

COMMITTEE ON PREPARATORY EDUCATION
Annual report, 2016-17

To: Academic Senate, Santa Cruz Division

The proposed changes in the Writing Program and Entry Level Writing Requirement (ELWR) satisfaction mechanisms were CPE's central concern during 2016-17, followed by oversight of Math Placement.

1. Proposed changes to the “first year” writing instruction and Entry Level Writing Requirement satisfaction

Introduction of the College 1 courses and elimination of stratification by writing skills in the core courses is an important step towards achieving the sense of community and belonging that the College/Core courses are intended to develop. CPE exhorts all participants in the design and implementation of the restructuring of the Writing Program offerings to ensure that gains made in the College 1 courses aren't undermined by losses in ELWR courses.

CPE reviewed the Writing Program provisional proposal and agreed that the planning process should move forward, but withheld endorsement of the proposed changes to the means by which students may satisfy ELWR pending additional information

1.1. ELWR satisfaction

Most incoming UCSC frosh satisfy the UC Entry Level Writing Requirement by earning a score of 8 or higher on the Analytical Writing Placement Exam (AWPE), which is administered statewide in May, and on each campus at the beginning of the academic year.

UCOP specifies that “Students who have not satisfied the Entry Level Writing Requirement at the time they enroll in their classes must take a writing course designated by their campus.”

At present, there are several course options available to ELWR-required students:

- Writing 20, possibly followed by Writing 21 and Writing 23,
- the Multi-Lingual Curriculum (MLC) pathway available to F-1 visa holders: Writing 27, Writing 26 and 27, or Writing 25, 26, and 27, depending on the student's AWPE score,
- ELWR-designated Core courses.

To avoid excessive repetition, we will use the term “ELWR courses” to designate the Writing Program courses serving ELWR-required students, e.g. Writing 20.

1.2. Current assessment of ELWR satisfaction for students in ELWR courses

At present, students in the Multi-Lingual Curriculum (MLC) pathway satisfy ELWR by passing Writing 26, but non-MLC students (i.e. students taking Writing 20, and possibly Writing 21 and Writing 23) satisfy ELWR by means of a portfolio review.

Development and maintenance of consistent preparation and assessment criteria for ELWR satisfaction for ELWR-unsatisfied students is a tremendous challenge. The assessment criteria should align with those used in scoring the AWPE, but the AWPE is a problematic assessment:

no UC campus besides UCSC uses AWPE scores for placement into different levels of ELWR courses; the AWPE is considered appropriate only for a binary ELWR satisfied/unsatisfied determination. (See the Appendix for additional information about the AWPE.) It is also problematic that the nature of assessment for student outcomes is also very different between the MLC and non-MLC students. All students take the AWPE for placement, but ELWR satisfaction is judged based on revised writing. While domestic students submit an essay for review, ELWR status for MLC students is reflected in the course grade. Relative to an essay produced during a two-hour exam, calibration assessment of a portfolio of work – which usually is prepared over an extended period of time with substantial revisions – requires experience and a deep understanding of the relationships between the errors and weakness of the work over the preparation process. The fundamental differences in determination of ELWR satisfaction for students taking the AWPE, MLC students, and non-MLC students are also problematic. The AWPE is a two-hour exam consisting of a single prompt and essay, MLC students satisfy ELWR by earning a passing grade in Writing 27, and non-MLC students satisfy ELWR by submitting a satisfactory portfolio that is evaluated outside the context of their writing courses.

The exceptionally large number of offerings of the ELWR courses (e.g. Writing 20) poses another formidable assessment challenge. Consistent assessment of a set of specific skills-across a large number of offerings of multiple courses, possibly with different learning outcomes, poses a far greater challenge; support of several pathways to ELWR satisfaction enables instructors to tailor courses to student needs, but requires ongoing cooperation and communication between instructors.

The efforts made through the Writing Program in order to establish and maintain consistent assessment across portfolio review and course satisfaction (with multi-instructor review) are to be highly regarded. The Writing Program should be supported by all stakeholders in the development of the tools and protocols required to adapt the current ELWR satisfaction assessment process to the new course structure(s).

