



CLAREMONT
MCKENNA
COLLEGE



Educational Effectiveness Review Report

prepared for the
WASC, Senior Commission

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Claremont McKenna College

<http://www.claremontmckenna.edu/wasc/>

Contact Persons:

Jerome W. Garris, Vice President for Special Projects and
Senior Associate Dean of the Faculty
Claremont McKenna College
Claremont, California 91711
Phone: (909) 621-8195
Fax: (909) 607-1212
jgarris@claremontmckenna.edu

Dianna Graves, Director of Academic Planning and
WASC Accreditation Liaison Officer
Claremont McKenna College
Claremont, CA 91711
Phone: (909) 607-8055
Fax: (909) 607-1212
dgraves@claremontmckenna.edu

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The following people graciously gave of their time and expertise in the development and completion of the Educational Effectiveness Review, 2011 at Claremont McKenna College, Claremont, California.

SENIOR STAFF

Pamela B. Gann, President and Chief Executive Officer

Cheryl M. Aguilar, Special Assistant to the President

Hilary Appel, Associate Dean of the Faculty and Professor of Government

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Matthew G. Bibbens '92, Vice President for Administration and Planning, General Counsel, and Secretary of the College

S. Brock Blomberg, Dean of the Robert Day School of Economics & Finance and Professor of Economics

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Jefferson Huang, Vice President for Student Affairs

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Elizabeth Morgan, Registrar and Director of Institutional Research

Colleen Wynn, Assistant Director of Institutional Research

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Gary Gilbert, Associate Professor of Religious Studies

David Hansen, Dean of the Joint Science Department and Professor of Chemistry

Paul Jeffrey, Claremont McKenna College student, class of 2012

Amy Kind, Associate Professor of Philosophy

Shana Levin, Professor of Psychology

Mike O'Neill, Associate Professor of Mathematics

Jonathan Petropoulos, Professor of History

George Posner, Claremont McKenna College student, class of 2012

Marie-Denise Shelton, Professor of Modern Languages

Anneliese Steele, Professor of Military Science

Michael L. Sutton, Professor of Physical Education

ASSESSMENT COMMITTEE

Jerome W. Garris, Chair; Vice President for Special Projects and Senior Associate Dean of the Faculty

Gary Gilbert, Associate Professor of Religious Studies

Cynthia A. Humes, Associate Vice President & Chief Technology Officer and Associate Professor of Religious Studies

Manfred Keil, Associate Professor of Economics

Lee Skinner, Associate Professor of Modern Languages

Dianna Graves, Director of Academic Planning

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Introduction to the Educational Effectiveness Report

From the outset of its current reaffirmation process, Claremont McKenna College has realized that it had not fully met its obligations to its students, to WASC and to public authorities, and to the general public to provide firm evidence of the educational effectiveness of its academic programs. Thus, starting from a position of minimal assessment and evaluation in the contemporary sense of the terms, the College has faced a considerable challenge in making up lost ground in establishing an on-going, systematic and comprehensive assessment and evaluation program to demonstrate that it clearly meets its core commitment to educational effectiveness and that its students are fulfilling the educational outcomes established for them.

In this Educational Effectiveness Report we believe we have provided the evidence needed to assert that we are no longer struggling with a new and daunting task. Rather, we have accomplished what we set out to do in our original Proposal by establishing systematic, ongoing assessment and evaluation for every academic program offered by the College including our overall general educational program. **(CFR 1.2)** In our Capacity and Preparatory Review we vowed to establish, “educational objectives for our students,” assess, “their achievement of those goals, and be able to demonstrate program alterations to improve effectiveness where appropriate based on the results of our evaluation efforts.” We also stated that this would, “be accomplished at both at the general education level and the departmental and program level.” We are pleased to report that we have accomplished all of these tasks. We have also formed the Assessment Committee that we referred to in our CP&R intended to guide and shepherd the entire process at the program level and to conduct the assessment and evaluation at the general learning level. Moreover, we have taken the lead in working with our sister institutions in Claremont to develop a means of assessment and evaluation of consortium programs jointly operated and over which no single institution had complete control.

Finally, we are gratified that the faculty and staff have worked diligently and faithfully to make this accomplishment a reality. Through their efforts, sometimes willingly, occasionally grudgingly, CMC can now state that every academic program, both its own, as well as those of the jointly operated Keck Science Department, and several other programs operated collaboratively with our sister institutions in Claremont have completed at least one full cycle of assessment and evaluation and the results are documented fully in this Report. Our Report provides an in-depth analysis of the effectiveness of our educational programs and the data gathered demonstrate that we are consistently achieving the educational goals we have established for our students. Our on-going external review process is now fully integrated with our assessment and evaluation system, and additional data, both direct and indirect indicate that our quality assurance processes are working at a competitive rate in comparison with other institutions. **(CFR 2.3, 2.4, 2.5, 2.6 & 2.7)** In short, CMC has made assessment and evaluation an institutional priority and it has become integrated into every aspect of student learning.

CMC chose two themes in 2007 in its Initial Proposal for its reaffirmation program: *Assessing Student Learning* and *Planning for Growth*. The first theme was selected for precisely the reasons stated above; the College recognized that it was not far along the path of assessment and evaluation that has dominated education in recent decades, and was determined to move ahead. The second theme of growth was based on an emerging desire to study enrollment growth as a means of strengthening the College. As will become clear in this Report, we have altered our profile with respect to assessment and evaluation but we have not made decisions to implement major growth in our enrollment in the near future due primarily to the financial downturn pressing upon the nation’s economic circumstances and its effect on the College’s finances and fund raising.

We have organized our Educational Effectiveness Report around the two themes we identified in our Initial Proposal. The first theme represents the lion’s share of the Report since it deals directly with educational effectiveness and student learning. We will provide considerable documentation of the results of our assessment and evaluation system which has completed its first cycle of operation. The results will be organized first to cover general education and learning outcomes for the College’s program as a whole. As we will demonstrate, the program is overwhelmingly meeting the learning goals we have established for it. This

general learning section will be further separated into assessment of student learning outcomes (SLOs) by direct means initially and then by indirect means of assessment. Because we are still in the early stages of operating our assessment and evaluation program, having completed only the first cycle in a number of programs, we have used multiple means of assessment for each student learning outcome as we wanted to test as many forms of assessment as we felt could be useful to us. It may be of particular interest to our WASC visiting team to learn that we took the team's suggestion that we focus on the senior thesis as the principal means of assessment for both general learning and our specific academic programs. This approach has worked very well in nearly every instance, although we have learned that in some cases we will need to make some policy decisions regarding the senior thesis requirement to ensure that it serves our purposes even better. Following this section, the Report presents evidence regarding **CFR 2.2**.

The second section of Theme One will provide documentation of the assessment of student learning outcomes for the academic programs (majors) offered to our students. A summary of the processes used by the faculty will be presented and individual reports for several of our majors will be included to illustrate the assessment, and subsequent analysis of educational effectiveness as well as any resultant curricular or programmatic changes. Detailed reports for every major are included in [Appendix 4](#). As will be evident from this section, our students are achieving or exceeding the learning outcomes set for them by the disciplinary faculty in nearly every instance (**CFR 2.4, 2.5**).

The sections on assessment are followed by Theme Two dealing with institutional growth. The College's response to the Commission letter of March 2010 is next. Finally there is a concluding integrative section on educational effectiveness at CMC.

Following the report narrative are required appendices including the [Summary Data Form](#) (App. 1), the [Inventory of Educational Effectiveness](#) (App. 2), the [Inventory of Concurrent Accreditation](#) (App. 3) and the full [Report](#) detailing program level assessment (App. 4). Other supporting evidence and data exhibits are hyperlinked throughout the document.

**THEME ONE
ASSESSING STUDENT LEARNING**

1. General Student Learning Outcomes

The Faculty adopted four student learning outcomes (SLOs) on the recommendation of the WASC Steering Committee in May, 2009. That same month, the Board of Trustees approved the SLOs and urged the faculty to add a fifth SLO on leadership. The following May, 2010, the faculty adopted the fifth general student learning outcome. The SLOs derive from our [mission statement](#) and from our expectations of the results of a CMC education. We expect our graduates to demonstrate strength in each of the five areas we have chosen to emphasize. The student learning outcomes are:

SLO #1, Graduates will be able to analyze a particular issue, problem, or idea in depth and consider its elements.

SLO #2, Graduates will be able to express themselves clearly, coherently, and convincingly both orally and in writing.

SLO #3, Graduates will be able to complete projects that require integrating ideas and information from various sources.

SLO #4, Graduates will be able to effectively utilize information technology tools.

SLO #5, Graduates will be knowledgeable about the attributes of responsible leadership.

Our assessment and evaluation program is designed to produce evidence that our students are achieving the intended outcomes both in terms of their overall educational experience at the College and in terms of their major program experience. While the faculty, administration, and Trustees have agreed upon the five student learning outcomes listed above, we also recognize our responsibility to meet the standards set for all institutions in **Standard 2, CFR 2.2** of the WASC Standards of Accreditation. This Standard focuses attention on the need for a general education program of sufficient depth and breadth to prepare students “for work, citizenship, and a fulfilling life.” We believe our program of general education which requires 12 courses, or 48 semester hours and includes upper and lower division courses set off by a capstone senior thesis requirement provides a firm basis for such learning. This program of study also encompasses the core learning abilities outlined in **CFR 2.2**; written and oral communication, quantitative skills, information literacy, and critical analysis. Our baccalaureate program also fosters an understanding of diversity, civic responsibility, the ability to work with others, and the capability for lifelong learning that are components of **CFR 2.2**. Our general education program and our residential environment ensures breadth of learning in aesthetic, social, political, scientific, and technical knowledge expected of educated young men and women. Finally, our major programs coupled with the senior thesis require every student to engage in a sustained, focused, in-depth program of study prior to earning the baccalaureate degree.

Our assessment and evaluation program at the general educational level is designed to provide evidence of student learning outcomes with specific attention to the five general learning outcomes identified above, while also providing additional evidence that we are meeting the **CFR 2.2** expectations. At the programmatic level, our assessment and evaluation program provides evidence of student learning with respect to specific program learning outcomes for each major program. Finally, both at the general educational level and at the program level our assessment and evaluation program results in active efforts to improve learning wherever the evidence leads to a conclusion that improvement is warranted. (**CFR 4.4, 4.6 & 4.7**)

The College established an Assessment Committee in the fall of 2010 to oversee the assessment and evaluation program in compliance with **CFR 4.1**. The [membership](#) is comprised of five faculty members and is chaired by the Senior Associate Dean of the Faculty. The role of the Committee is to monitor the activity of the

program assessment and evaluation efforts to ensure that they occur on schedule, to provide needed expertise where appropriate, and to review the results of evaluation. The Committee will report periodically to the Curriculum Committee and to the full faculty on its activities. The Assessment Committee is also responsible for designing and carrying out the assessment and evaluation of the general learning program. At the program level each major program has been responsible for appointing a member or a committee to design the assessment program following the adoption of student learning outcomes and for ensuring the assessment and evaluation cycle occurs on schedule. By the conclusion of the 2010-11 academic year, the College had completed its first cycle of comprehensive assessment and evaluation of student learning. This includes the general overall education program, each major program operated directly by the College, the Keck Science Department operated jointly with Scripps and Pitzer Colleges, and all of the intercollegiate programs offered by the Claremont Colleges to CMC students.

2. Methods of Assessment for General Student Learning Outcomes

In order to ascertain the degree to which our graduates have attained strength in each of the five principal learning areas, we have chosen to develop an assessment and evaluation program that is comprised of multiple means of analysis including both direct and indirect assessment. Only by multiple means of assessment can the College fully live up to its obligation to create an environment of evidence to sustain and support its efforts to improve its programs. To gain a comprehensive appreciation of our students' learning, the Assessment Committee decided to utilize the senior thesis completed by every graduate of the College as the fundamental basis for analysis. In most instances, we have used the [VALUE rubrics](#) developed by the American Association of Colleges and Universities as the means of analysis. This analysis has been supplemented by a performance-based skills assessment conducted by *All About Performance*¹, an independent Assessment Center located in southern CA which offers multiple exercises that evaluate individual skills, abilities and personal characteristics in a variety of real-life, work-related situations. In the case of CMC, the Assessment Center (headed by [Warren Bobrow, Ph.D](#)) used a variety of validated tools and techniques including written and oral exercises, as well as simulations and role play to evaluate students against several of our learning outcomes. The Assessment Committee also utilized in-house developed technology rubrics to measure progress in SLO #4 and the Kravis Leadership Institute is collecting direct evidence for SLO #5 through its Undergraduate Leadership Education Study. Finally, members of the Assessment Committee and the Office of Institutional Research directly evaluated more than 150 student presentations using VALUE rubrics and in-house developed rubrics.

We have also gained insights from the use of the [Collegiate Learning Assessment \(CLA\)](#) and the [American Council on Education Young Alumni Survey](#), since these two forms of assessment readily permit comparison with other institutions' student learning outcomes, something of considerable interest to us as a nationally competitive liberal arts college and in compliance with **CFR 4.5**. The Alumni survey is particularly valuable as our graduates can serve as highly useful judges of the utility of the skills they have gained via a CMC education. These perspectives relate directly to "work, citizenship, and a fulfilling life." (**CFR 2.2**) We have also utilized two means of assessment that permit cross institutional comparisons. (**CFR 4.5**) These indirect assessments are the [National Survey of Student Engagement \(NSSE\)](#) and the national [Cooperative Institutional Research Program \(CIRP\)](#) College Senior Survey. Additionally, we have utilized the [CMC Student Life Survey](#) which has been used by the College since the 1970s. Each of these instruments provides additional information on student perspectives on their learning outcomes at CMC, including those identified in **CFR 2.2**. We have been gathering data from these indirect measures for many years, but the direct means of assessment we are now utilizing are relatively new to us. We believe it is important to note that with respect to each SLO we have used more than one means of assessment to evaluate student learning. By this means we believe we are able to document student learning with greater accuracy and reliability.

¹ Details about the exercises and assessment methods employed by All About Performance can be found on the Center's [website](#). While the Center does not release its rubrics for proprietary reasons, it has provided the [validation study](#) on its processes and welcomes contact by the WASC reviewers.

3. Direct and Indirect Methods of Assessment

SLO #1, Graduates will be able to analyze a particular issue, problem, or idea in depth and consider its elements.

Direct Means

- Use of [Collegiate Learning Assessment](#) results
- Use of the [Inquiry and Analysis VALUE Rubric](#) to score student learning by means of senior theses
- Use of the [Problem Solving VALUE Rubric](#) to score student learning by means of senior theses
- Use of an [Assessment Center Workshop](#) exercise to score student learning

Indirect Means

- Use of [\(NSSE\) survey results](#) (Questions Nos. 2b, 2d, 6d, 7d, 7h, 11e, 11f, and 11m)
- Use of [\(CIRP\) Senior Survey results](#) (Questions Nos. 1g, 1h, 5w, 6p, 10b, 10c, and 16d)

SLO #2, Graduates will be able to express themselves clearly, coherently, and convincingly both orally and in writing.

Direct Means

- Use of [Collegiate Learning Assessment](#) results
- Use of the [Written Communication VALUE Rubric](#) to score student learning by means of senior theses
- Use of the [Oral Communications VALUE Rubric](#) to score student learning by means of student presentations
- Use of an [Assessment Center Workshop](#) exercise to score student learning

Indirect Means

- Use of [NSSE survey results](#) (Questions Nos. 1b, 1c, 3c, 3d, 3e, 11c, and 11d)
- Use of [CIRP Senior Survey results](#) (Questions Nos. 5z, 5aa, 5bb, 5cc, 5ee, 10b, 10c, 10d, 14k, and 14r)
- Use of [CMC Student Life Survey results](#) (Questions Nos. 33 and 34)

SLO #3, Graduates will be able to complete projects that require integrating ideas and information from various sources.

Direct Means

- Use of the [Critical Thinking VALUE Rubric](#) to score student learning by means of senior theses
- Use of the [Assessment Center Workshop](#), in-basket exercise requiring integration of information

Indirect Means

- Use of [NSSE survey results](#) (Questions Nos. 1d, 1i, 2c, 2e, 7a, 7d, 7h, and 11m)
- Use of [CIRP Senior Survey results](#) (Questions Nos. 1g, 5w, 6p, 6q, and 10m)

SLO #4, Graduates will be able to effectively utilize information technology tools.

Direct Means

- Use of a [CMC-developed rating scale](#) to score student learning by means of senior theses
- Use of [CMC Information Technology form](#) as a means of evaluating student use of information technology tools during student presentations

Indirect Means

- Use of [NSSE survey results](#) (Questions Nos. 1l, 1m, 10g, and 11g)
- Use of [CIRP Senior Survey results](#) (Questions Nos. 5j, 5l, and 14c)
- Use of [CMC Student Life survey results](#) (Question No. 37)

SLO #5, Graduates will be knowledgeable about the attributes of responsible leadership.

Direct Means

- Use of the [Assessment Center Workshop](#) evaluation system of leadership
- Use of the [Undergraduate Leadership Education Study](#)

Indirect Means

- Use of [NSSE survey results](#) (Questions Nos. 1j, 1k, 1s, 7a, 7b, and 11o)
- Use of [CIRP Senior Survey results](#) (Questions Nos. 1i, 5h, 5o, 5t, 5dd, 5ee, 6r, 6s, 6b, 6w, 9p, 13g, 13j, 14h, and 15j)
- Use of [CMC Student Life survey](#) (Questions Nos. 38 and 39)

4. Results of Assessment and Evaluation of General Student Learning Outcomes

a. Direct Methods of Assessment

Collegiate Learning Assessment

The Assessment Committee has chosen to use the senior thesis as the basic instrument for assessing general student learning at CMC. However, before turning to assessment using the senior thesis and other measures, we should address the use of the Collegiate Learning Assessment that began our overall assessment efforts several years ago in 2008. As part of our [Capacity and Preparatory Review](#) effort, the College chose to pilot the Collegiate Learning Assessment in order to evaluate its fitness for our purposes. In particular it seemed to relate well to three of our SLOs, #1, #2, and #3. We chose to test a group of freshmen and a group of seniors. Given our small size, we had great difficulty in inducing satisfactory numbers of students to take the test and were fortunate to achieve the absolute minimum number of test takers in both cases (fifty plus students). The [results of the test](#) were not promising for the level of analysis we intended. In the case of our fall 2008 freshmen test takers, they scored at the 98th percentile in overall terms of performance and at the 98th percentile in each of the four test areas. This suggests that very little improvement over the next four years on the CLA would be possible for that group essentially vitiating further analysis. Our seniors scored somewhat lower at the 88th percentile in the spring of 2009 in overall performance. In addition to these absolute scores, the CLA estimates a predicted score that in our case did not seem to work well for reasons that are still somewhat unclear, so we have focused on the actual scores achieved by our seniors.

If one uses these CLA actual senior results for assessment purposes, it is possible to say that in absolute terms our seniors outperformed students at 88% of the institutions administering the CLA that semester. In other words, our seniors were among the top 12% of all 9,000 seniors taking the CLA that semester. Scoring close to the top tenth percentile of all seniors taking the CLA appears to provide solid evidence that our graduates demonstrate good learning outcomes in the areas the CLA covers. The CMC seniors performed near the top at the 92nd percentile in the make-an-argument task that requires them to write a persuasive analytic essay correlating with SLOs #1, #2, and #3. Our seniors performed at the 87th percentile in both the performance task and the analytic writing test. The performance task involves analyzing complex realistic scenarios and involves SLOs #1 and #3. The analytic writing test relates to SLOs #1, #2, and #3 since it involves analyzing a problem, expressing oneself clearly in writing, and integrating ideas and concepts. Finally, in the critique-an-argument test, the seniors scored at the 82nd percentile. This test involves critiquing written arguments by

identifying flaws in arguments and explaining how they affect conclusions, then writing their critique in a logical, clear, and grammatically correct fashion. It involves SLOs #1 and #2.

Results of Collegiate Learning Assessment, 2009 Seniors

SLO #1, Graduates will be able to analyze a particular issue, problem, or idea in depth and consider its elements.

Performance Task	87 th Percentile.
Analytic Writing Task	87 th Percentile.
Make-an-Argument Task	92 nd Percentile.
Critique-an-Argument Task	82 nd Percentile.

Based on these results, we can demonstrate that our students are achieving at an advanced level the analytic outcomes we have set for them.

SLO #2, Graduates will be able to express themselves clearly, coherently, and convincingly both orally and in writing.

Make-an-Argument Task	92 nd Percentile.
Analytic Writing Task	87 th Percentile.
Critique-an-Argument Task	82 nd Percentile.

Based on these results, we can demonstrate that our seniors are more than able to write clearly, convincingly, and coherently.

SLO #3, Graduates will be able to complete projects that require integrating ideas and information from various sources.

Performance Task	87 th Percentile.
Make-an-Argument Task	92 nd Percentile.
Analytic Writing Task	87 th Percentile.

Based on these results, we can demonstrate that our seniors are more than able to integrate ideas and information.

While the CLA does not directly test for information technology skills (SLO #4), the CLA is an on-line test and students must demonstrate some information technology skills in order to access the test and complete it successfully. All of the nearly 100 students who completed the test were able to do so with little or no difficulty. This is a partial measure that our students have achieved competency in SLO #4, "Graduates will be able to effectively utilize information technology tools." The CLA does not test for leadership (SLO #5). In conclusion, the CLA results certainly demonstrate that CMC seniors are learning what they are expected to learn and at levels that are well above the average expected. **(CFR 2.6)**

The use of the CLA also provides insight into the skills included in CFR 2.2 of the WASC Standards. These include writing skills, critical analysis of data and argument, and problem solving skills. These are attributes and skills that aid in lifelong learning, work, and in responsible citizenship. As demonstrated above, the CLA results provide evidence of substantial learning outcomes among our seniors in these baccalaureate areas who achieved at an overall level better than students at 88% of all institutions taking the assessment exam.

The results of this one CLA test effort indicate that our students are clearly high achievers on three of the student learning outcomes we have established, and are competent in a fourth area of student learning,

information technology. However, the CLA does not permit us to assess performance on our own terms. Instead it measures performance in terms of how others are performing. This is valuable in and of itself, but it does not permit comparisons with our peer institutions since none of them actually participate in the CLA. Indeed, outperforming more than 88% of other students is not especially meaningful if there are no other highly selective institutions involved in the survey. Moreover, the freshmen we tested in 2009, scored overall at the 98th percentile outscoring students at 98% of the institutions involved in the test. Taken at face value, the CLA results demonstrate that we are achieving the desired results on at least three of our SLOs. Moreover, in the view of the Assessment Committee, they do not lend themselves to the need for programmatic alterations to improve a lagging or inadequate student performance in the areas measured. While these results are encouraging, we decided to turn to a more meaningful direct assessment tool for our own purposes, the senior thesis. At this point in time, the Assessment Committee has no plans to include future applications of the CLA in our assessment program. However, no final decision has been made to exclude it from future consideration.

