about the Eight Guiding Principles (Appendix J: Faculty & Staff, Focus Group Letter and Survey). We met with all School Curriculum Committees, Undergraduate Council, Psychology professors (a program that offers many of the most popular GE courses), Academic Advisors, Librarians, instructors in the Merritt Writing Program, Student Affairs administrators, and Bright Success Center staff.

Our goals and interview questions were highlighted in the invitation memo: “We are interested in your broader perspective as faculty and staff focused on undergraduate education at UC Merced. The following guiding questions will inform our discussion: *What do you think does or should distinguish our graduates? What general abilities and knowledge do we want to see in any student who graduates from UC Merced? What role does GE play in these aspirations?*” The agenda included a brief overview of GE at our campus, discussion of the meaning of the degree and the role of GE in the broader educational experiences of UCM graduates, and highlights from Banner enrollment data (summarized in Figure A on p. 7). Following these meetings, a survey about the relevance of the Eight Guiding Principles circulated for feedback.

Discussion in these sessions tended to emphasize guiding ideas for GE, with commentary about the distinctive aspects of an education at UC Merced. Broadly from the focus groups, we engaged in discussing the meaning of undergraduate education at UC Merced, leading to the role of GE relative to this vision. What we found from these discussions is that generally participants found it easier to engage with GE and questions specific to purpose and meaning of GE, including the Eight Guiding Principles, than to discuss the meaning of the degree and the role of GE in that larger vision. With this focus on the particular rather than the broad and guiding concepts driving a GE program, we found that responses about GE were diffuse and inconsistent. (For more information, see Appendix K: Faculty and Staff, Focus Group Data.) These issues with the focus group data, in part, motivated the GE retreat in May 2014 which concentrated on developing hallmarks for an undergraduate education at UCM and then associated GE programming priorities.

After the interviews, participants were invited to complete a brief survey about the Eight Guiding Principles. Respondents were divided evenly (20% each) among the Library, MWP, SSHA, SNS and Student Affairs (n=16 total, which is limited and self-selected representation overall). In general, participants described the Guiding Principles as important with varying combinations of emphasis. For example, when asked about which outcomes may be most important (Q#2), respondents consistently noted at least three options with no clear consensus about priority. Overall importance of guiding principles tended to be emphasized, with one representative comment being: “The \*collection\* of the 8 Guiding Principles of GenEd is particularly important; they reinforce each other.” Overall, a desire for further discussion and clarification about GE principles is evident from the survey responses, particularly in the final question about how complete the current guiding principles are: “The overarching outcomes are complete, but the skills listed within are incomplete or inaccurately focused.” (For more information, see Appendix L: Faculty & Staff, Eight Guiding Principles Survey Results.)

The overarching message from the focus groups was that there is no consistent understanding of GE outcomes across staff and faculty members at UC Merced. Further, the need to develop both a framework and GE outcome statements was another important conclusion from the data.

**Student Perspectives:** The following summarize data about students’ perceptions of GE collected in 2013 via focus groups (by Schools and within Student Affairs units) and institutional survey data.

*GE Focus Groups: Student and Academic Affairs:* In Spring 2013, the GE Subcommittee coordinated with Students Assessing Teaching and Learning (SATAL) to provide two focus group meetings with students. The goal was to gather student perspectives about the purpose of GE and about their self-assessed proficiency with each of the Eight Guiding Principles. The groups were composed of engaged and informed students (39 for Academic Affairs – that is, within the three schools -- and 16 for Student Affairs), who took the time to attend an interview and provide feedback without clear reward. In the Academic Affairs interview, students from all three schools described research opportunities through academic and co-curricular units as a source of achieving what they understood to be the goals of GE (the Eight Guiding Principles), particularly Decision Making, Leadership and Teamwork, and Ethics. These students reported valuing GE as it is “very important to increase their proficiency in all the areas described in the Guiding Principles, particularly with success after college” (Appendix M: GE Student Focus Group Report, Academic Affairs, p. 3). Students expressed different priorities about which GE outcomes might be most significant: “While some students felt that *communication, leadership and teamwork*, and *decision-making* are the most important ones, others considered *self and society* and *aesthetic understanding and creativity* as relevant abilities to develop” (Appendix M, p. 2). It is difficult to infer what this range might mean. It may be students value the Guiding Principles generally with specific preferences according to experience or major coursework emphasis. Alternatively, the meaning of these outcomes may be confusing, leading to a range of opinions.