1.3. Proposed ELWR satisfaction via passing grade

CPE proposes that if the current portfolio review process is replaced by ELWR satisfaction upon earning a passing grade in Writing 20 or 27 (for students taking the Multilingual Curriculum courses), the Writing Program will need to coordinate, calibrate, and monitor assessment practices and outcomes. Inconsistencies from one instructor to another could complicate enrollment patterns and place success in subsequent coursework at risk. Overall drift in instructor expectations could result in unnecessarily high rates of repeat enrollment in Writing 20 if instructors ask more of their students than is required for satisfaction of ELWR by means of the AWPE. On the other hand, lower expectations could lead to increased difficulties in future coursework, particularly Disciplinary Communication (DC) courses.

If a 3-unit version of Writing 20 were to be introduced alongside the existing 5-unit version, an accurate, equitable placement process would be essential. The AWPE is not intended to serve as a placement tool; not only is UCSC the only campus to use the AWPE in this capacity, but the members of University Committee on Preparatory Education (UCOPE) expressed strong disapproval of this practice. ELWR-satisfaction via a passing grade in Writing 20 would be

particularly problematic if both 3 and 5 unit versions co-existed, but elimination of the current 5-unit version seems unrealistic, given the needs of many of our students.

1.4. Retaking ELWR courses

While CPE shares the widespread optimism regarding the likely benefits of the analytical reading skills gained in the College 1 courses, we anticipate that many ELWR-required students will, unfortunately, continue to require more than one quarter of writing instruction before satisfying ELWR. It is essential that these students not be demoralized, alienated, or administratively penalized.

If the current assessment process and course structure for non-MLC students are replaced by ELWR satisfaction by successful completion of a repeatable Writing 20, as proposed by CEP, UCSC must ensure that repeating an ELWR course will not affect a student's academic standing or financial aid eligibility adversely. Insufficient institutional adaption to the ELWR course restructuring could tempt instructors to pass underprepared students to avoid immediate academic difficulties, leaving the door open for future setbacks in writing intensive coursework.

Advising and early communication with students regarding ELWR satisfaction should convince students that UCSC recognizes and values progress, reflecting the reality that pre-admission opportunities for the development of strong English-language writing skills vary enormously for UC students. We believe that a relatively small investment in advisor training and website revision could have a significant influence on student success in ELWR courses. Communication regarding ELWR should avoid, to the extent possible, a success/failure dichotomy. Sidebars or brief videos about ELWR-required students who've been highly successful at UCSC could provide an inspiring counterbalance to the necessary rules and regulations.

The fourth quarter to satisfy ELWR should be retained until an MLC pathway is available for all students who would benefit from specialized instruction for multilingual students *and* the success of the new ELWR satisfaction process for all ELWR-required students has been demonstrated. If the boost in analytical writing skills provided by the new College 1 courses improves student performance to the anticipated extent, retaining the additional quarter to satisfy ELWR, at least for a few transitional years, should cost very little, because very few students will need that fourth quarter. On the other hand, if there are initially a few bugs in the system, interim retention of the fourth quarter allowance will protect students during the transition period. Establishing clear benchmarks for sufficient success of the new process today would minimize the risk of future disputes regarding the transition to a three quarter time limit.

1.5. Multi-Lingual Curriculum (MLC)

Two years ago, CEP approved a proposal from the Writing Program to offer a Multilingual Curriculum (MLC) to help international students (F1 visa holders only) satisfy the Entry Level Writing Requirement (ELWR) and lower-division writing requirements. Each eligible student's starting point in the sequence (i.e., Writing 25, 26, and 27) is determined by their AWPE score. (A fourth course, Writing 24, was offered only in 2015-16.)

CPE reviewed the report and addendum on MLC outcomes to date that CEP had asked the Writing Program to prepare. VPDUE Hughey provided CPE with additional data on enrollments and outcomes in the MLC courses. Given the short time the MLC program has been in existence, there is relatively little data available at this time about ELWR-satisfaction outcomes for students in the program, and no data about participant success in their upper division coursework (particularly in DC courses) or time to graduation. While CPE found that this program appears to be working, we recommend ongoing monitoring of outcomes, initiating in-depth analyses when sufficient data to support such analyses becomes available.

Some of CPE's concerns include:

- How many quarters does it take for students in the MLC pathway to enroll in Composition 2, Rhetoric and Inquiry (C2), and what is their success rate in C2?
- How many quarters and/or course repeats do MLC students typically need to satisfy C2? Does progress to C2 satisfaction depend significantly on the initial course taken in the MLC sequence (WRIT 25, 26, or 27) or repetition of WRIT 27?
- Is sufficient emphasis given to writing in WRIT 25 and 26 to prepare students for success in WRIT 27?
- Does successful progress through the MLC sequence guarantee sufficient writing proficiency for success in subsequent coursework? How do outcomes in C2 and DC courses for MLC students compare to those for non-MLC students (i.e., students satisfying ELWR via WRIT 20 and possibly 21)?

