

Committee on Educational Policy Report on the Comprehensive/Senior Exit Requirement

Two growing trends led to the need for CEP to carefully examine the Comprehensive/Senior Exit Requirement. First, as the campus is now moving to mandatory grades, several programs wondered whether or not CEP would eliminate the comprehensive/senior exit requirement, which was originally mandated as part of our grading variance. Second, as part of our WASC (Western Association of Schools and Colleges) review, the campus WASC team identified a need to focus on our senior capstone experiences as we work to ensure the highest quality of undergraduate experience. It is clear to CEP that, whatever the motivation, the founders of UCSC had great foresight in adopting a senior exit requirement.

CEP reviewed and discussed material from two sources: the Committee's request for information from all programs about the range and effectiveness of their choice in satisfying the senior exit requirements; and the Spring 2003 campus survey of proposed graduates that included two questions concerning the senior exit requirement. The results from both surveys are remarkably similar.

Based on this material, the primary conclusions are:

1. Comprehensive examinations are generally the worst implementation of the senior exit requirement. They are not supported by students or faculty, and in general are a misuse of resources. While written and oral examinations, tailored to the individual student, are a standard part of graduate education in many disciplines, they can only be meaningfully provided by programs with low majors-to-faculty ratios.
2. Course-based capstone requirements, integrated with the curriculum, are strongly valued by students and faculty. With appropriate design, course-based solutions can be a more efficient use of resources, even in large programs.

CEP's goal is that this report will lead all programs to regularly evaluate their senior exit requirements. Even in times of budgetary restraint, the focus must be on the quality of our education. It is clear to CEP that senior capstone requirements are among the most important aspects of our programs, and thus they must be maintained and enhanced. CEP encourages all programs to be creative and introspective as they continue in the never-ending task of improving each program.

The remainder of this document summarizes the student and program survey data and presents the Committee's policies and recommendations.

Student evaluation of the exit requirement

The Senior Survey had 690 responses, approximately one-third of those petitioning to graduate in spring 2003. 40% indicated that they completed the senior exit requirement with an examination (38% departmental, 2% GRE or equivalent), and 60% had an alternative exit requirement, such as a research project or thesis, an in-depth paper, a capstone course (Senior Seminar, etc.), or some other option.

The most interesting aspect of the Senior Survey is the question considering the usefulness of the senior exit requirement. Students were asked to evaluate their senior exit requirement in relation to their regular coursework, in particular whether or not the impact was the same as regular coursework, better (“important in developing my intellectual skills” or “one of the most important aspects of my academic career”) or worse (“was less valuable than my regular coursework” or “was a useless hoop to jump through”).

Looking at the negatives, 60% of students who indicated that they completed the senior exit requirement by examination found the requirement to be either less valuable than regular course work or a useless hoop. 10% of students who completed the senior exit requirement by thesis, project, paper, capstone course, or other means rated the experience as less valuable than regular course work or a useless hoop.

Looking at the responses of students who completed a senior thesis or capstone course, the situation is reversed. 60% of students who completed a thesis, paper, project, capstone course, or other means rated the experience as being either important in developing intellectual skills or one of the most important requirements of their academic career. Only 12% of the examination students found significant value in the exam.

Program evaluation of the exit requirement

CEP received responses from 21 programs. The responses were among the most thoughtful and valuable that CEP has received on any campuswide request for information.

The responses fall into two categories. First, are those departments that have a comprehensive examination, who frequently believe the senior exit requirement should be abolished. Second, are those with some other form of senior exit requirement, who are in general strongly satisfied with the requirement, from both a pedagogic and workload point of view. Two programs are either presently revising their exit requirement to a form other than a comprehensive examination, or are considering such a revision in the near future.

Comments from the first group of departments using an exit exam, one per program, include:

- “Requiring an extensive comprehensive exam is exacerbated by the current budget crisis, since managing this annual exam is quite costly.” (from a program eliminating the comprehensive exam in favor of a capstone project course)
- “We think that the comprehensive examination in particular is inefficient, a poor use of faculty resources, produces a high level of stress and anxiety for students, and is not a particularly effective capstone experience.” And “we recommend utilizing the minimum University of California grade point average for graduation.”
- “We do not believe that our current senior comprehensive exam serves our students well, nor do we think it is worth the faculty, staff, and student time involved to mount, score, and maintain it.”

- “The department does not have the instructional resources to offer required seminar courses that smaller program find so beneficial and in which students gain a higher level or broader understanding of their discipline. The method in place allows us to handle the requirement while continuing to offer a curriculum that allows [students] to make degree progress.” “The comprehensive requirement does not add educational value to the [discipline] majors and is cumbersome to administer.”