Since so much of GE is defined by requirements, a comparison of responses at the school-level was informative. With Ethics, for example, there is consensus about importance of an outcome with variance in exposure by school:

Although some students noted that they came to UC Merced understanding the importance of becoming proficient with ethics and responsibility, they felt that it is not prevalent in their GE courses. Students considered ethics as a very important principle; however, they did not feel that their GE courses significantly developed this proficiency. This lack of growth in Ethics was

more frequently addressed among SoE students than SSHA students. While SSHA students mentioned they have developed proficiency with ethics by being involved in research and experiments, SoE students mentioned that the concept has not been emphasized much in their coursework. (p. 3)

Class formats by school also reportedly influences GE outcomes. For example in the School of Natural Sciences (SNS): “SNS native students mentioned that their GE courses are not geared towards developing *aesthetic understanding and creativity*. SNS students also discussed how large GE courses limited professor-student or peers’ interaction, and thus, hindered students’ proficiency with *communication, decision-making, leadership, and teamwork*.”(p.3). GE experiences may differ at the school-level not only by requirements and standards but possibly by format and pedagogy.

The student interviews noted that activities in extra-curricular projects supplemented GE coursework. In addition to the groups described above, the Division of Student Affairs focus group report (see Appendix N) also reflects feedback from a highly motivated group of students (n=16) rather than a cross-section of our campus. These students reported GE guiding principles were cultivated by their campus employment, including *communication, gaining appreciation for human differences, and learning about their sense of self and impact on other people*. Students mentioned repeatedly the value of practice and feedback on their learning, noting significant gains in confidence. As one example, a student employed as a residence life lead noted: “knowing that I can communicate with 1,500 residents daily [revealed to me that] what I do and say is important.” These kinds of reflections suggest the value of applied GE experiences.

A couple of conclusions might be drawn from these data. These students value GE generally but prioritize the specific outcomes and experiences differently. Also these students report that extra-curricular activities reinforce and cultivate valued GE outcomes. The general response from these students indicates that GE programming needs clarification and focus. Follow-up questions for future development include: To what extent is GE planned and represented to our students as a *program* at our campus? And, are current students invested in GE as an integral part of their educational experience, and why or why not?

*Graduating Senior Survey* In May 2013, the General Education Subcommittee undertook a onetime assessment of GE outcomes to support associated planning and to respond to accreditation expectations. The goals of the project were to gather baseline data describing:

- 1) Student awareness and understanding of the purpose of General Education at UC Merced;
- 2) Student perceptions of their learning in relation to the Eight Guiding Principles of General Education; and
- 3) The experiences and contexts, academic and co-curricular, which support this learning.

As part of this work, a comprehensive set of questions was included in UC Merced’s [Graduating Senior Survey](#)<sup>8</sup> (see Appendix O: Graduating Senior Survey 2013, All GE Data). This survey was, then, revised to include a briefer set of standard GE questions focused on values and outcomes for annual review and future purposes (see Appendix P: Graduating Senior Survey 2014, GE Questions). The following data tables and commentary discuss 2013 GE data, since this pilot was recent and comprehensive.

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<sup>8</sup> As of 2014, the Graduating Senior survey includes a brief set of standard questions regarding student experiences with GE.



Generally, the purpose of the survey questions was to identify the extent to which students could describe a GE program at UC Merced, by gathering initial feedback on the value and practice of each Guiding Principle at UC Merced. It is worth noting that to pilot some GE questions on the Graduating Senior Survey we favored asking questions about the value of each Guiding Principles in academic programs and proficiency with practice in extra-curricular activities. Our purpose was not to compare academic and extra-curricular programs, but rather to ask students to contextualize the Eight Guiding Principles in two contexts. The 2014 and future version of the survey addresses preparation in GE-related skill and knowledge areas, based generally (but not as specifically) on the Eight Guiding Principles and [WASC Core competencies](#).

The following figure summarizes the value of each Guiding Principle coursework, based on 2013 UCM Senior Survey GE data. In general the focus is on this guiding question: Beginning with coursework, where are the Eight Guiding Principles addressed and how does GE support major program outcomes?

**Figure B: Senior Survey Data 2013, General Education Courses**

*Original Question: Please indicate the degree to which...*

Question	Agree to strongly agree	Neither agree nor disagree
The Eight Guiding Principles were explicitly addressed in your general education courses.	74%	26%
Your general education courses contributed to learning in your major.	70%	30%
Courses in your major contributed to your development in the areas defined by the Eight Guiding Principles.	85%	15%
Core 1 addressed making connections among academic disciplines.	47%	53%
Other general education courses addressed making connections among academic disciplines.	66%	34%
Courses in your major addressed making connections among academic disciplines.	87%	13%

There is strong agreement that the Guiding Principles are explicitly featured in GE courses. Interestingly, too, there is strong agreement about the function of major courses relative to GE, with 87% strongly agree to agree that courses in the major connect disciplines and 85% say courses in the major support development in the areas described by the Eight Guiding Principles.