Senior Thesis Assessment

Deliberations in the Assessment Committee led us to place reduced emphasis on the CLA looking toward the future and to focus our attention on the senior thesis as the main instrument for assessment of overall, general student learning. Additionally, we were encouraged to look toward the senior thesis by the [WASC Visiting Team Report](#) reviewing our CP&R in 2009. Each CMC student is required to complete a senior thesis in the major program as part of their general education graduation requirement. The thesis represents a capstone experience conducted under the supervision of a faculty member drawn from the major program. The thesis is a significant research effort that may span either one or two semesters and results in a written work of considerable length depending on the discipline.

The Assessment Committee decided to conduct the assessment of the senior thesis using the [VALUE Rubric](#) approach developed by the American Association of Colleges and Universities. The VALUE Rubrics were developed by teams of faculty and other professionals for use at any institution. There are a total of fifteen rubrics available for use. The Committee selected five rubrics for our use. Using a 4.0 scale, the Rubrics include a *Benchmark* score of 1.0, two *Milestone* scores of 2.0 and 3.0, and a *Capstone* score of 4.0. A joint reading and scoring meeting was held in order to train the members of the Assessment Committee in a common method of reading, evaluating, and scoring. After analyzing the specific criteria set forward in the Rubrics, the Committee agreed that a score of 2.5 was an acceptable level of proficiency, and that a score of 3.0 or better was highly desirable. A sample of ten percent of the senior theses produced each year was drawn randomly from those completed in the spring of 2010 and fall of 2011. A total of 31 theses were read. Each thesis was read independently by two members of the Assessment Committee. When the scores differed by more than two levels, a third reader evaluated the thesis and an average score was reported.

Results of Senior Theses Analysis, Spring-Fall, 2011 as Supplemented by the Assessment Center Results

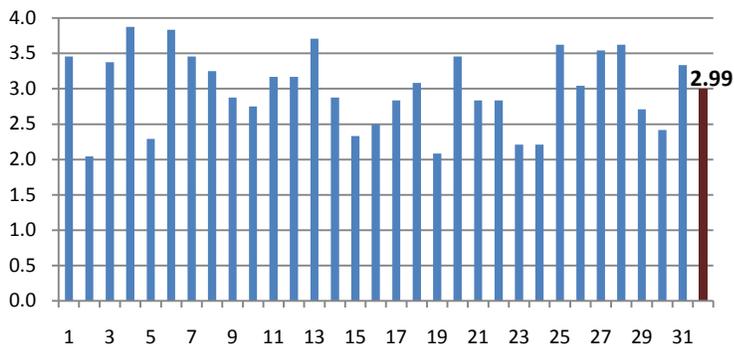
SLO #1, Graduates will be able to analyze a particular issue, problem, or idea in depth and consider its elements.

Our assessment of senior theses indicates that graduates are adept at analysis. CMC utilized the VALUE rubrics for [Inquiry and Analysis](#) and [Problem Solving](#) to measure progress within our first student learning outcome. Together, these rubrics provided assessment criteria on a four point scale for each of 12 aspects of critical thinking and analysis including topic selection, design process, the identification of problem solving strategies and research skills. As indicated in the chart below, students scored a combined average of 2.99 (red bar) on the 12 aspects with the highest scores reflected in topic selection (3.18) and analysis (3.19). The lowest overall scores were reflected in the identification of limitations and implications (2.76) and the implementation of solutions (2.81). Students whose thesis developed or employed an experimental and/or statistical design (primarily majors in economics, STEM fields, and psychology), generally scored higher in these areas (3.00, 3.02, respectively.) Students in these fields often had a clear design process and empirical results, whereas students who wrote theses in fields such as literature, film studies, international relations, history and government were less likely to acknowledge specific shortcomings in research design, and typically were not in

a position to “implement solutions.” Before the next assessment cycle in 2011-2012, the Committee will evaluate the rubrics’ criteria to determine whether certain majors may require modified criteria to more

adequately capture their specific disciplinary conventions of analysis.

SLO #1: Graduates will be able to analyze a particular issue, problem, or idea in depth and consider its elements. Bars indicate # of theses read. Vertical axis indicates score on 4.0 scale.



In addition to the senior theses, CMC also contracted with the Los Angeles based consulting firm All About Performance to provide additional assessment of our students’ learning outcomes relating to the general educational outcomes. We utilized an [Assessment Center exercise](#) conducted by All About Performance to evaluate analytic ability. In spring 2011, CMC students (N=35) scored 3.3 on a 5 point scale, while 17 non-CMC Claremont Colleges students scored 3.21. The

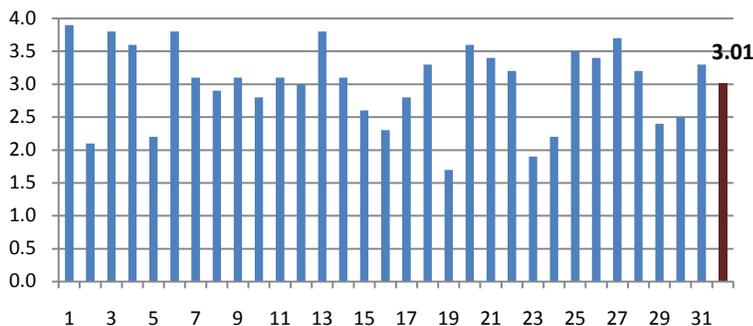
expected level for a good performance on this measure was a 3.0. Our students have achieved at a more than competent level. (CFR 2.6) Based on these results, the Assessment Committee has determined that no changes are warranted in our general education curriculum or courses regarding SLO #1 at this time.

SLO #2, Graduates will be able to express themselves clearly, coherently, and convincingly both orally and in writing.

The Assessment Committee evaluated student writing using the VALUE Rubric for [Written Communication](#) and determined that on average, as indicated below by the bar in red, students scored at the 3.01 level. Evaluated

on five aspects of writing, students scored best on written content development (3.13). Students scored lowest on their control of syntax and mechanics (2.76). This category regards the clarity, fluency and sophistication of the writing.

SLO #2: Graduates will be able to express themselves clearly, coherently, and convincingly both orally and in writing. Bars indicate # of theses read. Vertical axis indicates score on 4.0 scale .



The [Assessment Center](#) as provided by All About Performance tested for written communication skills using an exercise that evaluates students’ “abilities to understand business concepts and translate them into reasonable and actionable plans for the business.” In

spring 2011, CMC students’ average score for this exercise was 3.95 on a five point scale which is very high. The non-CMC Claremont Colleges students’ average score was also high at 3.63. (CFR 2.6)

Although CMC students generally scored well on written communication, writing continues to be a primary concern among faculty. The Assessment Committee notes that 22.6% of the students scored below 2.5 (proficiency) on the VALUE assessment as indicated in the chart above. Thus, the College has prioritized the improvement of student writing across the general education curriculum and will implement a number of changes in the upcoming academic year. (CFR 4.1, 4.6, and 4.7)

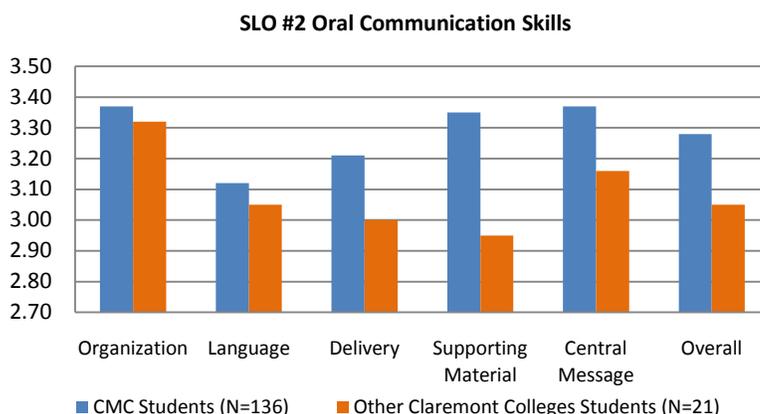
Foremost is the replacement of Literature 10 (introductory course required of all students) with the Freshmen Writing Seminar (FWS). Whereas Literature 10 was a literary analysis course that included writing, FWS aims to enhance the writing skills and literary acumen of first-year students through intensive composition and revision and the study of significant texts and models. Each seminar focuses on a literary theme chosen by the instructor, and each ranges across periods and genres. All of the seminars seek to instill rigor of argument,

clarity of presentation, and stylistic grace. Students will be expected to write no fewer than seventy-five hundred words during the semester and the seminars will typically have fifteen students.

CMC will also implement an [Academic Mentoring Program](#) in 2011-12. A Mellon Grant has provided funding to hire a team of Graduate Fellows to work with first-year students as dedicated Academic Mentors. These Fellows will serve as intensive advisors for students to assist them with their writing, to introduce them to the library and basic research skills, and to help acculturate them into academic life.

In addition to writing we have addressed student oral communications skills in our evaluation program. Members of the Assessment Committee and the Office of Institutional Research assessed 157 student oral presentations in 19 classes

during the spring of 2011 using the VALUE [Oral Communications Rubric](#). Our assessment of student oral communication skills indicates that CMC students are very adept at oral communication. Of the total evaluated, 136 were CMC students and 21 were other Claremont Colleges students enrolled in CMC classes. The overall rating of the student presentations was 3.28 on a four point scale. (For comparative purposes, the non-CMC Claremont Colleges students scored at 3.05 overall.) This is at the VALUE *Milestone 2* level which is “Very Good” in our terms. The highest ratings were in presentation of a central message scored at 3.37, organization of patterns scored at 3.37, and presentation of supporting material scored at 3.35. The lowest score was in terms of use of effective language scored at 3.12, still in the *Milestone 2* category and well above proficiency. (CFR 2.6)



The [Assessment Center](#) as provided by All About Performance also tested for oral communication skills. CMC students tested in the spring of 2011 scored 3.5 while non-CMC Claremont Colleges students scored marginally better at 3.53 on a five point scale. The level of expected competency is 3.0. Thus, we conclude that CMC students demonstrate very good oral expression skills. Our evaluation of the assessment results indicates that the CMC educational program is successfully preparing students’ oral skills.

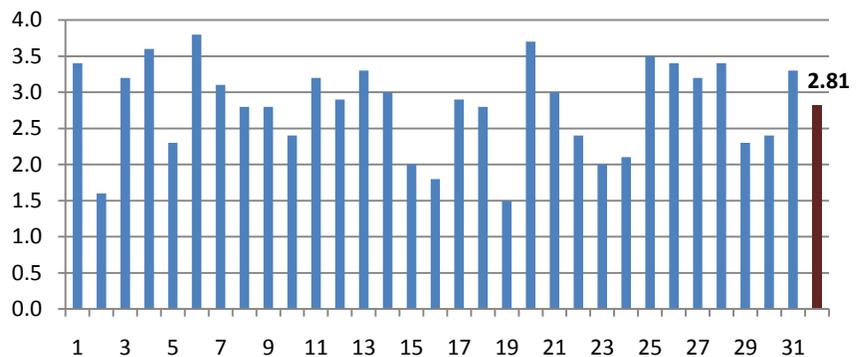
To augment student learning in both written and oral communication, The Writing Center will re-launch in AY 2011-2012 as the [Center for Writing and Public Discourse](#) (CWPD). The CWPD will continue to provide services currently being offered by the Writing Center—such as one-on-one free tutoring for students—and it will expand to assume a more prominent role in encouraging excellence in written and oral communication at CMC. Beyond focusing on student writing in individual conferences, the CWPD will work closely with faculty to help improve the teaching of writing across the curriculum. The CWPD will also work closely with Information Technology, Career Services, the Debate Union, and Public Affairs to develop programming that will assist students and faculty members with writing and presentation skills. (CFR 4.6)

SLO #3, Graduates will be able to complete projects that require integrating ideas and information from various sources.

As indicated by the red bar in the chart below, the assessment of senior theses yielded an average score of 2.81 on the VALUE rubric for [Critical Thinking](#). The rubric includes criteria for five aspects of critical thinking. CMC students scored high on their ability to explain an issue (3.10). Students also scored above proficiency in their presentation of evidence (2.77) and their articulation of research conclusions (2.87). Students scored lowest (still, at proficiency) in the category titled “Student’s position—perspective, thesis/hypothesis” (2.58).

Discussion among the members of the Assessment Committee revealed that vague differentiation between levels of proficiency on the rubric itself may have contributed to the evaluators' attribution of lower scores. For example, for "student position," the description for *Milestone 2* reads, "Specific position (perspective, thesis/hypothesis) acknowledges different sides of an issue." The description for *Milestone 3* reads, "Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/hypothesis)." This difference is nuanced and though consensus was reached within each reading group, scores across the reading groups varied considerably. The use and/or modification of the VALUE rubrics will be considered by both the Assessment Committee and the Curriculum Committee of the College in fall 2011 before the next assessment cycle. (CFR 4.1)

SLO #3: Graduates will be able to complete projects that require integrating ideas and information from various sources. Bars indicate # of these read. Vertical axis indicates score on 4.0 scale .



The Committees will also explore differences in the way faculty advisors from varying disciplines teach students to articulate perspective and position in their senior thesis to better align expectations across the campus within the context of general education. (CFR 4.1)

The [Assessment Center](#) yielded much better results in the In-Basket exercise which requires the integration of information. CMC students scored above the expected level of performance on this index, and averaged 3.34 on a five point scale. Non-CMC Claremont students scored 3.02. (CFR 2.6)

SLO #4, Graduates will be able to effectively utilize information technology tools.

To more precisely assess progress within this learning outcome, CMC established seven [FITness \(Fluency in Information Technology\) goals](#) which encompass a range of skills that indicate the effective utilization of technology tools:

1. Students will be able to communicate online appropriately.
2. Students will be able to create and make technology enhanced presentations.
3. Students will be able to create and use structured electronic documents.
4. Students will be able to use electronic tools to analyze data.
5. Students will be able to use electronic tools for research and evaluation.
6. Students will understand plagiarism and major legal and ethical issues related to technology.
7. Students will be able to use databases to manage and retrieve information.

For this assessment cycle, the Committee focused on direct assessment of FITness goals 2-7 as related to SLO #4. We evaluated 116 students who were required to use technology to enhance their presentations. Of those, over 99% met each sub-point standard in CMC Fitness Goal #2. Of the students who utilized technology to enhance their presentations, nearly half used statistical software to name and define variables (FITness goal #4a) and to run descriptive statistics (and in many cases inferential statistics) on individual variables (FITness goal #4b). Approximately 88% of students used technology to generate graphs of data (FITness goal #4c) and just over 40% used a mathematical software package to enter formulas and derive results (FITness goal #4d). Though the creation and use of databases were not required elements of any of the presentations assessed,

approximately one-third of students showed evidence of having navigated within a database, and extracted information to generate relevant reports, create forms or run queries (FITness goal #7).

The senior thesis was used to assess evidence regarding FITness goals #3, #5 and #6. Thirty-one theses were reviewed and each FITness goal was evaluated on a scale of 1 (poor), 2 (adequate), 3 (proficient). In every case, the students were proficient in the creation and use of structured electronic documents (FITness goal #3). A survey of the bibliography for each thesis indicated that all 31 students were able to use electronic tools for research and evaluation: 87%, proficient; 13%, adequate (FITness goal #5). Similarly, students used proper citation methods for online sources and other data in every case: 77.4%, proficient; 19.4%, adequate; 3.2%, poor (FITness goal #6).

Based on its evaluation of these assessment results, the Assessment Committee determined that the College's general education program is meeting its student learning goal in information technology and no changes in the program are deemed to be warranted at this time. (CFR 2.6)

SLO #5, Graduates will be knowledgeable about the attributes of responsible leadership.

To assess leadership knowledge, we used the results of the [Assessment Center](#) evaluation, conducted by All About Performance, an all-day exercise in leadership given to students from the Claremont Colleges applying for the Robert Day Scholars Program. The workshop consists of a simulation of the management operations of a bookstore and requires students to exhibit team leadership, coaching subordinate employee skills, and general leadership. Although the majority of the students are studying economics or economics-related fields, applicants to the program are not required to be economics majors. The overall leadership score for all 52 students completing the workshop in 2011 was 3.20 on a five point scale. The 35 CMC students scored 3.25 overall and the 17 non-CMC Claremont students scored 2.92.

The Assessment Center is used by a large number of [Fortune 500 companies](#) to evaluate the leadership potential of both prospective employees and current employees. The general rule for employers is anyone scoring 3.0 or better is a prime candidate for employment and or promotion to a leadership position within the firm. Since a majority of CMC students scored above the 3.0 level, they demonstrate a strong understanding of the attributes of leadership. Turning to responsible leadership, the CMC students scored 2.96 or essentially at the 3.0 standard. The non-CMC students scored slightly less at 2.91. In terms of team leadership, CMC students scored at a very high 3.74 while non-CMC Claremont Colleges students scored at a very positive 3.38. Thus, the Assessment Center exercise indicates that CMC students are both knowledgeable about and able to demonstrate attributes of responsible leadership. (CFR 2.6) This latter point is of considerable interest to the College. Indeed, we will explore the addition of an element regarding the *exhibition* of responsible leadership to this student learning outcome in the future.

Although the College is pleased to see strong scores from students in the Assessment Center exercise, it is seeking a clearer picture of how leadership knowledge translates for CMC students after they graduate. Sponsored by CMC's Kravis Leadership Institute (KLI), the College is engaged in the [Undergraduate Leadership Education Study](#). In this longitudinal study, applicants to CMC are tracked according to their leadership experience, knowledge, motives and skills from information gleaned from their applications. Students who matriculate are observed throughout their college career and are surveyed in their sophomore year, senior year and then at intervals of 3-5 years as alumni. The surveys combine indirect evidence with direct assessment from a number of standardized, validated test measures including the "Leadership Self-Efficacy Test" the "Motivation to Lead" assessment and "The Social Skills Inventory." Over time, it is anticipated that the study will provide strong evidence of students' views of responsible leadership, the College's role in engendering these views and the ways in which students' and graduates' leadership skills manifest. Data has been collected for the past four years and 2012 will mark the first year in which alumni will be surveyed.

Pending the results of future assessments, and possible modification of the current learning outcome, the evaluation of the Assessment Committee indicates that no changes are warranted in the general education program regarding leadership at this time.

b. Indirect Methods of Assessment

In addition to the direct means of assessment described above, the College chose to utilize several indirect means of assessment to deepen our understanding of student learning at CMC. This includes several national surveys and a college developed survey instrument that we have utilized for a number of years to gain insights into students' learning experiences. The surveys are the National Survey of Student Engagement ([NSSE](#)), the Cooperative Institutional Research Program ([CIRP](#)) Senior Survey, the [American Council on Education's \(ACE\) Young Alumni Survey](#) and our own [CMC Student Life Survey](#).

The Student Affairs Committee of our Board of Trustees has mandated that we rotate these surveys on a three year basis so that we do not over-survey our students. Thus, we will be in a position to incorporate these forms of indirect assessment into our ongoing assessment and evaluation cycles well into the future.

For the assessment purposes of this report, we have used the most recent iterations of the surveys. The NSSE data is from 2008. Although we administered the survey again in spring 2011, the data was not made available to the institution until less than one week before this report was due. As such, the bulk of the information refers directly to the 2008 NSSE results but select 2011 data points are included in the subsequent analysis and the entire [NSSE 2011 results](#) are linked to this report. The CIRP Senior Survey is from 2009-10. The ACE Young Alumni Survey and the CMC Student Life Survey are from 2010.

The Assessment Committee chose to highlight a series of questions drawn from these surveys that load on our five student learning outcomes and that provide a fuller picture of student learning at the College from the students' vantage point. Additionally, the surveys provide student perspectives on the learning outcomes identified in **CFR 2.2** as well as on general attitudes towards the College's educational program.

In the case of NSSE, the Committee identified 33 questions that relate to CMC's five student learning outcomes: [eight questions related to SLO #1](#) (problem solving), [seven questions related to SLO #2](#) (effective oral and writing skills), [eight questions related to SLO #3](#) (integrating information), [four questions related to SLO #4](#) (utilization of information technology skills), and [six questions related to SLO #5](#) (leadership knowledge). Additionally, 18 questions relate to the issues identified in **CFR 2.2**. The complete results of the [NSSE 2008 survey](#) are also available.

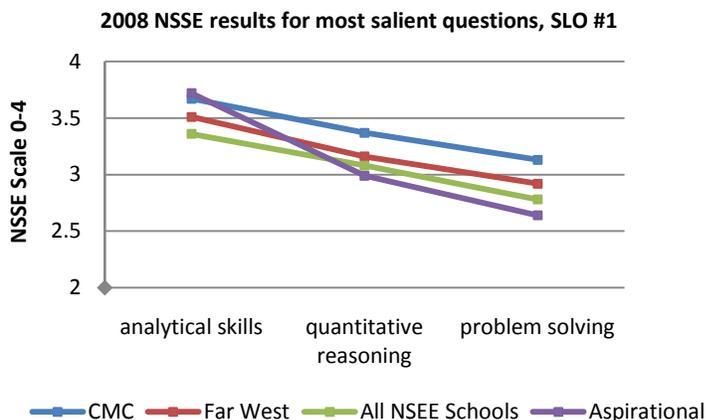
In the case of the CIRP Senior Survey, the Committee chose [seven questions relating to SLO #1](#), [ten questions relating to SLO #2](#), [five questions relating to SLO #3](#), [three questions relating to SLO #4](#) and [15 questions relating to SLO #5](#). In addition, the Committee identified 12 questions that relate to **CFR 2.2**. The complete responses to the [CIRP Senior Survey](#) are also available. Comparison group 1 includes all participating private/nonsectarian four year colleges. Comparison group 2 includes all participating Catholic and other religious four year colleges.

The Committee also identified items in the [CMC Student Life Survey](#) that relate to student learning outcomes: two questions relating to SLO #2, one question relating to SLO #4, two questions relating to SLO #5, and five questions relating to **CFR 2.2**.

SLO #1, Graduates will be able to analyze a particular issue, problem, or idea in depth and consider its elements.

With respect to SLO #1, the most salient [NSSE results](#) are as follows: When asked to what extent their experiences at the College contributed to their knowledge, skills, and personal development in terms of thinking critically and analytically on a four point scale, the CMC mean response was 3.67 compared to 3.51 for

Far West private institutions, 3.36 for all NSSE participating schools, and 3.72 for one of our aspirational national liberal arts highly selective schools. Results of the 2011 NSSE survey indicate a slight increase in the CMC mean to 3.70 and a non-significant difference between CMC and a [customized peer group](#) of 13 highly selective colleges and small universities. Asked to what extent their experience at CMC contributed to their knowledge, skills, and personal development in analyzing quantitative problems the mean 2008 CMC response was 3.37 compared with 3.16 for Far West Private schools, 3.08 for the national sample, and 2.99 for our aspirational school. The responses were similar in 2011, with CMC (3.39) significantly ahead of its peer comparison group (3.09). This question provides insight into **CFR 2.2** in terms of the requirement for “college-level quantitative skills.” Asked to what extent their experience contributed to their knowledge, skills, and personal development in solving complex real-world problems, CMC students’ mean score was 3.13 compared to 2.92 for Far Western Private schools, 2.78 for the national sample, and 2.64 for our aspirational institution.