Comments from the second group, requiring a senior thesis, creative project, capstone course, etc., one per program, include:

- “The current options were developed with undergraduate major needs in mind. Many seniors were delaying graduation in order to finish the senior thesis. The senior seminars provide a forum in which majors gain guidance in research and writing within a quarter.”
- “Both the thesis and the seminar offer important learning opportunities for UCSC students graduating with a B.A. in [major].”
- “We feel strongly that the exit requirement is an important component of our major, as it requires students to integrate knowledge from an interdisciplinary range of courses. We think that our current options [senior thesis, senior internship, senior seminar, capstone course] provide an excellent range of learning and faculty interaction opportunities for students. We do not think that an exam would be an appropriate exit requirement for our major. We are also convinced that abolishing the exit requirement would be a detriment to our major.”
- “[The program] retains a strong commitment to the capstone requirement because it represents a thoroughly meaningful intellectual and personal experience for graduating seniors (who are typically wanting and needing such meaningful experiences). Our faculty continue to enjoy working with students on their capstone projects and, in fact, frequently say this is among the most meaningful teaching experiences.”
- “The faculty feel that our current exit requirement is working extremely well as a learning experience for students. In the 190 seminars, students can get deep into an advanced issue in [discipline] and, if they wish, can engage in independent research or thinking.”
- “Faculty are, for the most part, very pleased with our Senior Exit requirement which is a seminar designated at the beginning of the quarter by the student as their capstone course. Faculty work particularly closely with those students, require work of a higher caliber than they do from those taking the course as a regular seminar, and evaluate the work using more rigorous standards.”
- “The [Discipline] Department’s impression is that both paths [senior thesis and seminar] work extremely well as learning experiences. The quality of the undergraduate theses produced is generally quite high...The seminars also appear to be highly successful by the same measure.”
- “The [Discipline] faculty think that the senior project class, the capstone for [discipline] is a good class.”
- “[Discipline] faculty generally feel that the senior seminar provides a valuable experience for majors. As classes grow larger, this option ensures that every student will be able to take at least one small intensive course. The [discipline] senior seminar requires that students write a substantial research paper (20 pages or more, although some faculty divide this into two ten-page papers).”

- “We in [Discipline] feel that the senior thesis is really a key learning experience for our students. We do not allow any other methods of satisfying the exit requirement except for the students who are double majors with their second major in the sciences or engineering. These students take the [Discipline] GRE...”
- “Last year we revised, with CEP’s approval, our senior extra requirement to give students six different options: [senior thesis, senior seminar, graduate course, additional approved course, oral examination, bibliographic essay]. We made these changes mainly to reallocate resources between our undergraduate and graduate curriculums. In that regard the changes have been helpful; we have been able to offer more graduate courses this year. We also think allowing students to choose among these options will improve their learning experience. But it is too soon to evaluate these changes. We will conduct a fairly thorough evaluation at the end of the next academic year and make any necessary changes.”
- “Our faculty feels that the range of options that we provide to students serves both the students and the faculty well. We had put a great deal of energy into revising them in the last couple of years, which is one of the reasons that we are satisfied for the moment with what we have drawn up. They allow students to choose between an Expanded Research Paper (building on earlier coursework) and a Senior Seminar that counts as an Exit Requirement.”
- “The department believes that a senior exit requirement is important and should be retained. It does not provide a serious impediment to graduation.”
- “We require a capstone design experience for all students in [Discipline] and [Discipline]. A major design experience ... is required for all accredited [Discipline] programs, and this experience fits perfectly into the UCSC senior exit requirement.”
- “As a learning experience, we feel that the senior seminar provides students with an intensive group learning environment—one that builds intellectual community among seniors and allows students to reflect collectively on the key questions in the field of [discipline] and their education as a whole.”
- “Your inquiry about the senior exit requirement comes at a very appropriate junction in curriculum planning in the [Discipline] Department. The Faculty have discussed this issue often in the past few years and, in fact, we just made a major change in the senior exit seminar for the B.A....Feedback from students thus far is extraordinary. They find the material both challenging and enjoyable. I am pleased to say that we have developed a course that truly “caps” their four years in the [Discipline] program and treats them on the level of first-year graduate students.”

CEP’s conclusions from both the data it and the campus have collected are simple: programs that require written senior comprehensive examinations experience a level of dissatisfaction among both students and faculty. These departments should consider shifting to some other form of exit requirement, and could perhaps consult with other departments with roughly equivalent resources and numbers of student majors to learn what works for them. Many departments have managed to improve their exit requirement strategies through a combination of trial and error; it would be advantageous if other departments could benefit from what they have learned in the process.

Policy and Recommendations

SCR 8.1.1 Each student, in order to graduate, must pass a comprehensive examination or senior thesis administered or approved by the agency supervising the student's major program.

1. **Regulation.** While the original relationship of the comprehensive/senior exit requirement and our grading policy has vanished, it is clear to CEP that senior capstone experiences are a core aspect of a high quality undergraduate education. CEP does not propose any change to Santa Cruz Divisional regulation 8.1.1.

2. **Policy**

Thesis: CEP affirms its 1995 definition of “thesis” as: “A major, coherent project that meets the standards of the senior year level of achievement in the discipline.” Courses designated to satisfy the SCR 8.1.1 thesis requirement must:

- a. Show senior-year achievement, for example by being restricted to seniors or having prerequisites that ensure only the most advanced students may enroll.
- b. Have a major coherent project with a significant writing component.