We were also interested in students' perceptions of the importance of proficiency in each of the Eight Guiding Principles for General Education for achieving their personal goals for undergraduate education. In Table C below, the Eight Guiding Principles are ordered by frequency of rating by "Highly to Moderately Important."

### Figure C: Importance of Proficiency in Guiding Principle for Undergraduate Education Goals

*Question: How important is improved proficiency with [Guiding Principle] to your personal goals for your undergraduate education?*

Guiding Principle	Highly to Moderately Important	Slightly to Not Important
Communication	96%	4%
Decision Making	95%	5%
Leadership & Teamwork	93%	7%
Ethics	91%	9%
Personal Potential	91%	9%
Self & Society	86%	14%
Scientific Literacy	85%	15%
Aesthetics	72%	28%

Improved proficiency in the Guiding Principles seemed valuable to the respondents. These data indicate that the Eight Guiding Principles are consistent with our students' educational goals. These findings are relevant to future planning regarding GE at UCM, a topic to which we return later in this report. As mentioned earlier in the self-study, understanding and planning for GE at UC Merced will need to account for how GE is delivered through major programs and factor the value of articulating GE outcomes to student goal development.

For an institutional perspective, we also looked at the extent to which extra-curricular activities may have improved proficiency with each guiding principle. Thus far, General Education coursework and extracurricular activities have not been coordinated, so this question was designed to look at activities as a separate area relative to each Guiding Principle.

### Figure D: Guiding Principle Experience in Extracurricular Activities

*Question: Based on the definitions above, please indicate how much your extra-curricular experiences improved your proficiency with [Guiding Principle].*

Guiding Principle	They improved it moderately to greatly	They improved it slightly or not at all
Leadership & Teamwork	75%	25%
Communication	72%	28%
Decision Making	70%	30%
Personal Potential	60%	40%
Ethics	46%	54%
Scientific Literacy	43%	57%
Ethics	46%	54%
Aesthetics	37%	63%

The top third of "moderately to greatly" response (emphasizing Communication, Leadership and Teamwork, and Decision Making) mirror those Guiding Principles that were high priorities for improved proficiency in Table C.

At the beginning of the GE set of questions, we asked students to provide levels of agreement to GE being a valuable part of undergraduate education. Given our distributed menu system, we were also

interested in the extent to which GE might seem to be a set of unrelated courses and requirements. The following table summarizes a distribution of responses.

### Figure E: General Education Experiences

*Question: Please indicate your level of agreement with the following statements about your General Education experience.*

Question	Agree to strongly agree	Neither agree nor disagree	Disagree to strongly disagree
General Education was a valuable part of my undergraduate education.	57%	24%	19%
General Education seemed to be a collection of unrelated requirements and separate courses.	55%	25%	19%
General Education courses were readily available.	60%	23%	18%

These data indicate that more than half of the respondents agreed, or strongly agreed, that GE was a valuable part of their education. Given the nature of the question, we do not know what, exactly, the students meant by General Education, but this response is generally consistent with the data reported in Figure B regarding students' perceptions of the contributions of GE to learning in the major and the contributions of the major to development in the areas defined by the Guiding Principles. Taken together, these results can be viewed as generally positive, though one could argue that we should aim for better – that 43% of student respondents feeling neutral or negative about the value of GE is not what we want for GE at UC Merced.

A little more than half of the respondents felt that GE was a collection of unrelated requirements and courses. This is consistent with the way GE is organized (or not organized) at UCM, so we could say that it is both good news and bad news that students view it as such. Whether that is how we want and/or need to organize GE, and how we want students to experience it, is also a topic for further discussion.

**GE Learning Outcomes Assessment:** So far, GE has not yet been fully reviewed within major or standalone minor programs, although some attention has been paid to assessing outcomes and student experiences in the institution-wide GE requirements (i.e., WRI 10 and Core 1).

Since 2009 at UC Merced [academic program assessment has occurred annually](#), with program learning outcome (PLO) reports. These PLO processes and resulting annual reports are designed to foster routine engagement with at least one program learning outcome per year based on direct and indirect evidence of student learning and to prepare for [cumulative program review](#). Typically, major and standalone minor programs participate in this process with a [Faculty Assessment Organizer](#) (FAO) who coordinates the annual review of a program learning outcome and implementation of assessment findings. Although not an academic program, Core 1 has an FAO and annual PLO report process. The other required GE course at UC Merced, WRI 10: *Reading and College Composition*, has been reviewed and described in Writing Minor PLO reports. While traditional PLO reporting tends to address discipline-specific outcomes, the Writing Minor PLO report supplements this process by including some focus on WRI 10 as foundational GE coursework.