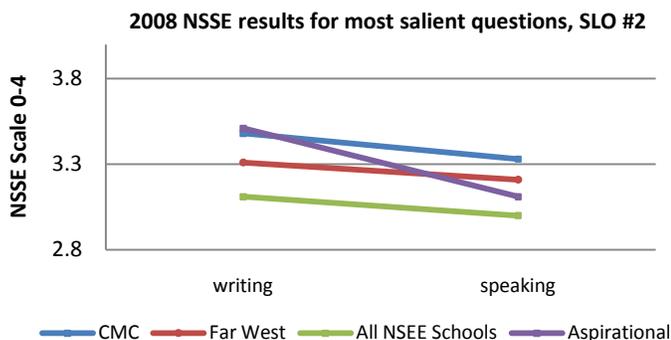
CMC improved its average in 2011, scoring 3.23, as compared to the peer group’s score of 2.86. Based on these responses, all of which are significant at the .01 or .001 levels, we conclude that students believe they are gaining more from their CMC education in terms of analysis than their peers at other institutions.

Questions drawn from the [CIRP Senior Survey](#) also relate to SLO #1. The most pertinent have a value added component. Salient questions with respect to SLO #1 include: “Compared with when you

entered this college, how would you now describe your critical thinking skills?” 92.1% of CMC seniors (N = 241) indicated their skills were stronger or much stronger compared with 93.9% in comparison group 1 and 93.5% in comparison group 2. A second question asks, “Compared with when you first entered this college, how would you now rate your problem-solving skills?” 92.5% of CMC seniors answered they were stronger or much stronger compared with 92.2% in comparison group 1 and 92.1% in comparison group 2. Nearly all students surveyed at CMC and elsewhere believe they have markedly improved their problem solving skills since entering as freshmen.

SLO #2, Graduates will be able to express themselves clearly, coherently, and convincingly both orally and in writing.

Turning to SLO #2, [NSSE questions relating to oral and written communications skills](#) include the following, “To what extent have your experiences at this institution contributed to your knowledge, skills, and personal development in writing clearly and effectively?” In 2008, CMC senior respondents scored 3.48 on a four point scale. Far West Private institutions’ students scored 3.31, the national sample scored 3.11, and our aspirational institution’s students scored at 3.51. Scores were nearly identical in 2011 with CMC significantly ahead of its peer group. With respect to oral skills “speaking clearly and effectively” CMC seniors scored 3.33 in 2008. Far West students scored 3.21 and the national sample at 3.00. Aspirational institution students scored 3.11. In 2011, CMC’s average score was 3.37 while its peer group scored 3.28. Thus, it is possible to conclude that CMC students believe they have improved their writing and speaking skills to a larger extent than other students.

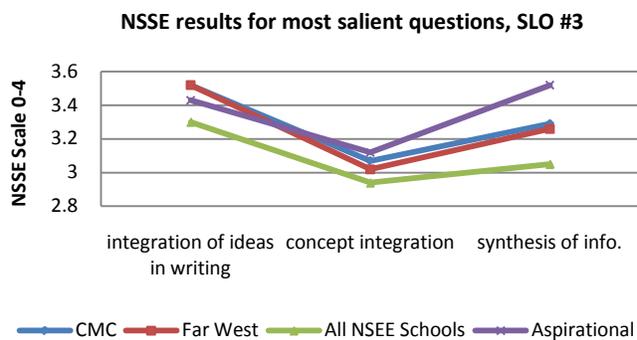


[CIRP provides responses](#) that indicate that CMC seniors have an elevated impression of their writing and speaking abilities. When asked to compare themselves to others their age in writing ability 33.9% indicated they were in the highest 10% compared to 21.3% in comparison group 1 and 19.8% in comparison group 2. Similarly, in public speaking ability 30.1% of CMC seniors rated themselves in the top 10% while only 16.1% so self-rated in comparison group 1 and 15.4% in comparison group 2. One piece of evidence that may help to explain why CMC students believe they write better than their peers is that 60.4% of CMC seniors indicated they frequently took classes that required one or more 10+ page papers compared to 44.0% in comparison group 1 and 40.2% in comparison group 2. On the other hand, CMC seniors were less likely to make frequent in-class presentations than their peers.

Finally, two questions drawn from the CMC Student Life Survey provide material that relates to improvement of writing and oral communications while at CMC. When asked whether they were satisfied with improvement in their writing skills while at CMC, 85.6% of the students replied they were. When asked whether they were satisfied with improvements in their oral communication skills, 90.1% of students responded they were satisfied. Thus, there is good indirect evidence that writing and speaking skills are positive learning outcomes for CMC students even when compared to their peers at other institutions.

SLO #3, Graduates will be able to complete projects that require integrating ideas and information from various sources.

Considering SLO #3, the integration of ideas, 2008 [NSSE data](#) indicate that CMC seniors have worked on papers that require integration of ideas at about the same frequency as students at other institutions surveyed.



On a four point scale with 4 being very often asked to prepare such papers, CMC students scored at 3.52, Far West Students at 3.52, and the national sample at 3.30. Aspirational institution students scored at 3.43. In 2011, the results were similar; CMC scored 3.63 while its peer comparison group scored 3.58. When asked about how often they put together concepts and ideas from different courses when completing specific course assignments or participating in class discussions the profile is similar. In 2008, CMC

students scored at 3.07 compared with Far West Private institution students at 3.02 and 2.94 for the national sample of students. Aspirational institution students scored at 3.12. Similar results occurred when students were asked about how often their coursework required them to synthesize information and ideas. CMC seniors scored at 3.29 on a four point scale, Far West students at 3.26, national sample students at 3.05 and aspirational students at 3.52. In 2011, CMC’s score on this item improved to 3.47 while its peer comparison group averaged 3.51.

Results from the [CIRP Senior Survey](#) provide a similar perspective. When asked how often in the past year they had integrated skills and knowledge from different sources and experiences, 71.6% of CMC seniors responded they had done so frequently. 73.4% of comparison group 1 students answered frequently and 71.2 % of comparison group 2 students provided the same answer.

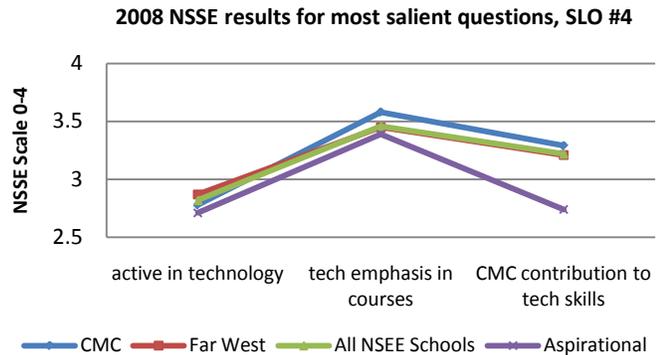
These results corroborate those of the senior theses VALUE assessment, indicating that for CMC students, progress in this SLO is not quite as strong as that in the other SLO areas assessed. SLO #3 is an area that should be watched in future assessment cycles.

SLO #4, Graduates will be able to effectively utilize information technology tools.

Within SLO #4, 2008 [NSSE results](#) indicate that CMC students are about as active in the use of technology as students at other institutions. Where “often used” is 3 on a 4-point scale, CMC scored 2.78, Far West students scored 2.87, national sample students scored 2.82, and aspirational students scored 2.71. In 2011, CMC’s score was 3.06, significantly higher than its peer group which averaged 2.78. Asked in 2008, whether their

institution emphasized the use of computers in academic work, CMC students scored 3.58 on a 4-point scale (where 4 = very much), while Far West students and national students scored 3.45 and 3.46 respectively, both significant differences at the $>.01$ level. Aspirational students scored at 3.39. The difference was even greater in 2011. CMC scored 3.67 while its peer comparison group scored 3.46. Finally, when asked to what extent their experiences at their institution contributed to their knowledge, skills, and development in using computing and information technology, CMC students scored at 3.29, Far West at 3.21, national at 3.22, and aspirational students at 2.74.

On balance, while CMC emphasized information technology to a greater extent than other institutions, it may not have resulted in additional learning beyond that experienced by students at many other institutions. Still, given our interest in comparisons with other highly selective institutions, it is instructive to learn that CMC students felt they had gained considerably more knowledge and skill than those students at our aspirational institution.



The [CIRP Senior Survey](#) provides further information regarding information technology learning. CMC seniors rated themselves no more active in the use of technology than students at comparison institutions. However, when asked to rate themselves in terms of computer skills a majority, 57%, rated themselves above average for people their age compared to 48% for comparison group 1 and 46.7% for comparison group 2. 16.9% of CMC students rated themselves in the top 10% in computer skills.

SLO #5, Graduates will be knowledgeable about the attributes of responsible leadership.

2008 [NSSE data](#) reveal that CMC students are far more likely to have participated in a practicum, internship, field experience, or clinical assignment where we believe they experience responsible leadership practices. 87% of CMC seniors (83 % in 2011) reported such experiences compared to 55% of Far West students, 53% of the national sample, and 75% of aspirational students. 72% of CMC students (74% in 2011) also reported participation in community service or volunteer work compared with 64% of Far West students, 60% of the national sample students, and 78% of aspirational students. CMC students believe they have had more experience in leadership than many other students, which leads to greater self-confidence in their knowledge and practice of leadership skills. 76.5% of all CMC students believe the institution encourages them to develop a strong sense of responsibility about their role in society, and 91% believe this encouragement by the College extends to responsibility about their role in political affairs.

The [CIRP Senior Survey](#) provides considerable indirect evidence that CMC students are learning leadership skills at a more than adequate level given their more frequent opportunities to experience leadership. Since CMC emphasizes leadership experiences as admission criteria to the College we might expect that the improvement in leadership knowledge might not be as great as that for students at other institutions which do not expect comparable leadership experience prior to admission. The numbers bear this proposition out. 82.3% of CMC students indicate that their leadership skills and knowledge have increased since entering the College which compares with students at other comparison institutions of, 85.6% and 86.1%. However, 70% of CMC students indicated they have been a leader in an organization while at the College compared to 57% in the comparison groups. Furthermore, 39.5% of CMC seniors had participated in formal leadership training compared with 32.5% at comparison institutions. Substantially more CMC students, 30%, had participated in student government compared to only 11% of the comparison groups. This experience in leadership positions led 77% of CMC students to rate themselves above average in leadership skills as compared to 70% of the comparison students. With respect to responsible leadership, 85% of CMC seniors indicated they have effectively led a group to a common purpose compared with 72.5% of the comparison students.

5. CFR 2.2

In addition to the use of the CLA and senior theses as a means of assessing our students' overall learning, we also attempted to learn from our graduates about their educational experiences with the influence of time to make an informed judgment about what they carried away from CMC (**CFR 2.2**). CMC participated in the [American Council on Education \(ACE\) Young Alumni Survey](#) in fall 2010 along with 20 other institutions ranging from research universities to community colleges. Four hundred CMC alumni, ages from 25-39, responded to the survey. While the Alumni Survey does not provide evidence of student learning directly relating to our five outcomes, it does provide information concerning alumni attitudes towards their educational experience at the College.

Preparing students for work is an element of baccalaureate programs. Our alumni responses to the ACE Young Alumni Survey indicate that a remarkable 92% of alumni believe the College prepared them effectively with the knowledge and skills they needed. This compares with 81% of the national sample surveyed. Moreover, 44% indicated it prepared them exceptionally well compared to only 17% of the national sample. These are very positive results for our overall educational program.

CFR 2.2 specifies that institutions, "engage students in an integrated course of study of sufficient breadth and depth to prepare them for work, citizenship, and a fulfilling life." Institutions should also prepare students, "to engage in lifelong learning." Relating to these issues, 44% of CMC respondents indicated that the College prepared them exceptionally well for their current job compared to only 17% of respondents from the other institutions involved in the national survey. Asked what the most important role for colleges and universities is, 60% of CMC respondents selected "Teach students how to learn and think effectively." This compares with 31% of the non-CMC respondents. Alumni were asked, "Upon graduation were you effectively prepared with the knowledge and skills you needed?" In this case, 92% of CMC respondents answered, "Yes." The responses of CMC graduates to this last question certainly demonstrate that a CMC education is fulfilling the goals set out in **CFR 2.2** and in our General Education SLOs. (**CFR 4.8**)

CMC has also prepared students well for citizenship as indicated by the 91% of seniors who reported in the [CMC Student Life Survey](#) that the College encouraged them to have a responsible role in political activities.

Preparation for civic responsibility is evidenced by 2008 NSSE data indicating that in terms of contributing to the welfare of one's community, the CMC educational experience provided knowledge and skills at 2.63 on a scale of 4, with 4 described as contributing very much. This compares with 2.75 for Far West students, 2.48 for the national sample, and 2.67 for the aspirational institution's students. Voting in local, state, and national elections is a measure of citizenship and CMC contributed to our seniors' sense of responsibility to vote at 2.94 compared with 2.11 for Far West students and the national sample, and 2.24 for the aspirational students.

In terms of preparing students for a fulfilling life, acquiring a broad general education is a solid measure of such preparation. CMC students rated their experience at CMC at 3.64 compared with 3.43 at Far West schools, 3.29 for the national sample and 3.39 for the aspirational sample, all on a four point scale. In terms of improving their understanding of national issues, 38.3% of our graduating seniors reported in the CIRP Senior Survey that they were much stronger in their knowledge compared to 23.6% of the comparison groups. In terms of global knowledge, 45.4% of graduating seniors indicated their knowledge was much stronger than when they entered the College compared with 28% of the comparison group students.

Developing a personal code of ethics is a major factor in a fulfilling life and CMC contributed towards the development of such a code among its seniors at a score of 2.89 compared to 3.01 for the Far West students, 2.71 for the national sample and 2.93 for the aspirational students. Finally, in terms of understanding oneself, CMC students rated the College as having contributed quite a lot toward such an understanding at 3.11 compared to 3.03 for the Far West, 2.83 for the national sample, and 3.2 for the aspirational sample.

Our students have gained an understanding of diversity with 2008 NSSE scores of 2.75 in terms of understanding people of different racial and ethnic backgrounds. Far West students reported scores of 2.89, national sample scores were reported as 2.64, and aspirational scores were 2.93. In 2011, CMC averaged 2.77 in this category, ahead of its peer comparison group which scored 2.67. On a related question “To what extent does your institution emphasize encouraging contact among students from different economic, social, and racial or ethnic backgrounds” CMC averaged 2.82, significantly higher than both its peer group (2.59) and all NSSE institutions (2.56). CMC students also reported “having serious conversations with students who are of a different race or ethnicity than your own” at a significantly higher rate than their peer group (2.95) and all respondents (2.69).

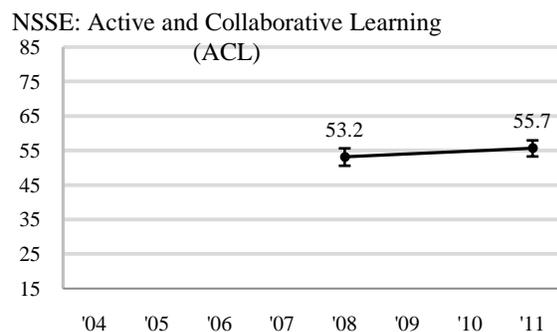
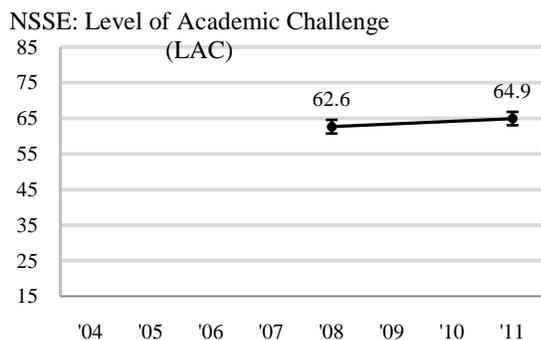
CIRP data reveals similar perspectives. Asked whether they gained improved knowledge about people from other races and cultures 67.6% of CMC seniors reported they had, while 75.2% of the comparison groups reported they had. Asked in the CIRP Senior Survey whether their knowledge of people of different races and cultures had been strengthened at CMC, 31.3% said it had, compared with 24.9% in comparison group 1 and 25.6% in comparison group 2. When asked how important it is to them personally to promote racial understanding, 40.1% of graduating seniors indicated it was essential or very important compared to 40% in comparison group 1 and 35.7% in comparison group 2. These scores are lower than CMC would prefer and the College will take steps to improve in issues related to diversity—these steps are detailed in the *Responses to the Commission Letter* section, later in this report.

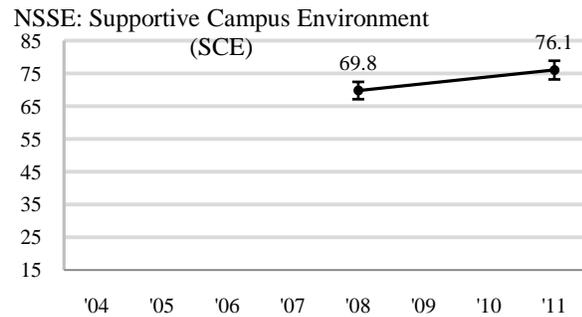
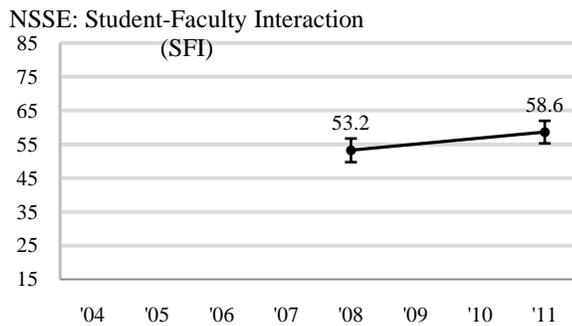
Working with others is a component of **CFR 2.2** and CMC does provide growth experiences for its students in this area. When polled on whether they had developed knowledge, skills, and experience in working with others while at CMC, NSSE respondents scored 3.42 on a 4 point scale compared with 3.35 for Far West students, 3.17 for the national sample and 2.89 for the aspirational students. 34.5% of graduating seniors reported in the CIRP Senior Survey that their interpersonal skills had grown much stronger during their years at the College, compared with 32.6% of students from comparison group 1 and 32.3% of students from comparison group 2.

Lifelong learning skills are an important component of **CFR 2.2** and CMC contributed to the development of seniors’ skills, knowledge, and experience in learning effectively on one’s own. In terms of this contribution, CMC senior’s scored at 3.36 or “quite a bit” on a 4 point scale. Far Western institutions’ students scored 3.12 and the national sample at 3.05, both of which were significant at the .001 level.

We have already explored other components of **CFR 2.2** including written and oral communication skills, information literacy, and critical analysis in describing the results of the evaluation of our five learning outcomes.

CFR 2.2 is one of the most comprehensive of the WASC standards for measuring educational effectiveness. NSSE serves as one of the best indirect measures of many of the criteria referenced in **CFR 2.2**. In both 2008 and 2011, 60% of CMC seniors responded to the survey. As indicated by the charts below, taken from the [NSSE 2011 Multi-Year Benchmark Report](#), CMC experienced gains in all but one of the five primary categories of measurement from 2008 to 2011. In the case of “enriching educational experience” the College average decreased just 1.5 percentage points.





6. Assessment of Major Programs' Student Learning Outcomes

In addition to the assessment of CMC's general education student learning outcomes, the institution also conducted assessment at the program level for every CMC major and every intercollegiate major offered to CMC students. Student learning outcomes have been established for each major and department faculty have engaged multiple means of assessment to ensure the evaluation of progress against those outcomes. In most cases, the faculty chose to read senior theses against a rubric with specific emphases placed on each SLO. This direct assessment was often supplemented by other direct measures, including but not limited to: embedded exam questions, nationally recognized standardized tests, skills-based oral exit examinations, and comprehensive examinations to seniors. Indirect assessment tools supplemented these efforts. In some cases, these indirect measures included alumni surveys, exit interviews, post-graduate career data, graduate school completion records and self-reported scores on national and international exams.

In every major, department faculty have completed at least one full cycle of assessment. This includes the development and execution of an assessment plan, the collection of data, the analysis of that data and a meeting of faculty to "close the loop" by determining what curricular or programmatic changes, if any, should be implemented to enhance student learning. Although a [detailed report for every major](#) is appended in this report, we have provided a sampling of program assessment below. Included in the sample are two of our largest majors, economics and government, and a range of others to illustrate the various ways department faculty approached the assessment process.

Economics

[Learning Goals: 3](#)

Student Learning Outcomes: 3

Graduates in 2011: 80

Assessment Methods: Use of a faculty developed [rubric](#) to assess senior theses.

Evaluation: First cycle completed spring 2010. Second Cycle completed spring 2011 by Robert Day School faculty.

Program Changes: The department is establishing a committee to review means of strengthening students' quantitative reasoning skills in Econometrics and Statistics.

The basic goal of the undergraduate economics is to emphasize *understanding economic behavior and institutions, and the development of specific analytical, quantitative, and communication skills*. The Economics major is offered through the [Robert Day School of Economics and Finance](#) (RDS). RDS is the largest department in the College with over 400 undergraduate students declaring one of their majors in the school. Economics had 86 graduates in 2010 (29.05%), and 80 in 2011 (27.1%), the largest major. RDS also offers a major in Economics- Accounting; offers the Financial Economics Sequence to those who wish to specialize in such a sub-field emphasizing modern finance as a tool for those looking for a greater understanding of finance, accounting, economics and policy; and supports the Economics, Environment, and Politics; Management-Engineering; and Politics, Philosophy, and Economics majors. The academic program offered by the

department is central to the mission of the College with its emphasis on economics, government, and public affairs.

During 2009, the faculty agreed on three student learning outcomes for [Economics and Economics-Accounting](#) majors.

- SLO #1, Students will demonstrate a comprehensive knowledge and understanding of economic theory. This will include micro and macro economic theories.
- SLO #2, Students will be able to demonstrate comprehensive knowledge and understanding of issues related to quantitative analysis. This will include statistical inference using probability theory, regression and/or data analysis.
- SLO #3, Students will demonstrate skillful analytical and communication skills.

The faculty has chosen to use the senior thesis as the principle form of assessment, although they have plans to add the use of imbedded questions in examinations next year for additional assessment purposes. The Faculty met periodically during 2010 and 2011 to assess student learning on the basis of the evaluation of senior thesis. The faculty used three rubrics to assess the student learning outcomes. The rubrics were based on a four point scale and were derived from the [VALUE rubrics](#) developed by the American Association of Colleges and Universities. One rubric dealt with economic theory. A second related to quantitative analysis, and a third with analytic and communication skills. The faculty read 57 senior theses in AYs 2009-11 for assessment purposes. The overall result of the assessment was a rating of 3.05 on a 4 point scale. This is a *Milestone* rating which is quite good. In terms of SLO #1, the average rating was 3.18, *Milestone*. SLO #2 was 2.83, *Milestone*, and SLO #3 was 3.14, *Milestone*.

Led by the Dean of the Robert Day School, members of the RDS faculty participated in a virtual forum to discuss the results of the assessment. Two interesting trends were noted. First, spring theses results are stronger than fall theses results. Second, students scored lowest in quantitative analysis.