The potential partnership with the Languages and Applied Linguistics Department for Advanced Academic English (ACEN) instruction for students in the MLC pathway is promising. CPE hopes that it is possible to develop and coordinate this focused language instruction in time for an initial fall 2018 offering.

1.6. ELWR Data Review and Criteria

CPE began developing guidelines to improve assessment of Writing courses. The challenges of evaluating the Writing Program's proposals with extremely limited data, and varying amounts of key background information, prompted CPE to discuss establishing a common report with standardized guidelines.

Development of a standardized request for information about course design, learning outcomes, implementation, and student success (both in individual courses and downstream) would streamline the review process, avoiding the need for initial reviews followed by requests for additional information. Standardization would clearly communicate CPE interests and expectations in advance and would allay concerns that certain requests might be intended to target possible weaknesses of a particular program.

Completion of the guidelines was sidelined by the developments with the ELWR courses, but we intend to share a draft template with other committees (e.g., CEP, CCI, and CBP) and finalize the guidelines during 2017-18.

1.7. Communication and coordination with CEP

CPE works in cooperation with many Senate committees, but there is a particularly strong intertwining of responsibilities with CEP. CPE's charge (13.25.2) states that:

“In consultation with the Writing Program, it [CPE] proposes the means by which students may satisfy the University Entry Level Writing Requirement and it oversees Entry Level Writing Requirement instruction.”

However, the ELWR courses, being courses, are under the purview of CEP. While much has been accomplished in the past few years, there have been ongoing tensions regarding the interpretation of CPE's charge.

Much of CEP's ELWR-related activity has been clearly course-related. The CEP-sponsored Amendment to Regulation 10.5.2, *Revisions to ELWR Satisfaction Requirement* (AS/SCP/1831), introduced the following changes (gray: struck out, boldface: added):

The Committee on Educational Policy is proposing changes to Regulation 10.5.2, which describes the mechanisms by which students satisfy the Entry-Level Writing Requirement (ELWR).

Entering students who have not satisfied the requirement in one of the above ways must enroll in an Entry-Level Writing *section* **course** of *Composition 1* in their first term of residence

Satisfaction of the Entry-Level Writing Requirement is a prerequisite for *receiving credit in enrolling in a* **Composition 1 course**

Determining prerequisites for course enrollment and approving courses is, of course, within CEP's purview. Thus, CPE has no objection to the following statements in CEP's *Update on the Lower-Division Writing and College Core Course Requirements* (agenda item, March 8 Senate meeting):

“In 2015, CEP concluded that the satisfaction of ELWR should be a prerequisite for enrolling in a composition (C1) course, as is required at every other UC campus.”

“Under this model, no student would be required to take a C1 course before satisfying ELWR.”

“In the spring of 2015, CEP approved a sequence of writing courses (Writ 24-27) designed for students with F1 visas who have not satisfied ELWR.”

However, a comparison of the following sentence from that *Update on the Lower-Division Writing and College Core Course Requirements*:

“A chart showing the revised structure of *the pathways by which students will satisfy ELWR*, the college core requirement, and the C1 and C2 requirements after this year is shown at the end of this report.”

to one from CPE’s charge (13.25.2):

“In consultation with the Writing Program, it [CPE] proposes *the means by which students may satisfy the University Entry Level Writing Requirement* and it oversees Entry Level Writing Requirement instruction.”

(boldface added) suggests that CEP may have ventured further into CPE’s purview than was necessary or appropriate.

Chair Lewis consulted with CEP on May 3. This was a valuable opportunity for CPE to learn about some important administrative considerations underlying CEP’s plans. We hope that it was equally informative for the members of CEP. CPE was not able to give its unconditional approval to the proposed restructuring of the ELWR courses at that time. While CPE understands that “CEP is extremely concerned by the continuing delays” and its members “are therefore eager to implement our recommendations as soon as possible.”, CEP’s reticence prior to the March 8 Senate meeting made a rapid resolution essentially impossible. The information CPE needed to make a responsible decision simply could not be provided on such short notice for review and evaluation by CPE during the spring quarter, particularly given that the Writing Program had to rapidly develop a proposal that aligned with the revised pathways presented by CEP on March 8.