In summer 2014, the GE Subcommittee requested that Core 1 and WRI 10 coordinators participate in a mini self-study process, with a set of guiding questions about course design and planning, assessment processes and data, student outcomes and experiences, and long-term aspirations. This cumulative mini self-study was based on PLO reports (2009-2014) to provide the GE Subcommittee with an overview of how outcomes have been assessed and measured and, if relevant, how findings are implemented for course improvement. To provide institutional GE data about course repeats, grades and enrollment, we partnered with [Institutional Research and Decision Support](#) and developed a process to summarize GE course data (see Appendix G: Core 1 and WRI 10 Enrollment and Grade Data).

This part of our self-study report will summarize a representative PLO report from Core 1 and WRI 10 to illustrate this PLO process for GE required courses. These Core 1 and WRI 10 assessment examples are intended to highlight the goals, activities, findings, and actions that tend to be featured in these PLO reports. The assessment of GE courses is preliminary, so the broader purpose of these summaries is to provide insight into what PLO reporting have facilitated thus far.

**Core 1:** As background to the Core 1 culture around assessment, the mini self-study authors note that all Core 1 instructors meet on a bi-weekly basis to review student work and discuss assignments. Reviews of student work include high-middle-low samples, measured by standard course grading rubrics. It is noted that “assessment data have informed our revision of assignments so that students are better positioned to fulfill course outcomes and instructors are better positioned to measure them” (Appendix Q: Core 1 Mini Study, p. 2). The following Core 1 PLO report summary (2012) is a noted example of student outcome review, assignment revision and instructor calibration.

To establish a priority for outcome review, the mini self-study notes that Core 1 students “tend to lack requisite organization and study skills to regularly assemble informed, demonstrative arguments about quantitative and qualitative information” (see Appendix Q: Core 1 Mini Study, p. 4). In Core 1, quantitative information is analyzed and presented in one of two capstone assignments (Quantitative Assignment #2), which is the assignment focus in this 2012 report (see Appendix R: Core 1 PLO Report). In 2011, the Core 1 PLO report first summarized review of scientific literacy outcomes, concluding that the average grades and rubric category scores indicate room for improvement. The goal in this 2012 assessment was to evaluate if revising this capstone assignment to include a collaborative component would strengthen the scientific literacy outcome, on the premise that data analysis benefits from multiple perspectives and statistical aggregation.

With this quantitative capstone assignment, students develop a statistically informed report that responds to a hypothetical pandemic flu outbreak. The revised assignment included a framework for collaboration, with such supporting materials as an initial team plan, work logs and self / group evaluations. Sixty sample projects were reviewed with high-middle-low range finders. Instructor reviews of sample student work indicated improvements on all grading rubric categories (accuracy, method, presentation, explanation, and discussion) from when the assignment was completed individually in 2011 to collaboratively in 2012. The mean assignment grade improved from 14.92/25 (in 2011) to 18.67/25 (in 2012). The report indicates correlation between degrees of collaboration and benchmarks of student success on this quantitative assignment.

The report author cautions the reader from citing collaboration as the only explanation for improved performance. In the instructor review of supporting materials, students provided limited information

about collaborative activities. Assessment scores on these supporting materials are lower than anticipated and raise questions about whether such scores relate to student success on the assignment. Building more engagement in documenting the process of collaboration, based on model outcomes, could enrich this revised curriculum, too. Tentative conclusions from this assessment project included the value of “crowd sourcing” (such that students assemble a comprehensive data set through collaboration) and the possibility that in teams students can more easily compare and contrast data on which to base definitions of a societal problem (and thus correct and focus details that would otherwise go unexamined).

This PLO report addresses two years of assessment data, with informed curricular change and initial findings that suggest efficacy of this revision. Historically, Core 1 PLO reports addressed argumentation and synthesis (2009-2010), information literacy and critical thinking (2010-2011), ethics and decision making (2011-2012), scientific literacy and collaboration (2012-2013 and featured here), and development of personal potential (2013-2014).

**WRI 10:** Consistent over time, 90% of students complete WRI 10 in the first attempt which relates to completing intended outcomes successfully (see Appendix G: WRI 10 / Core 1 Enrollment and Grade Data). Sample student work from WRI 10 is routinely reviewed by all Merritt Writing Program (MWP) full-time lecturers, with program-wide diagnostic exams in fall semesters and portfolio evaluations in spring semesters. These small group reviews (6-8 readers in a session) have several purposes, which include engaging in a program-based perspective on outcomes, exchanging pedagogical practices and calibrating grading standards. The diagnostic exams are pre and post measures of student performance in WRI 10 (and its preceding course WRI 1: *Academic Writing*), historically reflecting incremental improvements from entry to exit. Final portfolios are assigned in nearly all MWP courses, with each section of the portfolio specific to a program learning outcome. Annual reviews have addressed the following [writing minor program learning outcomes](#): process (2009-2010), rhetoric (2010-2011), research ethics (2011-2012), collaboration (2012-2013), and craft (2013-2014).