Thesis Evaluation for Economics Majors

Term	# of Theses Evaluated	Theory Literacy (SLO #1)	Quantitative Analysis (SLO #2)	Analytical/ Communication Skills (SLO #3)
FA 09	5	3	2.65	3.07
SP 10	15	3.28	3.02	3.32
AY 09-10	20	3.14	2.83	3.19
FA 10	17	3	2.62	3
SP 11	20	3.45	3.04	3.17
AY 10-11	37	3.22	2.83	3.09

The faculty plans to increase the modes of assessment by incorporating imbedded questions in the Economics 50 curriculum. Econ 50 is the introductory course and will help in determining a baseline of student learning in economics. The Dean of

RDS will establish a subcommittee in AY 2011-12 to consider curricular modifications in its statistics and econometrics courses that may bolster students' quantitative reasoning skills.

Government

[Learning Goals: 3](#)

Student Learning Outcomes: 5

Graduates in 2011: 54

Assessment Methods: Use of [rubric](#) to evaluate senior theses and oral examinations.

Evaluation: Completed first cycle in May 2010 by Government faculty. Completed second cycle in May 2011.

Program Changes: None warranted at this time.

Government is one of the two largest departments in the College. The faculty chose five student learning outcomes:

- SLO #1, Students will demonstrate an understanding of the ability to apply the literature and methods of ancient, modern, and contemporary students of politics and government to these issues [the great issues of politics] be those issues domestic or international.
- SLO #2, Students will be able to substantiate their arguments soberly and logically.
- SLO #3, Students will be able to inform their arguments with philosophic, theoretic, and constitutional principles and with in-depth knowledge of relevant political institutions and public policies.
- SLO #4, Students will be able to employ quantitative and qualitative evidence where appropriate.
- SLO #5, Students will be able to express themselves effectively orally and in writing.

The faculty developed a rubric to evaluate the senior theses and have used it to conduct an evaluation of senior theses in the spring of 2010 and 2011. In the assessment conducted in spring 2010 by 16 members of the department, students scored 2.79 on a 3 point scale on SLO #1; 2.6 on SLO #2; 2.64 on SLO #3; 2.6 on SLO #4; and 2.6 on the written part of SLO #5. On the oral part of SLO #5 the students scored 2.73. Combined, 71% of the 21 students evaluated scored 3.0 overall. 25% of the students scored between 2.0 and 2.9. A single student scored between 1.0 and 1.9. Overall, the department determined that students performed very well.

The Committee charged with reviewing the results of the assessment in October 2010, concluded, “Our students were particularly good at demonstrating knowledge of the relevant literatures and their political controversies under consideration. They were not quite as good at grasping deeper philosophical and theoretical principle, though perhaps this should be expected given the relative difficulty of the task. Likewise, a substantial minority of students did not excel at employing the appropriate evidence. And somewhat surprisingly our students’ greatest weakness was the sobriety of their analysis, perhaps because many students have a tendency to over state the strength of their case. They were also better at expressing themselves orally than in writing, though this finding is probably due to selection bias since only the honors students actually present [orally] their theses.”

In accord with the department’s assessment schedule, an analysis of the spring 2011 results will take place in fall 2011. For now, the department is not recommending any substantial systemic changes to its program or curriculum, but the faculty will pay particular attention to any trends that become evident in their analysis of the second assessment cycle.

The government department underwent a programmatic external review in spring 2011 and in its [self-study](#), included an [appendix](#) detailing its assessment procedures, rubrics and results. The department will also consider the recommendations of the review team as it resumes regular meetings in the fall.

Mathematics

[Learning Goals = 8](#)

Student Learning Outcomes = 4

Graduates in 2011: 15

Assessment Methods: Use of [rubric](#) to evaluate senior theses, evaluation of assessment quizzes, evaluation of writing, and a [comprehensive examination](#) (pending).

Evaluation: First cycle completed spring 2011 by Mathematics faculty.

Program Changes: The department is considering a change in the order of courses in the major. Additionally, the department will require at least one written assignment in all math courses, and will require more oral presentations to provide a greater means by which to assess students’ ability to communicate concepts in mathematics.

The Mathematical Sciences major offers courses in pure and applied mathematics to help prepare students for graduate education in mathematics, engineering, natural sciences, and economics. The Department also

offers a sequence in Computer Science. The Mathematics major achieves breadth by exposing students to three basic components of mathematical thought: analysis, geometry, and algebra. The applied program provides a solid foundation for further study or work in statistics and computational science. To create a successful and on-going long term assessment and evaluation program the mathematics faculty selected four student learning outcomes. Students will:

- SLO #1, Demonstrate proficiency in calculus, linear algebra, differential equations, and probability theory.
- SLO #2, Demonstrate proficiency in one of three areas, pure mathematics, applied mathematics, and general mathematics.
- SLO #3, Demonstrate the ability to communicate mathematical concepts and ideas.
- SLO #4, Demonstrate the ability to apply effectively appropriate quantitative analysis and methods.

The Mathematics faculty has chosen several means of assessing student learning: assessment quizzes and embedded examination problems, the evaluation of senior theses, writing assignments and presentations, and comprehensive examinations. For this assessment cycle, the faculty chose to use assessment quizzes and theses as the primary tools for evaluation. Assessment quizzes are short exercises given during class time that test students on prerequisite material (SLOs #1, #2). The quizzes provide a quantitative means to check retention of material from previous courses. The quizzes were given during the fall 2010 and spring 2011 semesters by faculty teaching in all upper-division math courses. Each quiz includes 2-5 questions that require students to use prerequisite skills. Quizzes are graded on a five point scale and the scores are reported to the department's assessment committee.

Mathematics Assessment Quiz Data

Math 109: Mathematics of Finance	N	Rating	Math 135: Complex Variables	N	Rating
Computing an expected variable	9	2.3	Line integrals	5	3.5
Use of the Chain Rule	8	4.1	Green's theorem	5	2.1
Math 60: Linear Algebra			Math 187: Deterministic Methods		
Proof by induction	7	2.5	Matrix algebra	9	3.8
Vector calculations w/ dot & cross product	7	4.3	Eigenvalue problem	9	3.1
Math 151: Probability			Math 31: Calculus 2		
Integration by parts	16	3.5	Use of the chain rule	29	4.2
Jacobian change of variables in integration	15	2.3	Finding relative extrema	11	3.5
Math 131: Introduction to Analysis			Math 171: Abstract Algebra		
Proof by induction	7	2.8	Counting permutations	8	3.1
Radius of convergence of power series	7	3.4	Pigeon hole principle	9	3.4
Math 152: Statistical Inference			Math 111: Ordinary Differ. Equations		
Distribution of a function of a random var.	14	3.6	A simple ODE, modeling	15	3.4
Fundamental subspaces for a matrix	15	2.6	Integration by parts	16	3.2
Math 32: Calculus 3			Math 140: Modern Geometry		
Integration by parts	8	3.2	Proof by induction	6	2.8
			Planes in space	6	3.6

The mathematics faculty met to discuss the results and determined that while basic topics in calculus require constant reinforcement, student retention in these areas is generally strong. Similarly, the math faculty believes it is meeting, if not exceeding its learning goals of imparting working proficiency in calculus and basic probability skills. Based on assessments in Math 140, and 131, some faculty have suggested that students should be exposed to basic proof techniques with more consistency in both the linear algebra and several

variables calculus courses. There was, in general, concern that the department may not be meeting its learning goal that students should be comfortable with writing and understanding mathematical proofs. The assessment procedure has also raised, for discussion in the department, the question of whether Math 60 (Linear Algebra) should be required before Math 32 (Several Variable Calculus) and before Math 111 (Ordinary Differential Equations). This discussion will be resolved in the coming semester through further meetings of the department.

The main concern with the current assessment quiz method is the difficulty in tracking whether students have taken their prerequisite courses from CMC or from another college. Overall, the procedure was found to be valuable by the faculty but in need of adjustments. The department will retain this method in the next assessment cycle, while seeking to be more uniform in its implementation.

The faculty also read senior theses against a departmental rubric. There were just two theses written in mathematics in 2011. Each was measured against three primary criteria and rated Proficient, Competent, Inconsistent, or Poor. Intermediate rankings were allowable.

Mathematics Theses Results, 2011	1	2
1. Selection and use and subject matter and sources. (SLO #3)	Competent	Proficient
2. Understanding of the mathematical content. (SLO #3, #4)	Competent	Proficient/Competent
3. Overall clarity of exposition and writing quality. (SLO #3)	Competent	Proficient/Competent

Overall, the mathematics faculty feels it is meeting its student learning outcomes as measured by the thesis but will continue efforts to encourage more math majors to write their thesis in the discipline. In the meantime, the department has agreed on an alternative means of evaluating students' ability to communicate math concepts and ideas. In 2011-12, the department will require that all mathematics faculty include at least one written assignment in each class. Graded on a five point scale, the results will be forwarded to a departmental assessment committee annually.

Additionally, the mathematics department assigned a subcommittee of faculty members to construct a [comprehensive examination](#) that it will begin implementing in the upcoming academic year. The exam will cover basic calculus, differential equations, linear algebra and probability and it will be given to students during junior and senior year on an incentivized volunteer basis.

Psychology

[Student Learning Goals and Outcomes: 8](#)

Graduates in 2011: 39

Assessment Methods: Use of [Halpern Critical Thinking Assessment](#); use of multiple choice examination for graduating seniors; use of a survey of seniors asking for their assessment of their achievement of the departmental learning outcomes.

Evaluation: First cycle completed in spring 2010 by Psychology faculty. Second cycle completed spring 2011.

Program Changes: None warranted at this time.

The Psychology department is one of the largest programs at the College graduating nearly forty students every year. The program is somewhat unique in that it offers students opportunities to engage in applied research through several research institutes and laboratories on the CMC campus. Students who devote themselves to the study of psychology will achieve a variety of learning goals. These goals flow directly from an understanding of psychological science and its applications. In accordance with the American Psychological Association's Report on the Undergraduate Psychology Major (APA 2008), the Department specified the following student learning outcomes for psychology majors:

- SLO #1, Knowledge of major concepts, theories, and empirical findings in psychology.
- SLO #2, Understanding of research methods in psychology, including research design, data analysis and interpretation.
- SLO #3, Development of critical thinking skills and use of the scientific approach to solve problems related to behavior and mental processes.
- SLO #4, Application of psychological principles to areas such as education, law, business, politics, and medicine.
- SLO #5, Awareness of ethical behavior in research and applied settings.
- SLO #6, Technological literacy.
- SLO #7, Oral and written communication skills.
- SLO #8, Understanding of socio-cultural and international diversity and complexity.

Thirty-eight graduating psychology majors in AY 2009-10 and 37 in AY 2010-11 were required to take an on-line multiple choice test with 60 questions selected from the following areas: research methods (15 questions which included ethics), social psychology (8 questions), biological psychology (10 questions), developmental psychology (5 questions), health and well-being (5 questions), learning (5 questions), memory and cognition (5 questions), and psychotherapy and mental disorders (7 questions). Questions were selected at random for each student from a pool of questions in each of these areas. Regardless of the courses students selected to complete their major, most psychology majors should have some knowledge of these key areas in psychology since multiple courses would include content from these areas (e.g., biological psychology would not only be learned in neuroscience courses, but also as a topic in psychological disorders and treatment, memory and cognition, developmental psychology, and other courses). The test permits assessment of SLO #1, knowledge of major concepts, theories, and empirical findings in psychology, SLO #2, research methods, and SLO #5, ethical issues in research.

As expected in 2009-10, given the emphasis the curriculum currently places on research methods, the highest percentage of correct responses were in the research category, SLO #2, 84%. This was also true for the ethics component, SLO #5, 84%. The percentage of correct responses for SLO #1, theories, was 63%. The average for all parts of the test was 65.9%. The lowest score, 57% was on health and wellness issues.

In AY 2010-11, the psychology department preceded the assessment with a series of questions that determined the students' psychology course taking patterns at CMC, the other 5-C institutions and at other institutions (e.g., during study abroad). To provide a comparative measure, all students enrolled in a lower-level division psychology course in the spring 2011 semester were required to take the assessment within the first 2 weeks of the semester. Of the 223 students who completed the assessment, 87 had reported that they had not taken any previous courses in psychology—including a high school AP course. Therefore, these 87 students were isolated and treated as the Control Group, and served as a comparison group for the senior majors.

Out of a total 60 questions, the Psychology Seniors answered approximately 38 questions correctly ($M = 38.32$, $SD = 6.06$) while the control group answered approximately 29 questions correctly ($M = 29.26$, $SD = 6.80$). An independent sample t-test reveals that this difference is statistically significant, $t(122) = 7.00$, $p < 0.001$, *Cohen's* $d = 1.41$.

In spring 2011, all graduating seniors were also asked to complete a well-validated, standardized critical thinking assessment (the Halpern Critical Thinking Assessment; Halpern, 2010). Developed by CMC faculty member and the former president of the American Psychological Association, Diane Halpern, the assessment measures five dimensions of critical thinking (SLO #3); verbal reasoning, argument analysis, thinking as hypothesis testing, likelihood and uncertainty, and decision making and problem solving.

This is the department's first year of data collection using this metric, so it does not have pretest data to compare critical thinking gains,

Halpern Critical Thinking Assessment Results Spring 2011	Mean	SD	Norm Mean	Norm SD
Overall Critical Thinking (0-206)	124.97	11.354	110.54	20.031
Verbal Reasoning (0-34)	13.48	2.694	10.10	3.236
Argument Analysis (0-41)	28.97	4.172	25.40	6.014
Thinking as Hypothesis Testing(0-46)	29.48	5.696	25.68	6.214
Likelihood & Uncertainty (0-24)	13.91	2.697	10.54	3.579
Decision Making & Problem Solving (0-61)	39.12	3.839	38.82	5.813

but it was able to compare CMC seniors' scores to a published, standardized sample². Thirty-three seniors took the assessment. Scores on the assessment ranged from 98-143, with an average of 124.97. The CMC average was above the standardized sample average of 110.54. Only 12% of the CMC seniors scored below the standardized average and all of their scores were within the first standard deviation below the mean. The remaining 88% of our seniors scored above the standardized mean, 58% of them were within the first standard deviation and 30% were within the second standard deviation.

Finally, all graduating seniors responded to a survey in spring 2010 in which they were asked about psychology's learning outcomes—which of the outcomes they believe they achieved and which they believe they have not achieved. 44% of the respondents answered that they had learned adequately all of the 8 student learning outcomes. 38% indicated they had adequately learned all but one, and 19% said they had learned all but two adequately. The SLO where students wished they had a better grounding was SLO # 6, technical knowledge. It primarily related to comfort using the SPSS statistical package. The survey of seniors was an interesting informal assessment; the department will consider issuing a direct survey assessment to alumni to gain information from those who graduated 5-15 years ago.

Based on the results of these multiple means of assessment, the department believes it is generally meeting its student learning outcomes, and it will closely monitor the next several assessment cycles to determine if programmatic or curricular changes should be implemented.

Religious Studies

[Learning goals: 3](#)

Student Learning Outcomes: 6

Graduates in 2011: 3

Assessment Methods: Use of [rubric](#) to evaluate senior theses.

Evaluation: First cycle completed June 2011 by Religious Studies faculty.

Program Changes: The Assessment Committee has recommended that the department make changes in the senior thesis program. First, while students normally are asked to write a thesis that deals with two or more religious traditions, some students are permitted to write on a particular problem that only uses the approach of a single religious tradition. In such cases in the future, students will be asked to explain how their interpretation might differ from other theoretical or historical approaches in an introductory chapter not currently required. Second, since students with a dual or double major may write a thesis in either of the two disciplines, when they choose to do one in the other discipline, they will be asked to provide a literature review, historical analysis, and critical theory in Religious Studies as part of the thesis project. Third, all faculty will be asked to include the department's student learning outcomes in their course syllabi and to identify the ones that are to be met in the course.

Religious Studies is a recently formed department, having been formerly joined with Philosophy until 2008. Since 2005, all five of the undergraduate colleges in Claremont have cooperated in a joint program that has

² The test was normed on a mixed sample—about 50 community adults, 50 CMC students, 50 Cal state students, and 50 community college students.

established a common curriculum and major for all Claremont Colleges students. Courses taken in the major are not considered to be cross-registration course but can be counted at all of the Colleges as a “home college” course. At present 16 full-time faculty participate in the program and offer over 80 courses. About 15-20 students graduate each year in Religious Studies across all five colleges.

To support these three goals, the faculty identified six student learning outcomes.

- SLO #1, Students will be able to demonstrate an understanding of the texts, beliefs, and practices of more than one religious tradition.
- SLO #2, Students will be able to trace the historical development of at least one religious tradition from its origins to the present.
- SLO #3, Students will be able to identify and analyze the intersections between religious traditions and major social and cultural issues (e.g., politics, gender, ethnicity, race, ethics,).
- SLO # 4, Students will be able to work with multiple sources of information (e.g., textual, performative, material, philosophical) used in the study of religion.
- SLO #5, Students will show proficiency in a variety of disciplinary approaches to the study of religion (e.g., historical, philosophical, anthropological).
- SLO #6, Students will be able to analyze and assess religious phenomena through the use of critical theories (e.g., literary criticism, gender theory, post-modern and post-colonial analysis).

Although the department had five graduating seniors this year none chose to write a senior thesis in Religious Studies (All were dual or double majors). Thus, the Departmental Assessment Committee chose to assess five senior theses written in the spring of 2009-2010. The two faculty members who conducted the assessment used a rubric derived from the Association of American Colleges and Universities VALUE project. Scores were recorded as High Pass-*Capstone* = 4, Pass-*High Milestone* =3, Pass-*Milestone* =2, and *Benchmark or Not Applicable* =1. The assessment of the senior theses yielded the following results. One thesis was scored at the highest level, *Capstone*, on four of the six SLOs. A second thesis was scored at the *Benchmark* level for four of the five SLOs because it was considered to be too theological or normative based and reflected the period when the Philosophy and Religious Studies departments were conducted as one department. This was somewhat true of a third thesis, although it contained a more analytic approach. A fourth thesis was a joint project with International Relations and although it won best thesis award for 2009-10, it was too heavily weighted towards IR to score well in Religious Studies. A fifth thesis scored at the *High Milestone* in three SLOs and *Capstone* in one. Overall, the five theses were scored at an average of 2.5, or midway between *High Milestone* and *Milestone*. Students scored best on SLOs #5 and #3 and least well on SLOs #1 and #6. As noted earlier, part of the difficulty was that several theses reflected the issues of theses written without a focus on more than one religious tradition or with too much emphasis on a second discipline.

The Assessment Committee has recommended that the department make changes in the senior thesis program. First, while students normally are asked to write a thesis that deals with two or more religious traditions, some students are permitted to write on a particular problem that only uses the approach of a single religious tradition. In such cases in the future, students will be asked to explain how their interpretation might differ from other theoretical or historical approaches in an introductory chapter not currently required. Second, since students with a dual or double major may write a thesis in either of the two disciplines, when they choose to do one in the other discipline, they will be asked to provide a literature review, historical analysis, and critical theory in Religious Studies as part of the thesis project. Third, all faculty will be asked to include the department’s student learning outcomes in their course syllabi and to identify the ones that are to be met in the course.

THEME TWO PLANNING FOR GROWTH

Given the length of our response in Theme One, this section may seem rather brief. The educational and financial environment seemed stable and promising in 2007 when CMC considered the adoption of institutional growth as a theme in its Initial Proposal to WASC. But, as is self evident, circumstances have altered since then, especially the financial environment, and this has led to a more thorough and drawn-out strategic planning process than was originally intended. This in turn has impacted any decisions regarding enrollment growth. In fact, consideration of institutional growth soon became closely intertwined with the strategic planning process flowing from the financial downturn in the fall of 2008. The College adopted a new strategic planning process in 2009. The goal of the process was to identify selected topics and issues which were rapidly becoming emerging priorities. These included four major groups of discussion: 1. Key Strategic Topics, including enrollment growth, admission and financial aid, academic affairs, master planning, and financial planning; 2. Other Academic Topics, including curriculum planning, governance and organizational topics, and research institutes; 3. Student Affairs and Career Services, including career planning and co-curricular topics; and 4. Topics Across the College, athletics, globalization, and sustainability. During the past two academic years, the Senior staff and faculty committees, as well as the Board of Trustees have met to review these topics and make decisions regarding them. A [strategic plan update report](#) is provided to the Board of Trustees and Faculty by the President as needed, no less than once every year. The annual [Strategic Indicators Report](#) also addresses these key areas.

An important element of these discussions included the development of a more dynamic and strategic financial planning framework or model that improved the College's ability to more effectively model and test the potential implication of various forecast scenarios, including the potential to build out of the College's master plan. To assess the "optimal" undergraduate and graduate enrollment levels within Claremont during the next 5-20 years became a major focus of the planning effort, particularly the financial implications of any growth. With respect to undergraduate enrollment a number of models were tested. As part of the response to the 2008 financial dislocation, the [Board of Trustees Finance Committee approved](#) an increase in undergraduate enrollment from 1,130 FTE to 1,150 for 2010-11, and an additional increase to 1,160 in 2011-12. This modest increase was facilitated by some increase in off-campus housing adjacent to the campus and the completion of the Kravis Center on campus.

All of our models of student growth in the undergraduate population assume maintaining our current policy of on-campus housing for all, or nearly all, students. They also assume a need for additional faculty to maintain our current student-faculty ratio. This requires additional office space and additional classroom space. Thus, any growth beyond the modest two-year growth noted above indicates that further enrollment increase would only occur as a result of the construction of a new student apartment complex, or through the addition of two new residence halls on the site of the Pritzlaff Field as well as additional classroom and office spaces. Neither option is considered to be financially feasible in a short to medium length time frame. Thus, significant enrollment increases do not appear to be likely in the near term.

Regarding graduate student enrollment, the Robert Day School does anticipate significant growth in both the near and long term. Enrollments during the first two years of the program, 2009-2011, were 15-20 students. For 2011-2012, we anticipate 30-35 students. As indicated in the [RDS Admission Goals](#), we hope to eventually have about 50 students per year in the program.

In addition to these strategic planning discussions concerning enrollment growth, the College has also considered curricular and other programs that may well have an effect on enrollment. For instance, we have begun a summer program of classes that is an initial "pilot" effort to test whether there is interest in summer programming on campus. We enrolled 52 students in summer 2010 in Claremont classes and have had 82 students enrolled this summer on campus. This initial effort has resulted in further discussion concerning a focused summer program that would bring students to campus for a specific programmatic or disciplinary purpose. We have also discussed the possibility of a year-round program at the College similar to the

Dartmouth model. Although the faculty has not expressed much enthusiasm for the idea, it would permit an increase in enrollment of about 25% without the need for additional residence hall and classroom and office space or faculty hires. The concept remains under active discussion.