2. Math Placement

In 2015-16, CPE requested that more robust procedures for processing placement scores be implemented and ambiguities regarding oversight of placement be resolved. Two significant steps were taken late this year:

- The Division of Student Success funded development of a math placement website, the UCSC Math Coach, to replace the current placement pages on the Math Department site and Physical and Biological Sciences Advising site; the site structure and content was guided by student survey responses and student queries regarding placement. Incoming students intending to take a math course at UCSC were directed to the Math Coach shortly after they submitted their Statement of Intent to Register in May.
- In June, the Physical and Biological Sciences Dean’s Office implemented a substantial improvement in the processing of math placement scores. Scores are now extracted from ALEKS and placed in an InfoView folder shared with the relevant staff of the Office of the Registrar; the file includes the student ID (ALEKS uses CruzIDs as identifiers) and the placement tier associated with the ALEKS score. The information in the shared folder is then loaded into AIS, where it is available for enrollment purposes. The approach eliminates some inefficient and insecure steps in the previous process, improving data security.

This spring, the Division of Student Success initiated discussions about a possible MOU that would delineate the assumptions for and agreements between the Mathematics Department, the Applied Mathematics and Statistics Department, the Division of Physical and Biological Sciences, the Baskin School of Engineering, and the Division of Student Success regarding the preparatory courses *College Algebra for Calculus* (Math 2), *Precalculus* (Math 3) and *Precalculus for the Social Sciences* (AMS 3). Chair Lewis represented CPE in these discussions. Agreement among key stakeholders on issues including course capacities, levels of instructor and TA support, and communication regarding placement would simplify planning and resource allocation. No agreement was finalized this year, but discussions will hopefully continue in 2017-18.

Chair Lewis updated CPE on recent analyses of placement activity and course outcomes, including the UCSC and UCOP reports on the Budget Framework Implementation Adaptive Learning Technology Pilot. UCSC, along with UC Davis and UCSB, piloted use of ALEKS for remediation and assessment during summer and fall 2016; the outcomes of these adaptive learning projects were reported to UCOP and subsequently shared with the Legislature.

Student surveys conducted in December 2016 and June 2017 suggest that a majority of the students in the UCSC "first year" math courses (up through calculus) may have already taken a version of that course in high school; many respondents had taken at least one high school course beyond the level of their first UCSC math course. This suggests that there are opportunities for improvement of the placement and preparation processes.

Math placement determines the most advanced math course an incoming student may take, but students are allowed to enroll in less advanced courses than they place into. Roughly half of the students taking *Precalculus* (Math 3) are calculus-eligible when they enroll in *Precalculus*; while some of these students need Math 19A for their major and are only eligible to enroll in Math 11A (in the 300 placement tier), the 300 placement tier corresponds to a 5 point range (70-75) in ALEKS, and almost all students who initially place into that tier improve their placement by at least one tier, becoming eligible to enroll in Math 19A, if they reassess. Common reasons given for enrolling in *Precalculus* despite being calculus-eligible and having completed a precalculus course in high school include the desire to have an easy course the first quarter and concerns because it had been a long time since they had taken precalculus (many respondents had more recently taken calculus or statistics).

Most of the students who take *College Algebra* (Math 2) are in the lowest placement tier, and thus ineligible for enrollment in a more advanced math course. However, many survey respondents had taken more advanced math courses in high school, and would probably have improved their placement had they reassessed. Efforts to increase the rates of reassessment have been supported by the Division of Student Success and the Office of the Dean of the Division of Physical and Biological Sciences, but have met with some resistance within the Mathematics Department.

Differences in prior preparation create different challenges in the introductory calculus courses. UCSC offers four different "introductory" calculus sequences: *Calculus for Economics* (AMS 11AB), *Calculus with Applications* (Math 11AB), *Calculus for Physics, Mathematics, and*

Engineering (Math 19AB), and *Honors Calculus* (Math 20AB). Math placement assesses knowledge of standard mathematics topics up through those covered in a typical precalculus course, but does not assess knowledge of calculus itself. Different placement score cut-offs are used for the different sequences, but enrollment recommendations or requirements are primarily based on (prospective) major, not prior math experience.

Students who took calculus in high school, but did not take Advanced Placement or International Baccalaureate exams or earn sufficiently high scores on those exams, must take calculus again at UCSC if they need it for their major. The December survey suggests that a strong majority of the students taking Math 11A or Math 19A in fall 2016 had already taken a calculus course in high school.