Comprehensive examination: Senior comprehensive examinations are generally not recommended by CEP.

Review: The senior exit requirement must be regularly reviewed.

- a. All 6-year external reviews must include an analysis of the program’s exit requirement, including student and faculty input, statistical information concerning the options chosen, and how feedback from the senior exit requirement is examined and used by the department.
- b. CEP may additionally require review and consideration of comprehensive requirements outside of the 6-year cycle.
- c. CEP will request that all programs which did not respond to our original survey respond, with this statement in hand, during Fall 2004.

3. **Present Practices**

- a. Some majors find that a senior thesis or performance is the only appropriate capstone experience. Most have other solutions.
- b. Senior seminar (190) is common, and typically involves either one major paper or many smaller essays on a common theme. Both approaches can potentially be justified as “major, coherent projects.” Senior seminars are usually small, and budget issues may make it necessary to restrict students to only one such seminar.
- c. A few programs include an appropriate graduate project course as an option.
- d. One program allows a specific upper-division course, with the agreement of both the faculty member and the department, to be taken as a senior seminar. Such students are held to a higher standard and are usually expected to produce a major research paper or other significant project in lieu of or in addition to the normal requirements for the designated course. Appropriately designed, with standards clearly set by the program faculty, this can qualify as a major coherent project.

- e. In certain cases, an examination may be appropriate, especially if it is integrated into a departmental process for outcomes assessment and continuous improvement.
- f. Some programs require a senior essay that may be an extension of a class project.
- g. A few majors allow completion of the senior exit requirement by taking additional courses or just the required courses. CEP does not favor this solution, and will be working with these programs to consider alternatives.
- h. A few majors require a formal written comprehensive examination. CEP does not favor this solution.

4. Recommendations

- a. Senior exit requirements should be integrated with annual or biannual internal review of each major and its requirements.
- b. Course-based projects are an effective use of resources for programs unable to supervise a thesis for every student.
- c. Evaluation of satisfaction of the senior exit requirement should include multiple faculty in the program, such as the program's undergraduate committee. This can also be the forum for awarding honors.
- d. Clear guidelines for the standards of the senior exit requirement should be available to students, preferably in the catalog (e.g., as in politics requirement adopted for the 2003-4 catalog). These guidelines could include complexity of a performance or exhibit, number of pages in a major paper, experimental methods required, or scope of a design.
- e. Student proposals and faculty approval prior to commencement of the work can help ensure quality and achievability.
- f. Proposals for changes to the senior exit requirement must focus on the undergraduate educational experience, rather than budget or workload. Resource availability may constrain the range of feasible choices, but should not be the starting point for faculty discussion.
- g. Programs may wish to consider satisfaction of the campus writing-intensive (W) requirement as a prerequisite to senior thesis and senior project courses.

Appendix

Santa Cruz Academic Senate regulations (8/03 version):

8.1 Comprehensive Examinations

(Am 21 Apr 71)

8.1.1 Each student, in order to graduate, must pass a comprehensive examination or senior thesis administered or approved by the agency supervising the student's major program. (Am 21 Apr 71, 24 Jan 79; EC 1 Aug 76)

8.1.2 Comprehensive examinations may be written, oral, or both, at the discretion of the agency administering the examination. (En 21 Apr 71)

9.3 Grading of Comprehensive Examinations

A9.3.1 All comprehensive examinations and senior theses shall be graded honors (H), pass (P), or fail (F). Papers of students receiving H or F must be read by at least two readers. (Am 27 Jan 71)

Comprehensive Examination

CEP Annual Report, 1994-95:

Comprehensive Examinations

A subcommittee was established to continue review of how boards satisfy UCSC's unique comprehensive requirement, including grading according to Senate regulation 9.3. The Subcommittee drafted an interpretation of "thesis" to mean "A major, coherent project that meets the standards of the senior year level of achievement in the discipline." This definition was adopted by the full committee. The subcommittee also recommended that all boards affirm in the catalog the long-standing regulation (May, 1966) that comprehensive examinations and senior theses be graded honors, pass, or fail. Discussion will be continued next year.

CEP Annual Report, 2000-01:

On-Going Concerns: External Reviews, the Comprehensive Exam Requirement, General Education, Selective Admissions to Majors, and the Calendar

...

Second, in conjunction with other issues such as the adoption of mandatory letter grades and the budget crisis, CEP received enough inquiries about UCSC's senior comprehensive requirement to feel the need to make clear its intention to uphold the requirement as an important part of UCSC's commitment to excellent undergraduate education and to reaffirm the 1995 definition of a "thesis" as "a major coherent project that meets the standards of the senior year level of achievement in the discipline." At the same time, CEP plans to initiate discussions which will encourage departments to develop feasible options for students to satisfy the requirement in meaningful ways while increasing the usefulness of the exit requirement as a way of assessing the effectiveness of programs of study within majors.