In May 2009, the Board of Trustees authorized the College to embark on an update of the 2002 Strategic Plan focusing on four topical areas as noted above. In addition to enrollment growth, the planning effort included setting priorities for financial aid and admissions, including maintaining need blind admission, meeting full need of students, sustaining the no-packaged loan policy, increasing financial aid for international students, and limiting funding for merit aid to restricted funds only. In addition, the planning process mandated an external marketing study in 2010-11 to best position the College for future recruitment of students. In terms of faculty recruitment, the Board of Trustees approved a new [faculty housing support policy](#) in 2010 to assist faculty in the purchase of homes. The Planning process reviewed facilities needs and identified Psychology, Keck Science, and the Robert Day School as having the greatest needs. We developed a more comprehensive financial planning model with a longer time frame that encompasses revenue projections, expense planning, and adopted revised policies for capital projects. In other areas, the Dean of Students has developed plans for a Center for Civic Engagement, improvement of our Career Services operations, and implementation of an Alcohol Task Force's recent recommendations.

We continue to engage in discussions concerning international programs. Our students [participate in off-campus study programs](#) at a very high rate. The Dean of the Faculty has developed a conceptual framework for a new year-round "Global Scholars" B.A. program focused on international relations and international economics and finance with advanced language education and international experiences. This summer, we have sent students to an Arabic language program in [Jordan](#) with a faculty member and a staff member, to [Israel](#) with a faculty member, and to [South Korea](#) for an economics program with a faculty member. A brief [recap](#) of these programs indicates that each was a tremendous success. We have also completed planning and have refined an implementation calendar for a program in [Silicon Valley](#) during the academic year. The program is modeled on our Washington, D.C. program and will include a strong internship component. Like the D.C. program, it would permit a modest increase in our on-campus enrollment. In 2009, the Board of Trustees approved a program to allow a small number of students (5-10 per year) to enroll as visiting students annually. Finally, a major step in any future additional enrollment growth will occur in December 2011, when the City of Claremont reviews the College's Master Plan for the future.

Responses to the Commission Letter of March 3, 2010

The action letter from the Commission directs the College's attention to three principal areas: Building a shared sense of institutional mission and character, creating a positive climate for diversity, and assessing and improving student learning.

Building a shared sense of institutional mission and character

The CP&R team that visited the College on October 6-9, 2009 noted that "some on-going tension exists at CMC between its fundamental purpose as an undergraduate liberal arts institution and its emphasis on preparing students for leadership in government and business." The team indicated that the recent approval of the MA in Finance was a catalyst for this most recent "tension" over our mission. Citing reference to **CFR 1.1** and **1.2**, the Commission supported the team's recommendation that the CMC community seek to achieve a clearer and more strongly shared sense of mission and character.

It is undeniable that there were differences of opinion regarding the creation of the MA in Finance degree among faculty. Some believed that the program placed enhanced emphasis on economics at the expense of other disciplines. That went to the heart of the matter as experienced by the team when speaking with some faculty. Others strongly supported the creation of the new program. Ultimately, both the faculty and the Board of Trustees overwhelmingly approved the program by unanimous votes in spring 2007 and fall 2008. Despite the critics, there clearly was broad support for the new program and the mission of the College.

However, that is not to say that the College's mission to unite the professional with the liberal arts has been without controversy.

From the very beginning, the College has not been immune from challenges to its efforts to bridge the wide gap between education in the arts and the professions. The Munro Report of 1927 recommending the founding of the College first established the mission for a men's college following the founding of Scripps College for women. Such a college, according to the report, would emphasize "preliminary training for certain male vocations and professions, notably the outstanding business professions and the law." It would "combine cultural studies with definite preparation in accounting, industrial organization, banking, merchandizing, marketing, advertising, business law, and business policy." It was intended that the College's own faculty would provide the pre-professional education and the "instruction in the cultural subjects should be borrowed so far as possible, from Pomona and Scripps." This separation of the pre-professional and the cultural is an early recognition of the inherent tension that traditionally exists between these two broad areas of education.

The effort to combine the cultural with the pre-professional immediately ran into challenges. Those planning for the school in 1928-30 recognized the difficulty of fitting any kind of vocational orientation into a collegiate setting that included an already developed tradition in the liberal arts in Claremont. But, everyone seemed to accept the notion that the new college could provide an education in business that was grounded in the liberal arts. To address this dichotomous challenge, the planners brought in Leverett S. Lyon of the Brookings Institution as a consultant. He counseled that the College would need to offer fields outside economics and business. But the non-economic aspects of the curriculum were to have a distinctive cast. "All general subjects, as for instance, History, should be presented in such a way as to emphasize the values which bear most significantly on the meaning and method of the economic processes involved in business." And, so it has been a cardinal element of the College's mission since before its actual founding that it would attempt to do what other institutions rarely attempt, build a bridge over a fundamental disagreement in the focus of education. Thus, it is not surprising that our mission occasionally generates controversy among faculty, although not among students, trustees or alumni. Indeed, students and trustees seem very comfortable with the mission of the College, and in 2001, the Board of Directors of the Alumni Association adopted a [statement of essential characteristics](#), thereby confirming the alignment of CMC's mission with the expectations of CMC's distinguished alumni base.

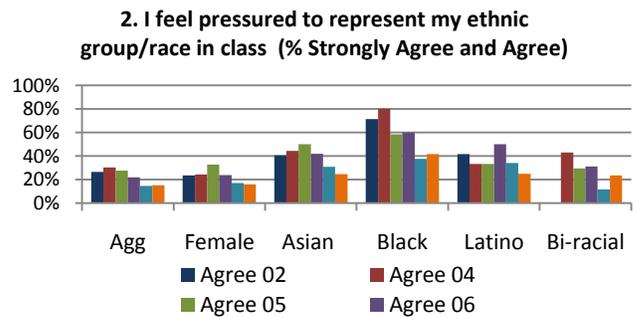
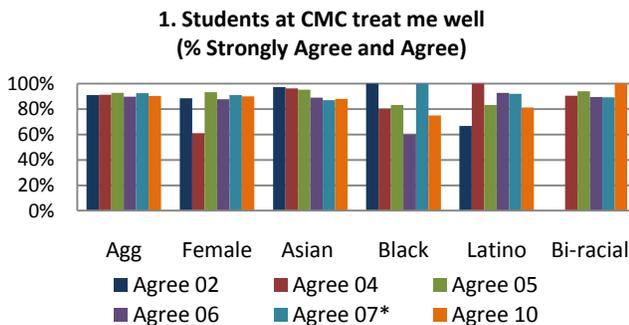
The College leadership remains committed to its mission and is comfortable with the inherent tension that it sometimes generates. Following the last visit by the WASC team, several faculty meetings provided an excellent forum for intellectual debate about the mission. Many faculty members drew largely on the founding and history of the College in framing their support of the mission. Others noted the unique opportunity being a member of the Claremont Colleges consortium provides students to broaden their academic exposure to the liberal arts, even in a setting that seeks to "educate its students for thoughtful and productive lives and responsible leadership in business, government, and the professions." Still others argued against pre-professional training of any kind. Interestingly, the anticipated growth of the master's program in finance has not been a significant source of debate or increased tension in regard to the mission over the past two years. A final resolution among the faculty was not reached as a result of these discussions, nor is final resolution necessarily our goal; however, the WASC reaffirmation process itself has contributed to a clearer and more strongly shared sense of mission and character across the institution. Through the establishment of five student learning outcomes for the CMC general education curriculum, the faculty reached a common ground—consensus on the fundamental skills we believe a CMC education must provide. In her conversations with prospective faculty, President Gann discusses the College's mission. Similarly, Dean of the Faculty, Gregory Hess, reiterates her points and includes some discussion of the mission at the new faculty orientation each year. Even with these efforts and ongoing discussion, some tension will likely always exist at CMC. We do not consider this to be problematic. Indeed, an institution with on-going dialogue and challenges concerning its mission and curriculum is probably one that is both healthy and open to debate on prevailing orthodoxy.

Creating a positive climate for diversity

The CP&R team acknowledged CMC’s challenge in recruiting and retaining a more diverse faculty and student body. Referring to **CFR 1.5, 3.1** and **3.2**, the Commission endorsed “the team’s recommendation that CMC carefully study campus climate and related issues with the goal of taking action to address any concerns identified through this study” (3/3/10). Accordingly, the College issued the [Campus Climate/Student Life Survey](#) to all students in spring 2010 and identified trends over time in regard to key issues of diversity and climate on our campus. The survey has 87 questions relating to various aspects of campus climate; the last third specifically relate to gender, sexual orientation, and race/ethnicity. The survey has been issued six times since 2002. The response rate was consistently high, over the last several years (30-50%). The table below shows the breakdown by gender and ethnicity, which is generally representative of the student body in terms of ethnicity but is over-representative of women and white students, and under-representative of Latinos.

*The campus climate and student life surveys were combined in 2007.	2010-11 Enrollment	2010	2007	2006	2005	2004	2002
Total # responses	1135	397	547	464	366	221	238
Men	54%	41%	46%	45%	43%	35%	31%
Women	46%	59%	54%	55%	57%	65%	69%
Asian American	13%	16%	17%	15%	14%	12%	16%
African American	4%	4%	2%	5%	5%	2%	3%
Latino/Hispanic	13%	9%	11%	8%	7%	4%	5%
White	53%	61%	61%	68%	71%	67%	70%
Bi-racial[†]	n/a	6%	5%	8%	5%	n/a	n/a

In the survey, students are asked to rate their level of agreement with several items. There are seven possible responses – strongly agree, agree, undecided, disagree, strongly disagree, and don’t know. The data in the following charts focuses on the total agreement the students had with each of the statements. This percentage was calculated from the number of students who strongly agree and agree, divided by the total number of responses excluding the “don’t knows.”



Overall, the results are positive and the campus climate appears to be improving over time. In the aggregate and on average, 90% of students think that other students at CMC treat them well. There is more variation among Black and Latino students; however, figure 2 illustrates that the pressure to represent their ethnic group/race for Black, Latino and Bi-racial students is decreasing over time.

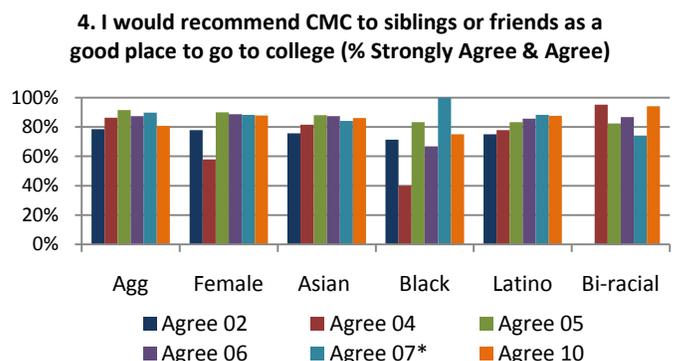
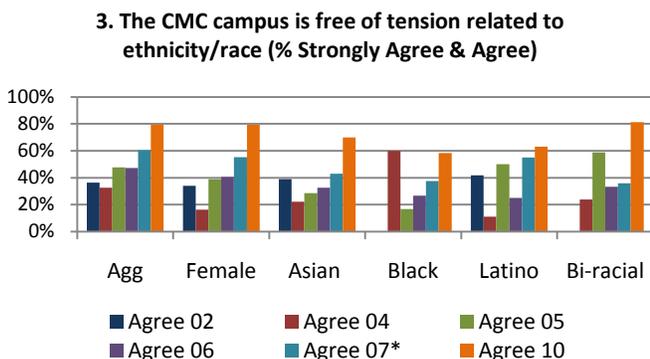
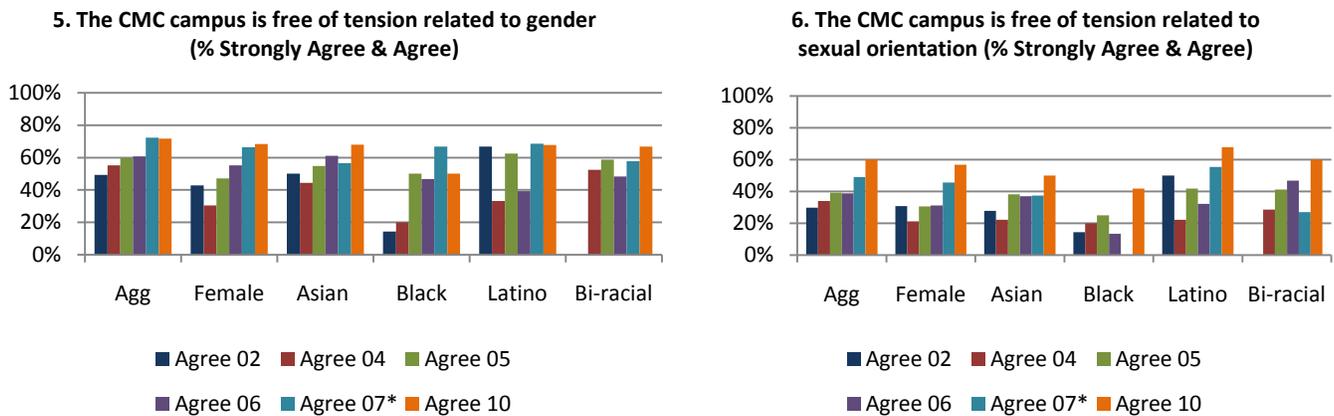


Figure 3 suggests that campus tensions related to ethnicity/race are declining over time. The most variation is among Black students, but overall, 2010 shows dramatic improvement in this area. Moreover, Figure 4 indicates that most students view CMC as a good place to go to college, regardless of their ethnicity/race. The College is pleased to see these positive trends; however, we recognize the need to continually improve campus climate and to consistently address sources of tension on campus, especially as they relate to gender and sexual orientation. Although the trend in Figure 5 shows that progress has been made in regard to gender tensions, when disaggregated by race, the positive trend is generally consistent. Figure 6 illustrates some inconsistent responses as to how students view tensions related to sexual orientation, but the trend is clearly positive. 2010 marked a general improvement on this item for every group yet the marks were below 60% in all but the Latino population.



Based on the aggregate results of the survey analysis one can see that the overall trends are positive in nearly all cases when disaggregated by racial/ethnic, and gender categories. Still, the CMC Diversity Committee identified a set of eight questions to more thoroughly investigate areas of concern. In spring 2010, a subcommittee of nine members conducted semi-structured one-on-one interviews with 53 students selected randomly from a representative sample. Results were compiled and analyzed, revealing several key areas for targeted improvement, most notably issues related to gender and homophobic tensions on campus. A detailed list of diversity initiatives and activities is available in the [2011 CMC Diversity Committee Report \(CFR 1.5\)](#), but an abbreviated list for AY 2010-11 includes:

- QRC and Ally Training for all student Sponsors and Resident Assistants, FA 2010
- Queer/Ally student, faculty and staff dinner, FA 2010
- Black student, faculty and staff dinner, FA 2010
- Chicano/Latino student, faculty and staff dinner, FA 2010
- Women and Leadership Series, 12 events (faculty, staff, students), AY 2010-11
- LGBTQ training for faculty and staff, FA 2010
- Sponsorship of Women’s Forum, AY 2010-11
- NCAA Diversity Workshop, SP 2011
- International Festival, SP 2011

CMC recognizes that creating a positive climate for diversity is essential not only among our students, but among our faculty and staff as well. Faculty searches are structured so as to require each department chair to meet with the Dean of the Faculty prior to inviting candidates to campus for on-site interviews. In that meeting the Dean and Chair review the applicant pool as well as the process by which the candidates were identified. Together, they evaluate whether the prospective hires are, “sufficient in number, professional qualifications, and diversity to achieve the institution’s educational objectives...” (CFR 3.2). These meetings, coupled with outreach efforts to professional academic organizations, and in some cases, independent search agencies, have augmented departmental efforts to ensure rich and diverse applicant pools for all faculty hires. These efforts have yielded positive results in terms of recruitment of women faculty. During the last decade, 2002-

2011, 38% of the 97 faculty hires have been women, and for the current year, 2011-2012, 54% or seven of the thirteen faculty hires are women, including hires in government, economics and mathematics, departments which have historically been more heavily populated with men (CFR 3.1, 3.2). Unfortunately, the College has had only limited success in hiring faculty from underrepresented ethnic and racial groups. The CP&R visiting team identified attrition of women faculty as an issue. As we indicated in our June 2010 Progress Report to the Commission, we did experience a significantly greater attrition of women faculty, especially in the 1990s. In the last ten years, this differential has narrowed. From 2002-2011, we have lost 15 male faculty and 15 women faculty to attrition. Still, the proportion of women lost in this time period is greater than that of men; however, as noted in our 2010 Progress Report, in reviewing the reasons for attrition, most women faculty left for better positions.

We have discussed eight policy proposals with little or no cost that could make the environment friendlier for women faculty and seven that have budgetary impact. These issues include better child care options, hiring in women's/gender studies areas, salary disparities, more women speakers at the Athenaeum, and a curricular review. This past academic year we implemented three of the initiatives, better child care options including at the Athenaeum and changing the faculty meeting times to facilitate attendance for those with children, and a salary disparity review and redress. We are currently planning for more women speakers in the Athenaeum next academic year.

Educational Effectiveness at Claremont McKenna College

For the better part of five years, Claremont McKenna College has been engaged in a WASC reaffirmation process that has required candid self-evaluation, reflection on the institution's origins and mission and a comprehensive overhaul of its existing standards for measuring educational effectiveness. As was noted in our 2007 Institutional Proposal and articulated in the Capacity and Preparatory Review in 2009, Claremont McKenna College has, "for many years relied almost exclusively on traditional means of evaluating students' learning, including letter grades, examinations both oral and written, research experiences involving students, senior theses, writing assignments, classroom and thesis presentations, surveys of student perceptions of their learning, alumni surveys and external program reviews." The College continues to value its ongoing assessment of student learning, and has worked diligently over the course of the last several years to implement a more systematic approach to evaluation and to apply metrics that are at once reliable, transparent and valid measures of our progress. Indeed, CMC chose educational effectiveness as one of its two themes for review throughout this reaffirmation process and has implemented an ambitious plan of action to, as the WASC Commission recommended, ***"...create a system for assessment that fits the particular ethos and resources of [CMC]...account[ing] for the identifying of student learning outcomes, assessing learning against those outcomes, regularly reviewing the effectiveness of program curriculum and pedagogy, and cycling the results from assessment and program review into efforts for improvement in curriculum and pedagogy."***

As indicated in our Report above, the College has now assessed every one of the 33 major programs offered to our students, (except for Environmental Analysis which is brand new this year, Organismal Biology which has had no graduates in the last two years, and Middle East Studies which is new and had no Senior theses students this past year. In each of these cases, however, the program has a fully developed assessment and evaluation program.) Five of our largest departments, Economics, Government, Psychology, Literature and History have completed two cycles of undergraduate assessment and all of the other programs will do so in the coming year. One third, eleven, of the programs have indicated they will make changes in their program to improve student learning or in their assessment techniques based on the assessments already conducted or are actively considering such changes. One department, Government, has conducted an external program review using the results of its assessment and evaluation, and two more major programs will do so this academic year in accordance with our on-going schedule of such reviews. The evaluation of these assessment efforts indicates that the College is offering a highly effective academic program to its students, and that CMC students as well as alumni believe the program is fully preparing them for their professional, personal, and civic lives beyond their four years at the College.

The WASC Reaffirmation process has also provided an opportunity for the College to refocus its curricular attention on its general education program. We have made considerable alterations in the program to improve its effectiveness. The former Questions of Civilizations course required of all students has been replaced with a new set of Freshman Humanities Seminars that permit a wider range of subject matter. The Literature 10 class, Composition and Literary Analysis, has been modified with a much more intensive writing course linked to the renamed Center for Writing and Public Discourse. The College's General Science requirement has been reduced from two laboratory courses to one, and we have added Arabic as an option for our language program requirement. In addition to these changes, we completed the first cycle of assessment of our general educational program as noted above. Although, no changes were recommended in the program as a result of this assessment, we will be modifying some of the assessment instruments in the near term in order to improve our assessment techniques.

Claremont McKenna College is an institution characterized by a unique mission among liberal arts colleges and the ongoing challenge of providing an education that adheres to a mission combining the liberal arts traditions with practical applications and leadership preparation in government and the professions. The WASC reaffirmation process stimulated lively intellectual debate among all constituents of the College as CMC moved to identify salient student learning outcomes across the general education program. Ultimately, five learning outcomes were established and approved by both the faculty and the Board of Trustees (**CFR 1.2**). These outcomes have been shared with the entire CMC community and are available to the public (**CFR 2.4**). As proposed in the CP&R report, we have formed a permanent Assessment Committee which, in addition to providing oversight of major-level evaluation, also conducts the assessment of learning for general education. The Assessment Committee works closely with the Dean of the Faculty, the Curriculum Committee and the WASC Steering Committee to ensure that assessment processes are ongoing and that assessment results are used to inform curricular and pedagogical decisions (**CFR 2.4, 4.4**). It also reports to the full faculty, Senior Staff and the Board of Trustees who in turn use the information to guide institutional decision-making (**CFR 4.6**). Although the Committee did not find it necessary to recommend significant modifications to the program on the basis of this single cycle, it will continue to engage faculty and staff in discussion of the assessment processes used, the resultant, observable trends in student learning and a reflection on the appropriateness of our expectations and the metrics by which we measure progress (**CFR 2.4, 2.6, 4.6, 4.7**).

Assessment of the general education program at Claremont McKenna has revealed that, generally speaking, our students are learning well, and are graduating not only with the skills we have identified in our student outcomes, but also with those valuable skills outlined in **CFR 2.2**. We have provided direct and indirect evidence that CMC graduates are well prepared for, "work, citizenship, and a fulfilling life" (**CFR 2.2a**). There is little question that our students "engage in an in-depth, focused and sustained program of study as part of their baccalaureate program" (**CFR 2.2a**). The same can be said of our graduate students. To sustain the effort that the WASC process has generated, CMC will continue to make sure that its data collection efforts are efficient, valid and consistent. General education outcomes will be monitored on an annual basis and will be coordinated by the Assessment Committee. Results will be available in a timely fashion to constituents across the CMC community and will be used to inform decision-making at every level (**CFR 4.6, 4.7, 4.9**).

Every academic program offered at Claremont McKenna is subject to systematic review (**CFR 2.7**). In fact, the College has engaged its departments in external reviews for decades, and conducts no less than two such reviews each academic year. Every academic department at CMC has undergone an external review within the last eight years. Likewise, the CMS Athletic Department, Military Science and the Writing Center have also been recently evaluated. Since 2010-11, CMC has required the inclusion of learning goals and student assessment data in all self-studies as part of our external review program. As noted above, the Government Department was the first such Department to be reviewed under this new guideline. Henceforth, all future external reviews will incorporate assessment and evaluation data gathered for the Department's program/s. In cooperation with the Office of Institutional Research (OIR), departmental self-study reports are now comprehensive reviews of the program, and include data specifically relating to student retention, disaggregated enrollment trends, comparative faculty data, and, when available, alumni outcomes (**CFR 2.7, 4.4, 4.5**).

Student learning outcomes for every CMC and intercollegiate major have been established (**CFR 1.2**) and are available publically on CMC's website and in the Course Catalog (**CFR 2.4**). In each program, Faculty have developed evaluative standards with embedded criteria that directly align with the student learning outcomes. Additionally, each department has developed a timeline for the evaluation of student learning (**CFR 2.6**). As is true of general education, a full cycle of assessment has been completed for every major and in every case, faculty have "closed the loop" with meetings to discuss the results, debate curricular modifications and recommend/implement changes (**CFR 4.3, 4.7**). In AY 2011-12, OIR will add an additional staff person who will be instrumental in streamlining surveying processes at the College and will contribute to assessment practices and data compilation (**CFR 4.5**). The College anticipates additional assessment data over the next several years, drawing on alumni, employers and others (**CFR 4.9**) to enrich our understanding of how a CMC education carries forward into the world (**CFR 2.2**). A full description of the assessment cycle has been presented in Theme One of this report.