Comparisons of grades of survey respondents who took calculus in fall 2016 showed that the average grades for respondents whose last high school math class was precalculus were below passing level for most groups determined by ethnicity and EOP status. It is not surprising that prior experience with calculus would provide an advantage, but if a strong majority of the students in the courses share that advantage, the danger arises that instructor expectations will be determined by that cohort of students and newcomers to the subject will be perceived as weak students even if they are well-prepared for calculus.

Respectfully submitted;

COMMITTEE ON PREPARATORY EDUCATION

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Appendix: The Analytical Writing Placement Exam (AWPE)

Most incoming UCSC frosh satisfy the UC Entry Level Writing Requirement by earning a sufficiently high score on one of several admissible exams before beginning coursework at UCSC. UC administers the Analytical Writing Placement Exam (AWPE) statewide in May and on each campus at the beginning of the academic year.

The AWPE exam and scoring processes have serious limitations that are particularly problematic for multicultural and multilingual students. Students have two hours to read the given passage and write their essay; such tightly timed assessments have clear logistical advantages for UC, but can trigger stereotype threat. Some students are taught essay exam prep strategies, analogous to the well-known strategies for taking tightly-timed multiple choice exams; this can give an advantage in the exam setting that doesn't correspond to superior writing ability in more realistic contexts.

Some AWPE passages are arguably culturally insensitive. For example, the May 2014 topic was “what roles do talent and practice play in enabling people to reach outstanding achievements in any field?”; students may not feel comfortable responding “not as big a role as race, gender, or wealth” in this high stakes context, even if they're thinking it and their performance is affected by those thoughts. Some portions of that passage, e.g. “either high levels of musical achievement are based on innate brain structures (what people refer to as talent) or they are simply the result of training and practice” could have been taken from a stereotype threat experiment. The May 2017 passage on “negative thinking” was also problematic; aside from the striking Euro-centrism of the passage itself, the “it's all in how you look at it” topic seemed biased in favor of fortunate students: in the calibrating essays, students who wrote about coming to terms with their anxieties about the prom or their unsuccessful tryout for a prestigious wind ensemble scored higher than those who wrote about overcoming more substantial setbacks.

AWPE Scoring Guide

IN HOLISTIC READING, raters assign each essay to a scoring category according to its dominant characteristics. The categories below describe the characteristics typical of papers at six different levels of competence. All the descriptions take into account that the papers they categorize represent two hours of reading and writing, not a more extended period of drafting and revision.

A 6 paper commands attention because of its insightful development and mature style. It presents a cogent response to the text, elaborating that response with well-chosen examples and persuasive reasoning. The 6 paper shows that its writer can usually choose words aptly, use sophisticated sentences effectively, and observe the conventions of written English.

A 5 paper is clearly competent. It presents a thoughtful response to the text, elaborating that response with appropriate examples and sensible reasoning. A 5 paper typically has a less fluent and complex style than a 6, but does show that its writer can usually choose words accurately, vary sentences effectively, and observe the conventions of written English.

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A 4 paper is satisfactory, sometimes marginally so. It presents an adequate response to the text, elaborating that response with sufficient examples and acceptable reasoning. Just as these examples and this reasoning will ordinarily be less developed than those in 5 papers, so will the 4 paper's style be less effective. Nevertheless, a 4 paper shows that its writer can usually choose words of sufficient precision, control sentences of reasonable variety, and observe the conventions of written English.

A 3 paper is unsatisfactory in one or more of the following ways. It may respond to the text illogically; it may lack coherent structure or elaboration with examples; it may reflect an incomplete understanding of the text or the topic. Its prose is usually characterized by at least one of the following: frequently imprecise word choice; little sentence variety; occasional major errors in grammar and usage, or frequent minor errors.

A 2 paper shows serious weaknesses, ordinarily of several kinds. It frequently presents a simplistic, inappropriate, or incoherent response to the text, one that may suggest some significant misunderstanding of the text or the topic. Its prose is usually characterized by at least one of the following: simplistic or inaccurate word choice; monotonous or fragmented sentence structure; many repeated errors in grammar and usage.

A 1 paper suggests severe difficulties in reading and writing conventional English. It may disregard the topic's demands, or it may lack any appropriate pattern of structure or development. It may be inappropriately brief. It often has a pervasive pattern of errors in word choice, sentence structure, grammar, and usage.