This section will briefly discuss the research ethics PLO report (see Appendix S: WRI 10 PLO report), which is a composite of several levels of related priorities: (1) a [program learning outcome](#) [*Apply professional ethical standards to the research process and its public representation*], (2) [the guiding principle](#) of Decision Making or “the know-how to assemble, evaluate, interpret and use information effectively for critical analysis and problem solving,” and (3) a national focus on citation and evidence usage via [the Citation Project](#) and the [Association of College and Research Libraries](#).

According to the WRI 10 mini self-study authors, critical reading and analysis skills tend to be a recurring focus for discussing and improving student learning outcomes. When readers evaluate diagnostics, the score sheet requires a brief written justification from the [UC’s Analytical Writing Placement Exam rubric](#). PLO reports include summaries of these scores and descriptions, with unsatisfactory ratings and supporting commentaries most often related to critical analysis and evidence integration (i.e. an “incomplete understanding of text or topic” or an “illogical response to original text”). The outcome of research ethics begins to address this analysis emphasis, particularly with the goals of effective source attribution, analytical reading strategies and purposeful use of evidence.

The stated primary goals of this 2011 PLO report is to identify vocabulary and context for teaching research ethics, to review research-based assignments, and to document student strategies for working

with evidence. The review of diagnostic exams compared WRI 10 student integration of evidence with national evaluation of similar strategies published by [the Citation Project](#). In freshman composition, students are learning to read critically and work with sources. When working with quotations, students tend to integrate evidence to emphasize or reinforce a point; an advanced approach would be purposeful uses of evidence to complicate or enrich an idea. Integration of outside resources was reviewed in about forty exam sets. In these pre and post exams, about one-third of papers used quotations to reinforce points. The function of summarization and elaboration was also common in about a quarter of the papers. Less successful sample work exhibited reading issues that complicated a student's ability to represent material responsibly and accurately. Based on this preliminary evaluation of source integration, purposeful integration seems to exceed expectations set from national studies (characteristic 25% of UCM versus 9% of national samples). Areas of further exploration are noted, with a recommendation to expand focus to include intersections between summary, paraphrase and analysis. This focus is currently being pursued in an [Assessment in Action grant](#), led by the UCM Library as part of a national initiative to increase data about the library's role in student success.

WRI 10 portfolios were reviewed in spring 2012 to summarize indirect evidence of student learning with cover letters and direct evidence of research ethics with research paper projects. As general background, WRI portfolios are organized by program learning outcomes. This review included calibrating expectations with an average [sample portfolio](#) and then 158 dual reviews (or about 80 WRI 10 portfolios), constituting 25% of the potential WRI 10 portfolios to evaluate. General conclusions from cover letters were that students tend to discuss the steps of research rather than the analytical process associated with integrating evidence. Nearly every reviewed portfolio cover letter associated research ethics with avoiding plagiarism and maintaining proper attribution, such that ethics was more so described as a personal attribute (e.g. integrity and honesty) than a practiced convention. To establish more opportunities to practice conventions, mini-assignments on information literacy are suggested which is also being pursued in the above AiA grant.

**Conclusion:** Our assessment strategies for GE are largely preliminary, with some routine practices in implementing the Graduating Senior Survey's GE questions and evaluating outcomes in required GE PLO reports. Moving forward we need to define our GE aspirations and program to develop the systematic means to evaluate GE courses and experiences at our campus.

Generally, several aspects of UCM's GE program need further development and input which include:

- Clarifying the purpose of general education at UC Merced in relation to the larger intentions of the baccalaureate degree;
- Strengthening communication of GE program intentions to all stakeholders, including most importantly students, faculty (ladder rank and lecturing) and all program leadership;
- Reformulating the Eight Guiding Principles to develop a GE mission statement, principles and outcomes;
- Coordinating existing GE curricula towards deliberate GE experiences;
- Recommending GE assessment practices that engage a broad set of stakeholders (ladder and lecturing faculty, staff, and students);
- Exploring the ways in which current PLO reporting facilitate the assessment of GE courses and aspects of GE programming (perhaps in light of current Core 1 and WRI 10 examples); and
- Providing the means to systematically review and coordinate a GE program within the constraints of our campus goals and resource capacity.

The next section, Future Directions, discusses these priorities in light of current planning.

## VI. Future directions/planning

**Section Synopsis:** This section summarizes our institutional context, particularly the capacity and constraints that inform current planning. Our broader purpose is to emphasize emergent themes that guide our efforts with a re-design of GE. To build engagement with these efforts, our recent GE retreat (May 2014) involved faculty and staff in developing an initial framework for situating GE within the broader hallmarks of an undergraduate degree at UC Merced. Retreat participants were asked: “*Given the role of GE in UC Merced baccalaureate degrees, what should GE “look like”? What experiences should it include?*” with five recommendations that followed. Those recommendations frame our future directions discussion for GE.