It should be noted that the College adopted a strategy of encouraging each program to develop its own SLOs and means of assessment. No institutional mandate other than the need to address the task was made on the programs. Assistance was provided by the Assessment Committee where needed. Funds were provided to program faculty by the Dean of Faculty where deemed essential to ensure completion of the work. Progress was regularly discussed at faculty meetings and in the Senior Staff and Board of Trustees. Nearly every academic program eventually decided to use the senior thesis as the principal means of assessment. In some instances this has proven to be a challenge as many students select more than one major, but only write a thesis in one program not both. Where this has been a problem the program faculty have developed changes that will mitigate the problem in the next cycle of assessment. A second issue has been one of scale. Many majors at CMC have very small enrollments with only a handful of graduates each year. Faculty in those programs recognize that it may require additional means of assessment or several years worth of data before they can be confident of the program's ability to ensure educational effectiveness with respect to their program's SLOs.

The assessment of learning at the program level is an on-going process. With a full cycle of assessment complete, the faculty will move to carry out additional assessments each year and spend time in each subsequent year evaluating its means of assessment and the appropriateness of its student learning outcomes. (**CFR 1.2, 2.6, 4.3, 4.4**). Equally important, each department will regularly reflect on the results of its assessment process and will implement practices that will result in improved student learning (**CFR 4.1, 4.3, 4.4, 4.6, 4.7**) as one third of them are already doing. Members of the Assessment Committee will meet with each academic department periodically to assist in this process and to guide departments that are interested in learning more about alternative direct measures of student learning. The Assessment Committee will also take a lead at the Claremont Colleges, working to streamline data collection methods for intercollegiate majors that may lack the departmental structure of other majors. CMC has documented in this Report its ability to accomplish a great deal in the last several years underlining its institutional capacity for educational effectiveness.

Claremont McKenna College's evaluation of its core functions and educational effectiveness has never been limited to evaluation of academic outcomes. While academic measures are clearly a critical component, so too is the institution's commitment to core functions that augment the student learning process. CMC's leadership, including the faculty and Board of Trustees are continually evaluating the myriad structures that contribute to our success (**CFR 4.7**). This is done in the case of student services by annual national and college-based surveys and by special studies in other areas of college operations.

Generally, CMC students are learning well and are quite satisfied with their experience. Overall retention and graduation rates at CMC remain very high. As demonstrated in the table below, the average retention of students from their freshman to sophomore year was over 93% in all disaggregated race/ethnicity categories for entering cohorts 2003-2009.

Claremont McKenna College: Retention Rate - first time freshman who returned for their sophomore year

	2009	2008	2007	2006	2005	2004	2003	Average
White non-Hispanic	95.6%	91.5%	98.5%	95.0%	94.4%	94.4%	97.1%	95.2%
Black non-Hispanic	83.3%	100.0%	100.0%	100.0%	100.0%	94.1%	90.0%	95.3%
Hispanic	100.0%	89.7%	100.0%	97.8%	94.9%	89.7%	88.0%	94.3%
Asian or Pacific Islander	100.0%	100.0%	92.9%	100.0%	100.0%	94.7%	93.3%	97.3%
American Indian or Alaska Native	100.0%	n/a	n/a	100.0%	100.0%	n/a	100.0%	100.0%
Race/ethnicity unknown	93.5%	96.5%	93.9%	93.9%	93.8%	96.3%	89.5%	93.9%
Nonresident alien	90.9%	94.1%	100.0%	100.0%	94.4%	100.0%	85.7%	95.0%

Source: CMC Factbook

Comments: CMC's retention rates are consistently high. Percents lower than 100 often represent the departure of a single student.

Similarly, the graduation rates are very high across the CMC population. The aggregate 6-year graduation rate for CMC students in 2010 was 93.2%. The lowest rate (88.2%) for those of known race/ethnicity was reflected in our African-American population in which two students of the original 17 departed CMC prior to graduation. This figure is comparable to those reported by our peer institutions as indicated in the [Grad/Retention Data Exhibit, 2011](#). Efforts to retain and graduate students are on-going and it is our hope that the targeted diversity initiatives outlined formerly in this report will contribute to gains in this area.

Claremont McKenna College: Overall Graduation Rates

Graduation Rates, four year	Entering Cohort						
	2006	2005	2004	2003	2002	2001	2000
White non-Hispanic	84.9%	88.0%	84.6%	87.4%	90.7%	85.2%	82.8%
Black non-Hispanic	90.0%	100.0%	82.4%	80.0%	92.3%	88.9%	84.6%
Hispanic	84.8%	71.8%	74.4%	80.0%	92.9%	76.9%	68.2%
Asian or Pacific Islander	93.5%	84.8%	94.7%	91.1%	94.7%	87.1%	75.0%
American Indian or Alaska Native	100.0%	100.0%	n/a	100.0%	0.0%	n/a	100.0%
Race/ethnicity unknown	87.9%	93.8%	81.5%	89.5%	86.4%	80.0%	n/a
Nonresident alien	92.9%	72.2%	80.0%	57.1%	71.4%	100.0%	80.0%

Graduation Rates, six year	Entering Cohort						
	2004	2003	2002	2001	2000	1999	1998
White non-Hispanic	93.0%	94.9%	95.0%	89.3%	89.4%	90.1%	89.0%
Black non-Hispanic	88.2%	90.0%	92.3%	88.9%	84.6%	90.0%	77.8%
Hispanic	94.9%	84.0%	92.9%	88.5%	77.3%	77.8%	100.0%
Asian or Pacific Islander	97.4%	93.3%	94.7%	90.3%	83.3%	88.1%	97.7%
American Indian or Alaska Native	n/a	100.0%	100.0%	n/a	100.0%	100.0%	n/a
Race/ethnicity unknown	85.2%	89.5%	100.0%	90.0%	n/a	n/a	n/a
Nonresident alien	100.0%	71.4%	71.4%	100.0%	100.0%	100.0%	100.0%

Graduation Rates, eight year	Entering Cohort						
	2002	2001	2000	1999	1998	1997	1996
White non-Hispanic	95.0%	89.3%	89.4%	90.1%	89.0%	87.7%	84.3%
Black non-Hispanic	92.3%	88.9%	84.6%	90.0%	83.3%	66.7%	75.0%
Hispanic	92.9%	88.5%	81.8%	77.8%	100.0%	84.6%	88.4%
Asian or Pacific Islander	94.7%	90.3%	83.3%	90.5%	97.7%	83.0%	81.3%
American Indian or Alaska Native	100.0%	n/a	100.0%	100.0%	n/a	100.0%	n/a
Race/ethnicity unknown	100.0%	95.0%	n/a	n/a	n/a	n/a	n/a
Nonresident alien	71.4%	100.0%	100.0%	100.0%	100.0%	80.0%	92.3%

A rigorous internal review of the College in May 2007, indicated that CMC had more to accomplish in 12 areas of the WASC Criteria for Review (**CFRs 1.2, 2.2, 2.4, 2.6, 2.7, 4.1, 4.3, 4.4, 4.5, 4.6, 4.7**). This Report documents the progress we have made in meeting our responsibilities in each of these Criteria for Review.

Finally, although we set out to study institutional growth in Theme Two, the subject became entwined with the economic downturn of 2007, and was superseded by a new strategic planning update effort mandated by the altered economic circumstances.

WASC/ACSCU SUMMARY DATA FORM for ACCREDITED INSTITUTIONS

Institution: Claremont McKenna College

Finances:

1. **Total Annual Operating Budget:** \$78,200,000
2. **Percentage from tuition and fees:** 59.7%
3. **Endowment:** \$466,000,000

Governing Board: A. Size: 41 B. Meetings a year: 4

FOR UNDERGRADUATE PROGRAMS:

Data for Most Recent Fall Enrollment by Ethnicity and Gender.

Use IPEDS definitions for students. IPEDS data reported as of (date) : September 15, 2010.

Table 1: Total Enrollments

Enrollment by Category	Total FTE of Students	Use total headcount for these categories										Total Male	Total Female	
		Total Students	Non-Resident Alien	Race and Ethnicity Unknown	Hispanic of any race	For Non-Hispanics Only								
						American Indian or Alaska Native	Asian	Black or African American	Native Hawaiian or Other Pacific Islander	White	Two or More Races			
Undergraduate	1252	1253	84	253	96	1	148	40	1	602	28	673	580	
Non-degree	6.5	8	4	4	0	0	0	0	0	0	0	2	6	
Total	1258.5	1261	88	257	96	1	148	40	1	602	28	675	586	
Enter percentage of total student headcount for each category		100%	6.98%	20.38%	7.61%	0.08%	11.74%	3.17%	0.08%	47.74%	2.22%	53.53%	46.47%	

IPEDS Data for 6-Year Cohort Graduation Rate for Baccalaureate Programs, Last 3 Years, by Ethnicity and Gender

NOTE: If the institution also collects data on 8-year graduation rates, an additional table using these or similar categories may be provided.

Please indicate if the data provided in tables below is for: freshmen only (use Table 2 only)
 freshmen and transfer students combined (use both Tables 2 and 3)

Table 2: 6-Yr Cohort Graduation Rate

Use total headcount for these categories. Enter percentage of students in category graduating within six years of enrollment												
Freshman Cohort Year (Entering Fall)*	Overall 6-year Graduation Percentages	Non-Resident Alien	Race and Ethnicity Unknown	Hispanic of any race	For Non-Hispanics Only						Total Male	Total Female
					American Indian or Alaska Native	Asian	Black or African American	Native Hawaiian or Other Pacific Islander	White	Two or More Races		
2004	93.2	100	85.2	94.9	n/a	97.4	88.2	n/a	93.0	n/a	92.8	93.7
2003	92.6	71.4	89.5	84.0	100	93.3	90.0	n/a	94.9	n/a	92.7	92.5
2002	94.4	71.4	100	92.9	100	94.7	92.3	n/a	95.0	n/a	96.3	92.0
3-Year Averages:	93.3	86.2	91.2	91.3	100	95.0	90.0	n/a	94.3	n/a	93.8	92.8
Percentage of 6-year graduates, each category	93.3%	86.2%	91.2%	91.3%	100%	95.0%	90.0%	n/a	94.3%	n/a	93.8%	92.8%

If the institution tracks freshman *and transfer* graduation rates separately, please provide last 3 years data for 6-Year cohort *transfer* graduation rate by ethnicity and gender.

Table 3: 6-Yr Cohort Transfer Graduation Rate

Use total headcount for these categories. Enter percentage of students in category graduating within six years of enrollment												
Transfer Cohort Year (Entering Fall)*	Overall 6-year Graduation Percentages	Non-Resident Alien	Race and Ethnicity Unknown	Hispanic of any race	For Non-Hispanics Only						Total Male	Total Female
					American Indian or Alaska Native	Asian	Black or African American	Native Hawaiian or Other Pacific Islander	White	Two or More Races		
20__												
20__												
20__												
3-Year Averages:												
Percentage of 6-year graduates, each category	%	%	%	%	%	%	%	%	%	%	%	%

FOR GRADUATE PROGRAMS:**Last Reported IPEDS Data for Enrollment in each program level by Ethnicity and Gender.**

Use IPEDS definitions for students. IPEDS data reported as of (date) __September 15, 2010_____.

Table 4: IPEDS by Program Level

Enrollment by Category	Total FTE of Students*	Use total headcount for these categories												
		Total Students	Non-Resident Alien	Race and Ethnicity Unknown	Hispanic of any race	For Non-Hispanics Only							Total Male	Total Female
						American Indian or Alaska Native	Asian	Black or African American	Native Hawaiian or Other Pacific Islander	White	Two or More Races			
Masters	17	17	4	5	1	0	1	0	0	5	1	14	3	
Research Doctorate	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Professional Doctorate	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Total	17	17	4	5	1	0	1	0	0	5	1	14	3	
Enter percentage of total headcount for each category		100%	100%	100%	100%	n/a	100%	n/a	n/a	100%	100%	100%	100%	

Table 5: Current Faculty

Faculty by Categories	Race and Ethnicity Unknown	Hispanic of any race	For Non-Hispanics Only						Male	Female
			American Indian or Alaska Native	Asian	Black or African American	Native Hawaiian or Other Pacific Islander	White	Two or More Races		
Full-time	2	8	1	12	5	0	114	0	103	48
Part-time as FTE*	2	0	0	0	0	0	14	0	12	4
Total Faculty FTE	3.67	8	1	12	5	0	118.67	0	107	49.33

*NOTE: The IPEDS formula for Full-Time Equivalent is, "The full-time-equivalent (FTE) of staff is calculated by summing the total number of full-time staff from the Employees by Assigned Position (EAP) component and adding one-third of the total number of part-time staff." If institution calculates FTE using a different formula, please describe briefly here: Typically Common Data Set (CDS) numbers are provided. IPEDS data are used in the calculations above.

CATEGORY	Have formal student learning outcomes been developed?	Where are these learning outcomes published?	Other than GPA, what data/evidence is used to determine that graduates have achieved stated outcomes for the degree?	Who interprets the evidence? What is the process?	How are the findings used?	Date of program review for this degree program.
General Education	Yes (5). The SLOs are derived from our mission and include goals related to analytical skills, communication, integration of ideas, information technology skills and leadership.	The outcomes are published in the CMC Catalog and are available publically on the CMC website.	Direct evidence includes scores on the CLA, the analysis of senior theses and presentations using VALUE and CMC-developed rubrics and an external Assessment Center evaluation. Indirect evidence includes data from the NSSE, CIRP Senior Survey, and the CMC Student Life Survey.	The CMC Assessment Committee comprised of faculty and staff oversee gathering of data and contribute towards its interpretation.	CMC will make improvements to its writing curriculum in AY 2011-12. It will also implement an Academic Mentoring Program and will continue to explore appropriate instruments and metrics for assessment.	The GE SLOs were adopted after rigorous institutional review of the general education curriculum in 2009-10.
American Studies	Yes (4)	The outcomes are available in the CMC Catalog.	Use of a rubric to evaluate senior theses.	Theses are evaluated annually by department faculty and results are discussed departmentally.	No programmatic changes recommended at this time.	Joint Science Department Review, November, 2006
Asian Studies	Yes (4)	The outcomes are available in the CMC Catalog.	Use of a rubric to evaluate senior theses. Alumni reported scores from national language tests.	Theses are evaluated annually by department faculty and results are discussed as a group. Alumni test scores are gathered through alumni surveys.	No programmatic changes recommended at this time.	February, 2008
Biochemistry	Yes (7)	The outcomes are available in the CMC catalog and on the department website.	Use of a rubric to assess senior theses, Use of a rubric to evaluate poster presentations.	Theses and posters are evaluated annually by Keck Science Center faculty and discussed as a department.	No programmatic changes recommended at this time.	Joint Science Department Review, November, 2006
Biology	Yes (5)	The outcomes are available in the CMC catalog and on the department website.	Use of a rubric to assess senior theses, Use of a rubric to evaluate poster presentations.	Theses and posters are evaluated annually by Keck Science Center faculty and discussed as a department.	No programmatic changes recommended at this time.	Joint Science Department Review, November, 2006

CATEGORY	Have formal student learning outcomes been developed?	Where are these learning outcomes published?	Other than GPA, what data/evidence is used to determine that graduates have achieved stated outcomes for the degree?	Who interprets the evidence? What is the process?	How are the findings used?	Date of program review for this degree program.
Chemistry	Yes (4)	The outcomes are available in the CMC catalog and on the department website.	Use of a rubric to assess senior theses, Use of a rubric to evaluate poster presentations.	Theses and posters are evaluated annually by Keck Science Center faculty and discussed as a department.	No programmatic changes recommended at this time.	Joint Science Department Review, November, 2006
Classical Studies	Yes (3)	The outcomes are available in the CMC Catalog.	Use of a rubric to evaluate senior theses.	Theses are evaluated annually by department faculty and results are discussed departmentally.	No programmatic changes recommended at this time.	Intercollegiate review TBD.
Economics and Economics-Accounting	Yes (3)	The outcomes are available in the CMC Catalog.	Use of a rubric to evaluate senior theses.	The theses are measured annually against a VALUE rubric by program faculty. Results are compiled and discussed by the department.	The department has established a committee to recommend curricular changes to strengthen students' quantitative reasoning skills.	April, 2005
Economics and Engineering	Yes (8)	The outcomes are available on the department website.	Use of a an oral exit examination. Use of a laboratory skills examination.	Exams proctored by EE faculty and results discussed among program faculty.	No programmatic changes recommended at this time.	Joint Science Department Review, November, 2006
Environmental Analysis	Yes (6)	The outcomes are available in the CMC catalog and on the department website.	Use of a rubric to assess senior theses, Use of a rubric to evaluate poster presentations.	Theses and posters are evaluated annually by Keck Science Center faculty and discussed as a department.	No programmatic changes recommended at this time.	Joint Science Department Review, November, 2006

CATEGORY	Have formal student learning outcomes been developed?	Where are these learning outcomes published?	Other than GPA, what data/evidence is used to determine that graduates have achieved stated outcomes for the degree?	Who interprets the evidence? What is the process?	How are the findings used?	Date of program review for this degree program.
Environment, Economics and Politics	Yes (1)	The outcomes are available in the CMC catalog and on the department website.	Use of a rubric to assess senior theses, Use of a rubric to evaluate poster presentations.	Theses and posters are evaluated annually by Keck Science Center faculty and discussed as a department.	in AY 2011-12, all EEP majors will be required to present a poster and their thesis will be evaluated against the EEP rubric notwithstanding the department to which they are submitting.	Joint Science Department Review, November, 2006
Film Studies	Yes (8)	The outcomes are available in the CMC Catalog.	Use of a rubric to evaluate senior theses.	The theses are measured against a VALUE rubric by program faculty. Results are compiled and discussed by the department.	A new course in film history will be offered in 2011-12. A workshop will be held for junior students to discuss program curricula and goals. A committee for program review will be established for AY 2011-12.	Intercollegiate review TBD.
Government	Yes (5)	The outcomes are available in the CMC Catalog.	Use of a department-developed rubric to evaluate senior theses.	The theses are measured against a rubric by program faculty. Results are compiled and discussed by the department.	No programmatic changes are recommended at this time.	April, 2011
History	Yes (6)	The outcomes are available in the CMC Catalog.	Use of a rubric to evaluate senior theses. Use of an alumni survey on student learning.	The theses are measured against a rubric by program faculty. The alumni survey was issued electronically to graduates from 1990-2005. Results were compiled and discussed among the faculty.	Assessment tools for Junior Seminar will be developed. Curriculum expanded to include more Latin American and nineteenth century American history.	May, 2006

CATEGORY	Have formal student learning outcomes been developed?	Where are these learning outcomes published?	Other than GPA, what data/evidence is used to determine that graduates have achieved stated outcomes for the degree?	Who interprets the evidence? What is the process?	How are the findings used?	Date of program review for this degree program.
International Relations	Yes (3)	The outcomes are available in the CMC Catalog.	Use of a rubric to evaluate senior theses.	The theses are measured against a rubric by program faculty. Results are compiled and discussed by the department.	No programmatic changes are recommended at this time. Individual faculty will address issues that arose in theses evaluation.	April, 2011
Legal Studies	Yes (6)	The outcomes are available in the CMC Catalog.	Use of a rubric to evaluate senior theses.	The theses are measured against a rubric by program faculty. Results are compiled and discussed by the department.	No programmatic changes are recommended at this time.	Intercollegiate review TBD.
Literature	Yes (8)	The outcomes are available in the CMC Catalog.	Use of a rubric to evaluate senior theses. Use of an alumni survey on student learning.	The theses are measured against a rubric by program faculty. The alumni survey was issued electronically to graduates from 1997-2005. Results were compiled and discussed among the faculty.	The department adopted five improvement measures including the appointment of a thesis coordinator, requiring a research paper in all single author classes and requiring presentations of all thesis results.	March, 2003
Management Engineering	Yes (7)	The outcomes are available in the CMC catalog and on the department website.	Use of an oral exit examination. Use of a laboratory skills examination.	Exams proctored by EE faculty and results discussed among program faculty.	No programmatic changes recommended at this time.	Joint Science Department Review, November, 2006

CATEGORY	Have formal student learning outcomes been developed?	Where are these learning outcomes published?	Other than GPA, what data/evidence is used to determine that graduates have achieved stated outcomes for the degree?	Who interprets the evidence? What is the process?	How are the findings used?	Date of program review for this degree program.
Mathematics	Yes (4)	The outcomes are available in the CMC Catalog.	Use of a rubric to evaluate senior theses. Use of embedded Assessment Quizzes to test for prerequisite knowledge, and evaluation of writing projects.	The theses are measured against a rubric by program faculty. Assessment quizzes are issued in all upper division classes by program faculty. Results are compiled and discussed by the department.	The department is considering a change in the order of courses in the major. In AY 2011-12, it will require at least one major writing assignment in all courses and will issue a comprehensive examination to all senior majors.	August, 2008
Middle East Studies	Yes (4)	The outcomes are available in the CMC Catalog.	Use of a rubric to evaluate senior theses.	The theses are measured against a rubric by program faculty. Results are compiled/discussed by the department.	No programmatic changes recommended at this time.	Will be reviewed for the first time w/ Modern Languages Dept in Nov. 2011
Modern Languages	Yes (6)	The outcomes are available in the CMC Catalog.	Use of a rubric to evaluate senior theses. Use of rubric to assess oral presentations.	The theses and oral presentations are measured against a rubric by program faculty. Results are compiled and discussed by the department.	Spanish: more emphasis will be placed on using target language sources in lower level courses. Upper level courses will add mini workshops on use of targeted language sources. French: more emphasis will be placed on developing oral and writing skills.	Scheduled November, 2011 (Last review was March, 2003.)
Molecular Biology	Yes (3)	The outcomes are available in the CMC catalog and on the department website.	Use of a rubric to assess senior theses, Use of a rubric to evaluate poster presentations.	Theses and posters are evaluated annually by Keck Science Center faculty and discussed as a department.	No programmatic changes recommended at this time.	Joint Science Department Review, November, 2006

CATEGORY	Have formal student learning outcomes been developed?	Where are these learning outcomes published?	Other than GPA, what data/evidence is used to determine that graduates have achieved stated outcomes for the degree?	Who interprets the evidence? What is the process?	How are the findings used?	Date of program review for this degree program.
Organismal Biology	Yes (5)	The outcomes are available in the CMC catalog and on the department website.	Use of a rubric to assess senior theses, Use of a rubric to evaluate poster presentations.	Theses and posters are evaluated annually by Keck Science Center faculty and discussed as a department.	No programmatic changes recommended at this time.	Joint Science Department Review, November, 2006
Philosophy and Philosophy and Public Affairs	Yes (4)	The outcomes are available in the CMC Catalog.	Use of a rubric to evaluate senior capstone papers for all majors.	The capstone papers are evaluated against a rubric by program faculty and are discussed as a department.	The department will adjust the curriculum to develop a stronger familiarity with historical philosophers. It will reevaluate its capstone project rubric.	Scheduled April, 2012. (Was last reviewed as part of Philosophy and Religious Studies department)
Philosophy, Politics and Economics	Yes (5)	The outcomes are available in the CMC Catalog.	Use of a comprehensive exam given to all senior majors. Indirect self-assessments of majors.	Exams proctored by PPE faculty and results discussed among program faculty.	No programmatic changes recommended at this time.	April, 2011
Physics	Yes (12)	The outcomes are available in the CMC catalog and on the department website.	Use of a rubric to assess senior theses, Use of a rubric to evaluate poster presentations.	Theses and posters are evaluated annually by Keck Science Center faculty and discussed as a department.	No programmatic changes recommended at this time.	Joint Science Department Review, November, 2006
Psychology	Yes (8)	The outcomes are available in the CMC Catalog.	Use of the Halpern Critical Thinking Assessment. Use of multiple choice examination for senior majors. Use of survey information from graduating seniors.	The exams are proctored by program faculty. Results are compiled and discussed as a department.	No programmatic changes recommended at this time.	April, 2009

CATEGORY	Have formal student learning outcomes been developed?	Where are these learning outcomes published?	Other than GPA, what data/evidence is used to determine that graduates have achieved stated outcomes for the degree?	Who interprets the evidence? What is the process?	How are the findings used?	Date of program review for this degree program.
Religious Studies	Yes (6)	The outcomes are available in the CMC Catalog.	Use of a rubric to assess senior theses.	The theses are measured against a rubric by a subcommittee of program faculty. Results are compiled and discussed by the department.	In AY 2011-12, there will be significant changes in the thesis requirement for senior majors. Additionally, all faculty will be asked to include the SLOs in their class syllabi and to identify which ones are addressed by the course.	May, 2008
Science and Management	Yes (3)	The outcomes are available in the CMC catalog and on the department website.	Use of a rubric to assess senior theses, Use of a rubric to evaluate poster presentations.	Theses and posters are evaluated annually by Keck Science Center faculty and discussed as a department.	No programmatic changes recommended at this time.	Joint Science Department Review, November, 2006

Inventory of Concurrent Accreditation and Key Performance Indicators Claremont McKenna College, EER 2011

(1) Name of accredited or certificated program	(2) Professional, special, state ¹ , or programmatic accreditation agency for this program	(3) Date of most recent accreditation action by agency	(4) Summary (“bullet points”) of key issues for continuing institutional attention identified in agency action letter or report	(5) One performance indicator accepted by the agency; selected by program	(6) For one indicator, provide 3 years’ trend data. Use link to cell for graph if desired.
Chemistry	ACS	4-2-09	NA	NA	NA

¹ Within the WASC region only

Claremont McKenna College: Assessment of Major Programs' Student Learning Outcomes

American Studies

[Learning Goals: 3](#) Student Learning Outcomes: 4 Graduates in 2011: 2

Assessment Methods: Use of rubric to evaluate senior theses.

Evaluation: first cycle completed May 2011 by American Studies faculty.

Program Changes: None warranted at this time.

American Studies is a multidisciplinary major offered jointly by all five of the undergraduate Claremont Colleges. The major is coordinated by an intercollegiate faculty committee. CMC program faculty adopted four student learning outcomes:

- SLO #1, Students are able to build an argument effectively using a wide range of evidence across the disciplines.
- SLO #2, Students are able to use primary and secondary sources effectively in carrying on research in American Studies.
- SLO #3, Students are able to demonstrate awareness of methodological issues.
- SLO #4, Students are able to demonstrate effective and appropriate writing skills in communicating the histories and cultures of the United States.

CMC program faculty determined to assess all four of the SLOs in this year's cycle of assessment by means of a rubric to evaluate the senior theses. The number of CMC graduates is not large, averaging slightly more than one student per year. Nevertheless the CMC faculty developed a plan to review the senior thesis as the means of assessing student learning in the major. This spring there was one senior thesis in American Studies. A review of the thesis indicated a good knowledge of secondary literature, effective historical context, and clear and lively writing. However, it failed to use proper footnotes, was too reliant on secondary sources, and did not articulate an original argument. The overall average score on the four SLOs was 2.3 on a four point scale. The overall rating was "competent." The scores on each SLO were as follows: #1 = 1.8, #2 = 2.1, #3 = 2.5 and #4 = 2.8. Given the fact that there was only a single graduate in the major, the faculty decided that it would be premature to consider changes in the program based on the evaluation process at this time. "Rather, this thesis suggests the need to continue monitoring and evaluating American Studies theses in future years."

Asian Studies

[Learning Goals: 2](#) Student Learning Outcomes: 4 Graduates in 2011: 1

Assessment Methods: Use of [rubric](#) to evaluate senior theses / Use of language testing

Evaluation: first cycle completed May 2011 by Asian Studies faculty.

Program Changes: None warranted at this time.

Asian Studies is a multidisciplinary major offered jointly by the undergraduate colleges. The number of CMC graduates is small, averaging 1.2 per year over the last five years. The program faculty chose four student learning outcomes.

- SLO #1, Students will demonstrate an understanding of Asian culture, society, and polity.

- SLO #2, Students will have proficiency in an Asian language at an intermediate level or above.
- SLO #3, Students will demonstrate academic knowledge of an Asian culture and spans more than one disciplinary perspective.
- SLO #4, Students will demonstrate the ability to carry out a self-designed research program grounded in academic literature as evidenced by a senior thesis.

The faculty decided to use two means of assessment: the evaluation of the senior theses by means of a [rubric](#) and the use of a survey of seniors and of alumni. The [survey](#) asks questions specifically relating to the graduates' knowledge of an Asian language (SLO #2). Surveys were issued to the six most recent graduates from the past several years. Four graduates have not yet returned the survey. Results from the first respondent indicate that the Chinese language preparation permitted the alumnus to score at the Advanced High rating on the American Council on the Teaching of Foreign Languages test. The alumnus considers himself to be professionally functional in Mandarin. (He works in China.) He scored the major at 4.5 on a five point scale in terms of meeting its student learning outcomes overall. The second graduate passed the Foreign Service Language Examination in Chinese. He rated the major program at 4.75 in meeting its student learning outcomes.

Based on the results of these two students' language proficiency, the program is more than adequately meeting its goals with respect to SLO #2. In general, they judged the program to more than adequately meeting its learning goals.

Two senior theses, one each from 2010 and 2011, were also read. The faculty indicated one thesis was rated "Excellent" and the other was rated "Competent." Thus, with respect to SLO #4, the combined score of the theses was 2.8 on a four point scale, or "Competent Plus." SLO #3 was scored at 3.0, or "Very Good."

Due to the small number of majors, the program faculty will await further assessment results before considering any changes in the program; currently, they believe students are meeting their student learning outcomes at an acceptable level.

Classical Studies

[Learning Goals: 3](#)

Student Learning Outcomes: 3

Graduates in 2011: 2

Assessment Methods: Use of [rubric](#) to evaluate the senior thesis.

Evaluation: First Cycle completed May 2011 by Classical Studies faculty.

Program Changes: None warranted at this time.

The Classical Studies program is a joint interdisciplinary program of CMC, Pitzer, Pomona, and Scripps. It provides coursework in literature, languages, history, philosophy, religious studies, and government. Students must complete four courses in classical Greek or Latin. The number of CMC majors is small. In 2010, there were no graduates in the program. There were two graduates in 2011, but only one wrote a thesis in Classical Studies.

The program faculty has adopted the following student learning outcomes:

- SLO #1, Students will demonstrate language proficiency at the intermediate level.
- SLO #2, Students will demonstrate knowledge of historical/cultural contexts including the ability to reproduce in broad outline the main periods of classical history, along with significant events from each period.

- SLO #3, Students will demonstrate the availability to carry out a research project based on close study of classical and other materials that utilize research methods and resources from the field.

This year, one student wrote a thesis in the major permitting an assessment of student learning using a rubric that was developed by program faculty. The rubric used a four point scale and assessed seven areas. The overall score was 3.57. This is considered an overall performance at the “distinguished achievement” level. With respect to SLOs #1 and #2, the student performed at the distinguished achievement level. SLO #3 was at the “good job” level (3 points on the 4 point scale). This assessment was performed on May 20, 2011.

The faculty believes this performance demonstrates that fully appropriate student learning is being achieved. On this basis faculty do not plan on alterations in the curriculum. However, given the small sample it is difficult to make broad generalizations about the program.

Economics

[Learning Goals: 3](#)

Student Learning Outcomes: 3

Graduates in 2011: 80

Assessment Methods: Use of a faculty developed [rubric](#) to assess senior theses.

Evaluation: First cycle completed spring 2010. Second Cycle completed spring 2011 by Robert Day School faculty.

Program Changes: The department is establishing a committee to review means of strengthening students’ quantitative reasoning skills in Econometrics and Statistics.

The basic goal of the undergraduate economics is to emphasize *understanding economic behavior and institutions, and the development of specific analytical, quantitative, and communication skills*. The Economics major is offered through [Robert Day School of Economics and Finance](#) (RDS). The RDS is the largest department in the College with over 400 undergraduate students declaring one of their majors in the school. Economics had 86 graduates in 2010, and 80 in 2011, the largest major. The RDS also offers a major in Economics- Accounting; offers the Financial Economics Sequence to those who wish to specialize in such a sub-field emphasizing modern finance as a tool for those looking for a greater understanding of finance, accounting, economics and policy; and supports the Economics, Environment, and Politics; Management-Engineering; and Politics, Philosophy, and Economics majors. The academic program offered by the department is central to the mission of the College with its emphasis on economics, government, and public affairs.

During 2009, the faculty agreed on three student learning outcomes for [Economics and Economics-Accounting](#) majors.

- SLO #1, Students will demonstrate a comprehensive knowledge and understanding of economic theory. This will include micro and macro economic theories.
- SLO #2, Students will be able to demonstrate comprehensive knowledge and understanding of issues related to quantitative analysis. This will include statistical inference using probability theory, regression and/or data analysis.
- SLO #3, Students will demonstrate skillful analytical and communication skills.

The faculty has chosen to use the senior thesis as the principle form of assessment, although they have plans to add the use of imbedded questions in examinations next year for additional assessment purposes. The Faculty met periodically during 2010 and 2011 to assess student learning on the basis of the evaluation of senior thesis. The faculty used three rubrics to assess the student learning outcomes. The rubrics were based on a four point scale and were derived from the [VALUE rubrics](#) developed by the American Association of

Thesis Evaluation for Economics Majors

Term	# of Theses Evaluated	Theory Literacy (SLO #1)	Quantitative Analysis (SLO #2)	Analytical/ Communication Skills (SLO #3)
FA 09	5	3	2.65	3.07
SP 10	15	3.28	3.02	3.32
AY 09-10	20	3.14	2.83	3.19
FA 10	17	3	2.62	3
SP 11	20	3.45	3.04	3.17
AY 10-11	37	3.22	2.83	3.09

Colleges and Universities. One rubric dealt with economic theory. A second related to quantitative analysis, and a third with analytic and communication skills.

The faculty read 57 senior theses in AYs 2009-11 for assessment purposes. The overall result of the assessment

was a rating of 3.05 on a 4 point scale. This is a "Milestone" rating which is quite good. In terms of SLO #1, the average rating was 3.18, Milestone. SLO #2 was 2.83, Milestone, and SLO #3 was 3.14, Milestone.

Led by the Dean of the Robert Day School, members of the RDS faculty participated in a virtual forum to discuss the results of the assessment. Two interesting trends were noted. First, results from spring theses are stronger than those from fall theses. Second, students scored lowest in quantitative analysis.

The faculty plans to increase the modes of assessment by incorporating embedded questions in the Economics 50 curriculum. Econ 50 is the introductory course and will help in determining a baseline of student learning in economics. The Dean of RDS will establish a subcommittee in AY 2011-12 to consider curricular modifications in its statistics and econometrics courses that may bolster students' quantitative reasoning skills.

Economics-Accounting

[Learning Goals: 3](#)

Student Learning Outcomes: 3

Graduates in 2011: 22

Assessment Methods: Use of a [rubric](#) to assess senior theses.

Evaluation: First Cycle completed spring 2011 by Economics-Accounting faculty.

Program Changes: None warranted at this time.

In addition to the Economics major, the Robert Day School offers a major in Economics-Accounting. The program graduates about 20 students per year. The Economics-Accounting major is a unique opportunity to learn accounting within a liberal arts setting. The basic goal of the Economics-Accounting Major is to emphasize *analytical, communication, and interpersonal skills in fields specializing in and including consulting and financial advisory services*. In keeping with the broader aims of a liberal arts education, our students are encouraged to combine study in Economics-Accounting with other areas of study for a dual or double major while still offering the breadth of courses necessary to prepare students with the technical skills to sit for the CPA exam.

The Economics and Economics-Accounting program have adopted common learning goals and student learning outcomes. The same rubrics are used by both majors and the assessment and evaluation results described above in economics applies to Economics-Accounting as well.

Film Studies

[Learning Goals: 5](#)

Student Learning Outcomes: 8

Graduates in 2011: 6

Assessment Methods: Use of a rubric to assess senior theses.

Evaluation: First cycle completed spring 2011 by Literature and Film Studies faculty.

Program Changes: A new course in will be offered next year to improve students' knowledge of film history. A workshop for students will be held during their junior year to enhance research skills and to discuss program curricula and goals with students. A committee for program review will meet next year.

Film Studies is only offered as a dual major in concert with another academic discipline. Thus, it is not a standalone major unlike most CMC majors. It is part of an interdisciplinary, intercollegiate program. It emphasizes the history, theory, and critical assessment of film and examines its impact on and reflection of contemporary society and culture. CMC Film faculty adopted five programmatic learning goals. Additionally, the faculty selected eight student learning outcomes for Film Studies dual majors.

- SLO #1, Students will demonstrate mastery of the basic conceptual vocabulary used in the study of film—i.e., the ability to define and use terms appropriate to cinematic genres and techniques, critical and theoretical approaches to film.
- SLO #2, Students will demonstrate a clear understanding of the history of international film and some of the major filmmakers and works in each period.
- SLO #3, Students will be able to demonstrate the ability to analyze a film in terms of its formal dimensions, including editing, composition, imagery, tone and other stylistic features.
- SLO #4, Students will be able to demonstrate the ability to analyze a film narrative in terms of its plot, characters, ethical concerns, themes, and structure.
- SLO #5, Students will be able to demonstrate the ability to write clear and cogent prose.
- SLO #6, Students will be able to demonstrate familiarity with various forms of research, including use of the library, the Internet, and databases.
- SLO #7, Students will be able to demonstrate the ability to give a considered and coherent rationale for the study of film and its place within the humanities.
- SLO #8, Students will achieve media literacy via the study of film and its place within larger cultural frameworks.

Consideration of the program's success in achieving these outcomes took place this year in tandem with the Literature department's review. The department produced guidelines for capstone projects/senior theses within the major. Film faculty reviewed five of the ten senior theses from AYs 2008-11 to see how well students met these goals. Subsequently, the department faculty participated in discussions of the results and adapted the Literature Department guidelines to the Film Studies program for both critical studies and creative projects. On the basis of the review, faculty concluded that three of the "outcomes" are not dependably met in representative senior theses – specifically, SLOs #2, #7, and #8. In order to address these issues, the Program will undertake the following steps:

1. To address SLO #2, the Film Studies dual major will be revised to include a requirement in Film History in AY 2011-12. This requirement will be added to the introductory courses in film studies and video production. The major will then consist of three requirements and three electives.
2. To address SLO #7 and #8, the program director, in consultation with the Literature Department coordinator for senior theses, will hold a meeting required of all juniors in both the Film Studies dual and Intercollegiate Media Studies (IMS) majors in their spring semester to clarify expectations, to discuss students' individual curricula in relation to the goals of the programs more generally, and to review research procedures specific to the field.

Film Studies is a program with one foot in the Literature Department, as it were, and one in the [Intercollegiate Media Studies \(IMS\) program](#). The latter program will be undergoing a self-study and subsequent external review over the next two years. This will include an alumni survey, to be conducted beginning in fall 2011, of all CMC Film Studies and IMS graduates over the past ten years. That material will be used for further review of the program's success in achieving "outcomes." The results will be examined by CMC's Film Studies program committee (currently consisting of Professors Bilger, Espinosa, Morrison, Vega-Duran, and Velazco). In

addition, a more formally constituted version of this committee will meet once a year beginning early in February 2012 to review recent work in the program (whether in the form of senior theses or portfolios of student work) and to assess its success in achieving the stated goals.

Government

[Learning Goals: 3](#)

Student Learning Outcomes: 5

Graduates in 2011: 54

Assessment Methods: Use of [rubric](#) to evaluate senior theses and oral examinations.

Evaluation: Completed First cycle in May 2010. Completed second cycle in May 2011 by Government faculty.

Program Changes: None warranted at this time.

Government is one of the two largest departments in the College. The faculty chose five student learning outcomes:

- SLO #1, Students will demonstrate an understanding of the ability to apply the literature and methods of ancient, modern, and contemporary students of politics and government to these issues [the great issues of politics] be those issues domestic or international.
- SLO #2, Students will be able to substantiate their arguments soberly and logically.
- SLO #3, Students will be able to inform their arguments with philosophic, theoretic, and constitutional principles and with in-depth knowledge of relevant political institutions and public policies.
- SLO #4, Students will be able to employ quantitative and qualitative evidence where appropriate.
- SLO #5, Students will be able to express themselves effectively orally and in writing.

The faculty developed a rubric to evaluate the senior theses and have used it to conduct an evaluation of senior theses in the spring of 2010 and 2011. In the assessment conducted in spring 2010 by 16 members of the department, students scored 2.79 on a 3 point scale on SLO #1; 2.6 on SLO #2; 2.64 on SLO #3; 2.6 on SLO #4; and 2.6 on the written part of SLO #5. On the oral part of SLO #5 the students scored 2.73. Combined, 71% of the 21 students evaluated scored 3.0 overall. 25% of the students scored between 2.0 and 2.9. A single student scored between 1.0 and 1.9. Overall, the department determined that students performed very well.

The Committee charged with reviewing the results of the assessment in October 2010, concluded, "Our students were particularly good at demonstrating knowledge of the relevant literatures and their political controversies under consideration. They were not quite as good at grasping deeper philosophical and theoretical principle, though perhaps this should be expected given the relative difficulty of the task. Likewise, a substantial minority of students did not excel at employing the appropriate evidence. And somewhat surprisingly our students' greatest weakness was the sobriety of their analysis, perhaps because many students have a tendency to over state the strength of their case. They were also better at expressing themselves orally than in writing, though this finding is probably due to selection bias since only the honors students actually present [orally] their theses."

According to the department's assessment schedule, an analysis of the spring 2011 results will take place in fall 2011. At this point, the department is not recommending any substantial systemic changes to its program or curriculum, but the faculty will pay particular attention to any trends that become evident in their analysis of the second assessment cycle.

The government department underwent a programmatic external review in spring 2011 and in its [self-study](#), included an [appendix](#) detailing its assessment procedures, rubrics and results. The department will also consider the recommendations of the review team as it resumes regular meetings in the fall.

History

[Learning Goals: 3](#) Student Learning Outcomes: 6 Graduates in 2011: 18

Assessment Methods: Use of a [rubric](#) to assess senior theses and alumni surveys.

Evaluation: Completed first cycle in spring 2010; second cycle completed in summer 2011 by History faculty.

Program Changes: Development of an assessment survey for all senior majors; refinement of the Junior Seminar and development of an assessment protocol for that seminar; expanded curricular offerings in Latin America and nineteenth century American history.

Apart from the intrinsic value of stretching the imagination and satisfying curiosity about ourselves, the study of History builds skills and knowledge that are indispensable for any career; critical awareness of alternatives and the consequences of choice. Students study American, European, and non-Western history and take at least one course in history prior to 1700. The faculty has adopted six student learning outcomes, Students will:

- SLO #1, Demonstrate a basic understanding of our nation and the world, the ideologies, values, and political, economic, and environmental forces that have shaped the past and the present.
- SLO #2, Demonstrate intellectual breadth through knowledge of the histories of American, Western, and non-Western societies in different time periods.
- SLO #3, Demonstrate an understanding of historical time and sequence, cause and effect, and will be able to place events in an historical context.
- SLO #4, Demonstrate the ability to read sources and identify basic themes, and understand the past as it was experienced by those who lived them.
- SLO #5, Differentiate between primary and secondary sources. They can understand biases in primary sources, where and how the ideas originated, and how they evolve.
- SLO #6, Demonstrate research capabilities in history that allow them to frame a proper research topic, locate and utilize primary and secondary sources, and construct a coherent argument or thesis.

In October 2008, the members of the Department met to discuss the recommendations of the History assessment committee. At the meeting, the faculty decided to develop a rubric to assess the senior theses as a primary means of assessment, to develop an assessment survey of all graduating seniors in the department, and to develop a means of assessing the junior seminars once they are put in place. History faculty read ten senior theses in spring 2010 and nine senior theses in spring 2011. Each item in the senior thesis rubric was constructed to identify five critical aspects of student learning within each item. In most cases, the aspects of learning build upon one another, demonstrating cumulative knowledge. Three of the aspects load heavily on SLO #5 and SLO #6. Each item was graded on a four point scale.

For the criteria, "Builds an argument effectively," (SLO #6) students scored an average of 3.22 in 2010 and 3.66 in 2011. For the criteria, "Used primary sources effectively," (SLO #5) students scored 3.11 in 2010 and 3.5 in 2011. Similarly, for "Used secondary sources effectively," (SLO #5) students scored 3.22 in 2010 and 3.4 in 2011. In every case, students averaged between "very good" and "excellent" on the four point scale.