**Institutional Context:** As a new and small research university, UC Merced has inspired unusual opportunities to collaborate across disciplines, which have shaped some undergraduate, graduate and GE programming. This self-study highlights how early plans and current aspirations for a GE program at UCM tended to emphasize interdisciplinary goals; however, GE has been almost entirely delivered through discipline-specific courses associated with degree program requirements and the menu-based system of breadth specific to each school. Further, we are entering another significant phase of enrollment growth, which involves strategic academic focusing to develop a range of academic programs, grow graduate student enrollment, and define research emphases distinctive to our campus. At the same time, UC Merced has a small number of Senate faculty members who are charged with meeting the research, teaching, and service standards expected of a UC campus. These circumstances, and others, shape our capacity and constraints for re-designing GE.

Several notable details emerged from our study of the current GE program:

- (1) GE programming is largely informed by school and major requirements, with differing expectations, standards, and pedagogical emphases;
- (2) GE course enrollment data patterns indicate that stated breadth experiences are probably limited to a relatively narrow set of available courses;
- (3) How GE instructional responsibilities are distributed among ladder and lecturing faculty have not been systematically examined;
- (4) The Eight Guiding Principles are reported by faculty and students as consistent with educational goals; however, Graduating Senior Survey data suggest mixed responses about the overall value of GE;
- (5) While students see the co-curriculum as improving their proficiency in the Eight Guiding Principles, we have not been intentional about integrating GE across academic and non-academic, curricular and co-curricular experiences;
- (6) The Eight Guiding Principles for General Education are not truly GE outcomes, and we need to define a mission, guiding principles and outcomes for GE program, consistent with institutional priorities for undergraduate education; and
- (7) The current organization and delivery of General Education is not conducive to meaningful assessment of student achievement of intended GE outcomes. Any revisions to GE at UC Merced must include a plan for ongoing assessment of student learning that is systematic, effective, and sustainable.

Discussions about the meaning of the UC Merced baccalaureate degrees, and the roles GE should play in those degrees, have begun to focus our GE re-design efforts. Moving forward, we need to articulate a

structure for GE that achieves campus goals, reflects the experiences that all students should have as part of GE (particularly high impact practices), recognizes the role of GE in the broad priorities of undergraduate education, systematically integrates the co-curriculum into GE, and considers the role of GE in student success. In light of our institutional context and GE data, we seek guidance from the review team in a few important, broad areas:

- Principles and outcomes for GE consistent with institutional priorities, as well as the experiences that all UCM undergraduates should have in light of those priorities;
- Strategies for designing a program that will be broadly inclusive of faculty and staff, representative of the institutional scope of GE;
- Structures for allocating appropriate resources and incentives to engage Senate faculty in the oversight and delivery of GE; and
- Strategies and processes for systematic and sustainable assessment of GE.

Conclusions and insights from internal and external review of these above emphases will inform current institutional capacity building for GE. In describing our current efforts to develop campus engagement with GE, this Future Directions section will provide an overview of emergent GE themes.

**Institutional Capacity Building -- GE Retreat:** With this comprehensive review of GE, we have sought to build the broad institutional engagement necessary to establish a framework for revisiting our institutional goals for GE. Wide consensus building about fundamental priorities and recommendations would inform re-design efforts as well as engage faculty and staff in the broad issues of developing a GE program.

In May 2014, a campus GE retreat was organized to bring together a representative group of faculty and staff. Broadly speaking, our goal was to re-imagine UC Merced's GE program in light of the institution's mission. A comprehensive team was assembled, including 32 ladder faculty (representing 80% of undergraduate majors), a lecturing faculty member, and staff members representing academic advising, career services, housing and student life. The University Librarian, Dean of Students, and Provost participated as well. The retreat was organized to address three, related questions:

1. Thinking ahead to 2020, what is the meaning of the baccalaureate degree at UC Merced?"
2. What is the role of General Education in the baccalaureate degree at UC Merced?
3. Building on the hallmarks of a baccalaureate degree and the role of GE in the degree at UC Merced, what should General Education "look like" at UC Merced?

Sessions began with a plenary introduction to a guiding question with subsequent breakouts to address the question in small teams (see Appendix T: GE Retreat Packet). Teams presented results, followed by group discussion to identify emerging themes and synthesize contributions. Following the retreat, these ideas were then further summarized by the GE Subcommittee to form a "Retreat Synthesis," a single document articulating the main ideas to emerge from the retreat in relation to each of the three core retreat questions. Over the summer, a draft of the Retreat Synthesis was circulated to all retreat participants for commentary (resulting copy is Appendix V: GE Retreat Synthesis). The next step was to engage a wider audience of faculty, staff and students to both confirm emphases and expand results. In October 2014, VP/Dean Whitt and Chair Zanzucchi presented the Retreat Synthesis at [Undergraduate Council](#) and [Division Council](#)'s open forum. During this time, the GE Subcommittee contacted lead



faculty in all undergraduate majors, seeking comments on the Retreat Synthesis, including additional thoughts in response to the core retreat questions (due February 1, 2015, see Appendix W: GE Retreat Synthesis, Major Program Questionnaire). Also in process is a plan to obtain feedback from undergraduates in the early spring 2015. Senior-level students will be asked to respond to a student-specific digest of the Retreat Synthesis via group interviews. The Retreat Synthesis, then, is a working draft of guiding concepts that can inform strategic planning for General Education.

This future directions section will focus on the five recommendations from the GE retreat describing what GE “*should look like*” at our campus based on hallmarks of undergraduate education. From the GE Retreat Synthesis, initial hallmarks of an undergraduate program at UC Merced include: (1) Depth and breadth in academic and intellectual preparation, consistent with the values of UCM as a small research university, (2) Cultural awareness, sensitivity, and responsiveness (3) Community engagement and citizenship -- local and global, (4) Self-awareness and intrapersonal skills, and (5) Interpersonal skills necessary to the outcomes identified above, as well as to lead productive lives after graduation. Although this synthesis and set of recommendations are part of an evolving and ongoing conversation, the Retreat Synthesis recommendations help to focus our discussion of the future of GE at our campus. The following emphases guide, then, our current efforts to build institutional capacity for GE.

### **(1) Broaden instructional engagement with the design and delivery of GE**

A multifaceted approach to GE instruction could inform future planning. Currently lecturing faculty play a significant role in the delivery of GE courses. As campus develops graduate programs, the role of teaching assistants in GE programming will be emerging consideration. The role of ladder faculty in the design and delivery of GE is also a consideration, particularly in relation to the parallel development of undergraduate programs. The following brief summary includes some considerations related to this instructional focus.

Deliberate involvement of lecturers in the design of GE seems recommendable, especially given high-levels of engagement in the delivery of GE. One step would be to include a Unit 18 lecturer (contractual faculty) on the GE Subcommittee, parallel to Undergraduate Council membership. More broadly and long-term, institutional considerations might include planning resources to promote lecturing faculties’ professional development and service (including assessment), increasing opportunity to participate in GE planning and governance, and prioritizing Senate lecturer appointments in traditionally GE-intensive disciplines and/or interdisciplinary undergraduate programming.

An outstanding question is how to further engage Senate faculty in the design and delivery of GE. In our brief history, GE committee reports have tended to address faculty governance issues with GE, broadly in terms of an unmanaged menu system and specifically in terms of Core course sustainability (see Appendices C: 2011 GE Report and J: 2009 GE Report). From the retreat, freshman seminars and capstone courses were noted as potential avenues to strategically engage ladder faculty in the delivery of GE coursework and implementing the goals of our GE program.

In light of future growth and related institutional changes, another consideration is involvement of graduate students in the delivery of GE. Our graduate population has not yet participated directly in the delivery of general education. At more established campuses, however, this is a potential instructor pool. Currently, our graduate population is small with 384 ([Fall 2014, Graduate Student Headcounts](#));

however enrollment targets for growth are in the near future with 2020 planning. Our graduate population is about 5% of our total student population, which is approximately half of enrollment trends at most University of California campuses at 10-12% (see [UC InfoCenter, Graduate Student Data](#)). With the expansion of a graduate population as part of 2020 enrollment planning, this instructor population is an important part of future directions.

## **(2) Create synergy between major programs and GE**

As GE guiding principles and outcomes continue to be clarified, we will need to consider ways to bridge narrow discipline-specific instruction towards an integrative GE experience. It was noted several times throughout retreat conversations that a sustainable approach to GE programming could be through the disciplines. From what we have learned so far from our brief history, much of GE has been delivered through the disciplines, however, not yet in a systematic or fully intentional institutional approach. Review of Guiding Principles have revealed that these focus points are valuable parts of undergraduate educational experiences, which warrants further exploration and development in creating a mission, guiding principle, learning outcomes, and student success expectations for GE.

If GE were more systematically delivered through the disciplines, what are some effective strategies that will link disciplines to institutional GE priorities? Retreat suggestions included co-enrollments and learning communities, which can serve to coordinate disciplinary emphases within institutional learning priorities. Involvement from residence life was also noted as part of developing integrative GE experiences.

## **(3) Provide undergraduates with research skills and experiences**

UC Merced's status as a small, research-intensive university has created high expectations – on the part of faculty and students – for engaging undergraduates in research. An aspiration to develop a culture of discovery and inquiry at UC Merced was discussed frequently at the retreat, as emphasized as emergent hallmarks of undergraduate education (Appendix V: Retreat Synthesis, p. 2). This emphasis speaks to how undergraduate research experiences continue to be an ongoing priority and potential area of synergy between disciplines and GE programming.

As our campus grows and graduate programs develop, this legacy of undergraduate research opportunities will continue to need ongoing attention and systematic review. As noted in retreat feedback so far, our GE program could play an important role in:

- *Exposure to research methods and authentic problems:* Modes of inquiry and approaches to research could be more explicitly featured as aspects of GE. Case studies and research problems could engage students in authentic issues and experiences;
- *Distinctive local experiences with community research:* Community-based learning could be one model that is inclusive, local, and foundational;
- *Access to research-based experiences:* Research experiences could be sequenced and inclusive, beginning with exposure to research to applied work.

We anticipate that widespread undergraduate research opportunities will be challenging to coordinate and sustain. One consideration could be defining what undergraduate research means to a variety of

disciples at our campus to then identify priority skill areas, resource support, and areas of collaboration. Initial work from the recently founded [Undergraduate Research Opportunities Center](#) and faculty advisory board will guide and inform GE planning. In sum, this is an important and emergent emphasis at our campus, with elements that may inform planning around the previous recommendation for synergy between major and GE programs.

#### **(4) Build GE experiences and outcomes from lower to upper-division courses**

As noted in the self-study, GE courses are proposed in the context of the Eight Guiding Principles; beyond this course proposal process, we have a need to develop a structure to develop and assess GE courses, experiences, and programmatic goals to foster student success. Our first priority, then, is to continue defining a framework for our GE program, within the context of UCM's hallmarks of an undergraduate education. The alignment of lower and upper division courses will be based on this evolving GE mission, guiding principles, and outcomes.

Upper division GE coursework will benefit from a focus on synergy with lower-division foundational coursework and broader alignment with a GE program. At the GE retreat, participants noted that GE could provide a context for "learning to learn" with potential to transfer content and skills throughout undergraduate education. Our current GE program will need further development to support this kind of aspiration, as GE courses are part of an unconstrained menu. So far, available seats have largely dictated upper-division GE enrollment which is limited as far as intentional and aligned programming.

In our earlier history, Core 100 illustrated a desire and struggle to define a common intellectual experience at the upper-division level. In the future, the form upper-division GE curricula recommendations might take (e.g. a course requirement, co-enrollments, themes, etc.) remains an evolving matter.

#### **(5) Provide GE programming that connects curricular and co-curricular experiences.**

A comprehensive GE program would include opportunities to integrate courses and activities, culminating in GE experiences that go beyond coursework. This recommendation is consistent with the 2011 GE report (Appendix Item C), "*If we are committed not just to diversity in access to the university, but also to promoting success for all of our students, we must follow best practices in the curricular and co-curricular aspects of our general education program*" (p. 3). Broadly speaking, scholarship related to the [National Survey of Student Engagement](#) data have demonstrated the importance of high-impact practices, which can relate to the design of a GE program. When asked what the one thing could be done to enhance student engagement and increase student success, NSSE founder George Kuh advises "to make it possible for every student to participate in at least two high-impact activities during his or her undergraduate program, one in the first year, and one taken later in relation to the major field. The obvious choices for incoming students are first-year seminars, learning communities, and service learning."<sup>9</sup> Jayne Brownwell and Lynn Swaner in *Five High-Impact Practices: Research on Learning Outcomes, Completion and Quality* (2010) address how this research applies to specific populations, with attention to the needs of underserved populations. A general pattern supports the idea that high-

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<sup>9</sup> "High-Impact Educational Practices: What They Are, Who Has Access to Them, and Why They Matter" 2008.

impact educational practices, such as learning communities and integrated approaches, strengthen this population's student success outcomes<sup>10</sup>.

Both of these national studies emphasize that experiences alone are insufficient to affect outcomes. In this sense, thoughtful curriculum and program planning, along with assessment of student experiences, are central to the development of high-impact practices. *Well designed and deliberate GE programming requires faculty and campus engagement*, particularly in sustaining systematic efforts towards active learning and maintaining associated resources (human and capital). Identifying strategies for Academic and Student Affairs colleagues to collaborate on the planning and delivery of GE programming will be critical to our GE re-design and strategic planning efforts.

## **Closing**

We conclude by seeking guidance in achieving our goals to build institutional capacity for GE, re-design GE, and develop a strategic plan for carrying out that new design. At this stage in our campus history, attention to structure, resources, assessment strategies will be particularly salient, as we seek to develop a GE program consistent with broader goals of undergraduate education.

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<sup>10</sup> Student success is defined here as year to year retention, time to degree, and graduation rates.