In addition, the faculty reviewed alumni survey results from graduates in 1990- 2005. Fifty-two surveys were returned. Each alum was asked to answer a series of questions relating to their experience as a history major at CMC and about their experiences since graduation. Of the 52 respondents, 67.3% had gone on to graduate school (34.3%, law; 20% education, 17.1% business, 28.6% other.) Alumni were asked whether history contributed to their understanding of the world (SLO #1). They responded with an average rating of 3.83 on the four point scale. Similarly, when asked whether history contributed to their intellectual growth (SLO #2),

alums were very positive, averaging 3.72. The respondents were also invited to include written comments. The following are examples of some that speak directly to the department's student learning outcomes:

"I feel that compared to my work peers, I have a better understanding of the world and am less one dimensional." (SLO #1)

"[History contributed to my] analytical skills and global perspective." (SLO #1)

"Studying history at CMC gave me a more worldly perspective...It caused me to be more analytical and vastly improved my writing. (SLO #1)

"Without a doubt, the intellectual curiosity I developed as a history major has helped in building my legal career." (SLO #2)

"My CMC history experience was profoundly formative in my intellectual growth and life path." (SLO #2)

"I think studying history has given me a solid skill set in research and analysis skills." (SLO #3)

"History helped me to look for root causes, patterns and context in my professional work." (SLO #3)

"[History] has caused me to look for longer term patterns and prior events that may indicate future events." (SLO #3)

"My understanding of America's role in the world, the continuity of themes over time, and my ability to view things in historical perspective all make me a more informed citizen and better human being." (SLO #4)

"On a practical note, the extensive writing and continuous deadlines were FABULOUS preparation for grad school. I felt much more prepared than most of my grad school friends and the grad school work load was no more intense than the CMC experience." (SLO #4)

"[My] knowledge of cultures, historical facts, ability to synthesize large amounts of information effectively and a strong ability to research have all been personal assets." (SLO #5, #6)

"History has taught me to ask questions and to find answers from various sources, thus stimulating my continued intellectual development on a daily basis." (SLO #5, #6)

A subcommittee of the history department faculty met to discuss the results of both the theses evaluation and the alumni survey. The faculty is generally satisfied that the department is meeting its learning goals. Students have learned how to pose questions, select topics for which there is evidence, and utilize primary sources. Faculty found the writing to be quite good in many cases, although they would like to see a bit more consistency and strong theses from *all* history majors. The department partially credits the Junior Seminar, which covers methodology and historiography for the recent (modest) improvement in theses quality. In the future, the faculty hopes to develop an assessment survey of all graduating seniors in the department. They will also continue to refine the structure and content of the Junior Seminar and will develop a means of assessing the seminar's effectiveness to direct those refinements. The department will develop additional means by which history majors can share their thesis research with one another.

In addition to strong direct evidence, the department notes that its teaching evaluations from the students are above the college average. Moreover, the number of faculty has more than doubled since 2000, thereby enhancing the richness and breadth of its curriculum. The department will continue to expand its curricular offerings in Latin America and nineteenth century American history in the near term and to Africa, the Middle East and other areas in the longer term. Faculty will also explore ways in which the Freshman Humanities Seminar can contribute to the major.

Finally, The CMC History Department plans to complete the separation from Scripps College and the joint program in History. That arrangement existed when both colleges had small history departments: Scripps had no modern historians and CMC no pre-modern historians. But the CMC History Department has now grown to a size where it can be self-sufficient within the consortium. Colleagues at Scripps are in agreement about this move. CMC faculty consulted with the Registrar (Elizabeth Morgan), who believes this is a sensible move. In the coming year, the department will look to the Dean of the Faculty to take the matter to the Board of Trustees for final approval.

International Relations

[Learning Goals: 2](#)

Student Learning Outcomes: 3

Graduates in 2011: 28

Assessment Methods: Use of a [rubric](#) to assess senior theses.

Evaluation: First cycle completed May 2011 by International Relations faculty.

Program Changes: None warranted at this time.

International Relations is an interdisciplinary major that combines courses in government and economics. Students must also choose a geographic or thematic focus for their studies. Study abroad and advanced language study are required of all majors. The program is based in the government department. In September 2008, work began on developing program goals and student learning outcomes. The faculty met on several occasions and agreed upon two learning goals and three student learning outcomes during 2010-11.

The IR faculty adopted three student learning outcomes.

- SLO #1, Students will be able to demonstrate thorough knowledge of major international and comparative theories.
- SLO #2, Students will be able to develop a hypothesis from one or more of these theories, and be able to substantiate their arguments with logic, normative insights, and quantitative evidence when appropriate.
- SLO #3, Students will be able to express themselves effectively in writing.

To assure consistency and objectivity, faculty evaluated ten senior theses in May 2011 using a rubric to determine students' levels of understanding and mastery of theories of international relations and comparative politics as well as communication skills. The faculty used a three point scale with 3 equaling Outstanding, 2 equaling Satisfactory, and 1 equaling Unsatisfactory. The results of the assessment on SLO #1 reflected average student scores of 2.15 or Satisfactory. On SLO #2, students scored at 2.6 or close to Outstanding. On SLO #3, the student average was 2.4. No students performed at the Unsatisfactory level in any of the three areas. The program faculty met to discuss student progress and determine what measures need to be taken to improve competence. The faculty agreed to monitor senior theses again next year using the same learning objectives. They note, "This is the first round, the numbers are relatively small, and it's not clear that we have identified deep-seated trends. Individually, we are going to take action in each of the areas identified as we see the need. The benefit of the survey in this regard was to alert us to possible weaknesses."

Joint Science

The [W.M. Keck Science Department](#) serves as the science department for Claremont McKenna (CMC), Pitzer, and Scripps Colleges, and it is administered cooperatively. Of the 134 majors the Department graduated in 2011, 31 were CMC students. Students from the three sponsor colleges take their science courses together and fulfill the same requirements for their science majors. The department offers 12 majors to CMC students

described below. The Keck Science Department has undergone two formal external reviews in the last 10 years, both focused primarily on space-planning.

In academic year 2008–09, Keck Science set out to “assess student progress toward departmental goals” through the implementation of a pilot project that examined formative and summative data in the general chemistry and natural science (non-majors) courses offered in the department. At the start of academic year 2009–10, Keck Science faculty began to develop a sustainable assessment plan for all of its majors. This plan was developed through discussions held during 2009-10.

The department took a circuitous route to establishing SLOs, beginning at the course level, moving to major-specific SLOs, and only then establishing department-wide SLOs, which pertain to every major offered by Keck Science. Many of the courses taught (including all the introductory ones) can count towards more than one major. Because of this and the complexities of the joint three college program, discussions about establishing department-wide SLOs commenced quite late in the game. Nonetheless, since all scientific inquiry is built upon a (relatively) common foundation, once the idea was proposed, it was embraced and the following department-wide SLOs (DW-SLOs) were adopted by Keck Science faculty in November of 2010.

- DW-SLO #1, Use foundational principles to analyze problems in nature.
- DW-SLO #2, Develop hypotheses and test them using quantitative techniques
- DW-SLO #3, Articulate the role of science in the modern world
- DW-SLO #4, Effectively communicate scientific concepts both: a. verbally and b. in writing.

The sequence of events described above has not surprisingly led to some inefficiency in our current assessment practices—for example, overlaps exist between the department-wide and some of the major-specific SLOs. Therefore, in fall 2011 all of the major-specific SLOs will be reviewed, and the overlaps will be eliminated. Following the lead of the CMC Assessment Committee, the department is using the senior thesis as the basic instrument for assessing student learning; in addition, the poster each student writing a thesis must present is evaluated. When overlaps were present between the department-wide student learning outcomes and the previously established major-specific outcomes, the thesis rubric for that major was written to capture distinctive aspects of the major-specific SLOs. The [departmental poster-evaluation rubric](#) was also created before the adoption of major-specific SLOs and is thus identical for all majors. It directly assesses department-wide SLOs #1 and #4.

Major Program Assessment

In 2010–11, 31 CMC students wrote theses in the Keck Science Department CMC majors, and these theses were assessed in June 2011 by program faculty using the appropriate major-specific rubric. The Keck Science majors for these students were as follows: 17 in Biology; 4 in Neuroscience; 3 in Chemistry; 2 each in Molecular Biology and Physics; and one each in Environment, Economics and Politics, Environmental Science, and Science and Management. No CMC students majored in Biochemistry or Organismal Biology in 2010–11.

All SLOs were scored on a 4 point scale (4 = “Superior”; 3 = “Good”; 2 = “Fair”; and 1 = “Poor”), with the exception of department-wide SLO #3 (“Articulates applications of science in the modern world”), which was graded “Yes,” “No,” or “Somewhat,” and Physics MS-SLO #8, which was graded “Yes,” “No,” or “Not enough information to judge.” All responses of “Not Applicable” (often written in by hand by an evaluator) are not included in the averages reported.

The results of these evaluations are presented by major in alphabetical order below. Following this analysis by major, some of the results will also be discussed in a department-wide context.

Note that students in the department’s two 3-2 engineering programs—Economics and Engineering and Management Engineering—do not write a senior thesis (since they leave CMC after their junior year to enroll

at the engineering-degree-awarding institution). The SLOs for these students were thus assessed using the alternative methods described for these two majors in the list below.

The major-specific thesis rubrics are augmented with an assessment of the poster presentation by each thesis student. The results of this analysis are presented in the department-wide discussion below.

It is important to note that for many majors within Keck Science, SLOs have been established for which evaluation of the senior thesis is not an appropriate assessment tool. In the sections below, every SLO is presented for each major and then those that were evaluated using the thesis are indicated. In future years, assessment vehicles for the other major-specific SLOs will be developed.

Biochemistry

[Student Learning Outcomes: 7](#) (in addition to the 4 department-wide SLOs). Graduates in 2011: 0

Assessment Methods: Use of [rubrics](#) to evaluate senior thesis and poster presentation.

Evaluation: First cycle completed June 2011 by Biochemistry faculty.

Major-Specific Program Changes: None warranted at this time pending future assessments.

Biochemistry is a combined major at the interface of biology and chemistry that partially overlaps the requirements for those two individual majors. It is particularly appropriate for those going on to graduate work in biochemistry or molecular biology. It also provides a strong background for those entering medical, dental, and veterinary schools. No CMC students majored in Biochemistry in the academic year 2010–2011.

In addition to the four department-wide SLOs (DW-SLOs), the Biochemistry faculty adopted seven major-specific SLOs (MS-SLOs):

Graduates in Biochemistry will:

- MS-SLO #1, Be able to apply knowledge of chemistry and biology to solve biochemical problems.
- MS-SLO #2, Possess a breadth of knowledge in organic, physical, and bio-chemistry, as well as genetics, molecular biology and cellular biology.
- MS-SLO #3, Be able to identify, formulate and solve complex biochemical problems.
- MS-SLO #4, Read and understand original research.
- MS-SLO #5, Be able to design and conduct experiments.
- MS-SLO #6, Have a mastery of techniques and skills.
- MS-SLO #7, Be able to communicate results and findings.

There were no biochemistry majors in 2011.

Biology

[Student Learning Outcomes: 5](#) (in addition to the 4 department-wide SLOs). Graduates in 2011: 17

Assessment Methods: Use of [rubrics](#) to evaluate senior thesis and poster presentation.

Evaluation: First cycle completed June 2011 by Biology faculty.

Major-Specific Program Changes: None warranted at this time pending future assessments.

The Biology discipline of the Keck Science Department aims to provide students with skills and knowledge to prepare them as citizens to effectively engage and evaluate biological science issues and innovations in the wider world, and to prepare them as leaders in research, biotechnology, and health-related career fields. To augment their study of biology, majors are also required to take four semesters of chemistry (through organic) and two semesters of physics.

In addition to the four department-wide SLOs (DW-SLOs), the Biology faculty adopted five major-specific SLOs (MS-SLOs):

- MS-SLO #1, Understanding of foundational scientific principles and findings in a student’s major field.
- MS-SLO #2, Ability to transfer knowledge of foundational principles between different disciplines.
- MS-SLO #3, Ability to clearly communicate scientific principles: a. orally and b. in writing.
- MS-SLO #4, Critical, analytical, scientific thinking skills:
 - a. develop scientific questions and methods for answering them;
 - b. read/understand original research;
 - c. quantitative approaches to data analysis, presentation, and modeling; application of quantitative/analytical tools.
- MS-SLO #5, Understanding of how science relates to current problems in the modern world.

In an assessment conducted in June 2011 by 11 members of the Keck Science Department, the 17 Biology majors scored an average of 3.5 on MS-SLO #1 (overlaps with DW-SLO #1); of 3.3 on DW-SLO #2; of 3.2 on each of three measures of MS-SLO# 3b (overlaps with DW-SLO #4b); and of 3.5 on MS-SLO #4b. For DW-SLO #3, “Yes” was checked for 12 students, “No” for three, and “Somewhat” for two. Of the 17 Biology majors 16 scored either “Superior” or “Good” on MS-SLO #1 and all 17 scored “Superior” or “Good” on MS-SLO #4b, indicative of good achievement overall. The scores were somewhat lower for DW-SLO #2, with only 12 of the 17 Biology majors scoring either “Superior” or “Good.” In the fall, the Biology discipline will carefully review the five theses that scored lower on DW-SLO #2 to see whether any pattern can be discerned.

The results for the Biology majors from the assessment of department-wide SLO #4 will be discussed in a departmental context following this listing of major-specific results.

Chemistry

[Student Learning Outcomes: 4](#) (in addition to the 4 department-wide SLOs). Graduates in 2011: 3

Assessment Methods: Use of [rubrics](#) to evaluate senior thesis and poster presentation.

Evaluation: first cycle completed June 2011 by Chemistry faculty.

Major-Specific Program Changes: None warranted at this time pending future assessments.

The student of Chemistry examines, describes, and explores the composition, structure, and properties of substances and the changes they undergo. This curriculum provides a firm foundation in the principles of chemistry as well as sufficient experience to prepare the student for basic research, secondary school teaching, the pursuit of a career in medicine, or graduate study in the field. The Keck Science chemistry major is accredited by the American Chemical Society (ACS).

In addition to the four department-wide SLOs (DW-SLOs), the Chemistry faculty adopted four major-specific SLOs (MS-SLOs):

Graduates in Chemistry will:

- MS-SLO #1, Be able to apply knowledge of chemistry, physics and math to solve chemical problems.
- MS-SLO #2, Possess a breadth of knowledge in analytical, physical, organic, analytical, inorganic and bio-chemistry.
- MS-SLO #3, Be able to identify, formulate and solve complex problems.
- MS-SLO #4, Have a mastery of techniques and skills, used by chemists.

In an assessment conducted in June 2011 by two members of the Keck Science Department, the three Chemistry majors scored an average of 4.0 on MS-SLO #1 (overlaps with DW-SLO #1); of 3.7 on DW-SLO #2; of 3.3, 3.5, and 3.2 on three measures of DW-SLO #4b; and of 3.0 on MS-SLO #4. For DW-SLO #3, “Yes” was checked for two students and “No” for the third. Overall these are very positive results. Given the small number of CMC students who graduated with a major in Chemistry in 2011, the adoption of major-specific program changes will await the collection of more data in the years ahead.

Economics and Engineering

[Student Learning Outcomes: 8](#) (in addition to the 4 department-wide SLOs). Graduates in 2011: 0

Assessment Methods: Oral exit examination and laboratory examination.

Evaluation: First cycle completed in spring 2011 by Economics-Engineering faculty.

Major-Specific Program Changes: No changes warranted at this time.

The Economics and Engineering major is a dual degree program of Claremont McKenna College (CMC) and Harvey Mudd College (HMC). Students in this five-year program, three at CMC and two at HMC, complete all CMC requirements for a full major in economics, as well as the requirements for a full major in engineering at HMC. Upon completion of all courses, students receive a Bachelor of Arts degree in economics from CMC, and a Bachelor of Science degree in engineering from HMC.

In addition to the four department-wide SLOs (DW-SLOs), the Economics and Engineering faculty adopted eight major-specific SLOs (MS-SLOs):

When confronted with an unfamiliar physical system, our students should be able to:

- MS-SLO #1, Develop a framework for understanding the system by identifying the key physical principles underlying the system.
- MS-SLO #2, Translate the conceptual framework into an appropriate mathematical format.
 - a. If the equations are analytically tractable, carry out the analysis of the problem to completion or
 - b. If equations are not tractable, develop a computer code and/or use standard software to numerically simulate the model system.
- MS-SLO #3, Analyze and assess the reasonableness of the answers obtained.
- MS-SLO #4, Communicate their findings either verbally and/or via written expression.

In a laboratory setting, students should be able to:

- MS-SLO #5, Demonstrate a working familiarity with standard laboratory equipment.
- MS-SLO #6, Identify and appropriately address the sources of error in their experiment.
- MS-SLO #7, Have proficiency with standard methods of data analysis.

An assessment of two juniors’ performance was conducted through a skills-based oral exit exam that tested students’ knowledge of six primary physics and mathematics systems. Results indicated that both students retained basic principles of physics and math courses and were able to conceptualize problems outside of the

classroom setting. A final lab examination (SLOs #5, #7) and graded weekly write-ups (SLOs #5, #6, #7) permitted an evaluation of students' lab skills. Both demonstrated good laboratory skills on the examination.

There were no EE majors in the 2011 graduation cohort. At this time, there does not appear to be a need to implement changes to the EE program.

Environmental Analysis

[Student Learning Outcomes: 6](#) (in addition to the 4 department-wide SLOs). Graduates in 2011: 0

Assessment Methods: Use of [rubrics](#) to evaluate senior thesis and poster presentation.

Evaluation: There were no EA majors in 2011.

Major-Specific Program Changes: None warranted at this time pending future assessments.

The Environmental Analysis program was established in 2010 and replaced the Environmental Science major that had previously been offered at CMC. The EA Program is designed to prepare students for careers in many environmental problem-solving fields, including law, policy, medicine, chemistry, conservation, global climate change, urban planning, and resource management. It also provides a solid background for careers in environmental education and community environmental action. Study abroad is a vital, strongly encouraged part of the EA Program experience, enabling students to secure a deeper appreciation for the global dimensions of our environmental situation. CMC students select a concentration in science or a concentration in policy through the Keck Science Department

In addition to the four department-wide SLOs, the EA faculty adopted six major-specific SLOs (MS-SLOs):

- MS-SLO #1, Understand and describe the complex social, scientific and humanistic aspects of environmental issues.
- MS-SLO #2, Understand and apply both disciplinary and interdisciplinary analysis to environmental issues.
- MS-SLO #3, Critically analyze, evaluate, and interpret scholarly arguments and popular discourse and be able to communicate this analysis to a variety of communities.
- MS-SLO #4, Develop well-reasoned solutions to environmental predicaments, testing them against relevant criteria and standards.
- MS-SLO #5, Be able to craft well-researched, informative and effective scholarly presentations.
- MS-SLO #6, Contribute knowledge and action regarding environmental issues to the public through service learning, internships, community-based-research, and other activities.

Given the fact that the single student who graduated did so in the discontinued Environmental Science major rather than Environmental Analysis, the adoption of major-specific program changes will await the collection of more data in the years ahead.

Environment, Economics, and Politics (EEP)

[Student Learning Outcomes: 1](#) (in addition to the 4 department-wide SLOs). Graduates in 2011: 1

Assessment Methods: Use of [rubrics](#) to evaluate senior thesis and poster presentation.

Evaluation: First cycle completed June 2011 by EEP faculty.

Major-Specific Program Changes: All majors will be required to present a poster and their thesis will be

evaluated by use of the EEP rubric notwithstanding the department to which they are submitted.

Closely associated with the Roberts Environmental Center, the EEP major emphasizes problems and opportunities for the real world of the 21st century. An awareness of the environmental issues has become increasingly important for anyone with a career in business or the professions. The EEP major provides students interested in economics and policy studies with a background in ecological analysis and environmental management. Students take basic courses in biology, chemistry, economics, government and mathematics, together with advanced courses in areas such as environmental law, environment and resource economics, government and the environment, and natural resource management. In their junior or senior year, students participate in a clinic course directed toward a specific environmental project.

In addition to the four department-wide SLOs (DW-SLOs), the EEP faculty have adopted one major-specific SLO (MS-SLO):

- MS-SLO #1, EEP students should achieve an understanding of biology, economics, and government policy similar to, if not quite as extensive as, majors in these disciplines.

In an assessment conducted in June 2011 by one member of the Keck Science Department, the one EEP major scored 4.0 on DW-SLO #1; 4.0 on DW-SLO #2; and 3.0, 4.0, and 3.0 on three measures of DW-SLO #4b. For DW-SLO #3, "Yes" was checked. These are generally very good scores.

Though 16 CMC students in the Class of 2011 majored in EEP, only one (as indicated above) wrote his thesis with a Keck Science faculty advisor—the other 15 had thesis advisors from other departments at the College. These numbers took us by surprise. Moreover, these 15 students did not present a poster in the department, nor were their theses scored against the EEP thesis rubric since they were written in other dual/double major departments. Professor Emil Morhardt, the director of the EEP program, will ensure that beginning next year all EEP majors will present a poster, which will be assessed using the departmental poster rubric, at a Keck Science poster session and that all EEP theses, irrespective of faculty advisor, will be assessed using the EEP thesis rubric.

Management Engineering

[Student Learning Outcomes: 7](#) (in addition to the 4 department-wide SLOs). Graduates in 2011: 1

Assessment Methods: Oral exit examination and laboratory examination.

Evaluation: first cycle completed June 2011 by Management Engineering faculty.

Major-Specific Program Changes: A decision has been made to form a sub-committee to explore a quantitative reasoning requirement in the department beginning next fall.

Management-Engineering is a five-year program, offered in conjunction with other institutions, which allows students to receive both a Bachelor of Arts Degree from CMC and a Bachelor of Science Degree in Engineering from the second institution. The first three years of study are undertaken at CMC, the final two in the engineering program at the partner institution. Although formal programs exist with Columbia University, University of Southern California, and Harvey Mudd College, students can transfer to other engineering programs as well.

In addition to the four department-wide SLOs (DW-SLOs), the Management Engineering faculty adopted seven major-specific SLOs (MS-SLOs):

When confronted with an unfamiliar physical system, our students should be able to:

- MS-SLO #1, Develop a framework for understanding the system by identifying the key physical principles underlying the system.
- MS-SLO #2, Translate the conceptual framework into an appropriate mathematical format.
 - (a) If the equations are analytically tractable, carry out the analysis of the problem to completion;
 - (b) If equations are not tractable, develop a computer code and/or use standard software to numerically simulate the model system.
- MS-SLO #3, Analyze and assess the reasonableness of the answers obtained.
- MS-SLO #4, Communicate their findings either verbally and/or via written expression.

In a laboratory setting, students should be able to:

- MS-SLO #5, Demonstrate a working familiarity with standard laboratory equipment.
- MS-SLO #6, Identify and appropriately address the sources of error in their experiment.
- MS-SLO #7, Have proficiency with standard methods of data analysis.

An assessment of four juniors' performance on an oral exit interview (students were asked to apply skills to solve problems concerning six physical systems) indicated that one student retained basic principles of physics and math courses and was able to conceptualize problems at a high level. Two students took much longer than expected to conceptualize the problems and analyze them, but did complete the task. A final student had problems with the oral format. The ME faculty discussed the results and there was much debate on the need to improve students' quantitative reasoning. While there was little consensus on a quantitative reasoning requirement, a subcommittee has been authorized to review the matter in the fall.

A final lab examination (SLO #5, #7) and graded weekly write-ups (SLO #5, #6, #7) permitted an evaluation of students' lab skills. All four of the students passed the laboratory examination. Scores were distributed between 72 and 97 percent. The faculty does not feel any changes are warranted to the laboratory curriculum of the ME major at this time. There was just a single major in the 2011 graduating cohort. The faculty will continue to monitor the progress of its majors in the next assessment cycle.

Molecular Biology

[Student Learning Outcomes: 3](#) (in addition to the 4 department-wide SLOs). Graduates in 2011: 2

Assessment Methods: Use of [rubrics](#) to evaluate senior thesis and poster presentation.

Evaluation: First cycle completed June 2011 by Molecular Biology faculty.

Major-Specific Program Changes: None at this time pending future assessments.

Molecular Biology is an interdisciplinary major focused on biology and the physical sciences, and it also incorporates a significant amount of mathematics. Students must take at least six courses in biology, four in chemistry (including physical chemistry), and two in physics; students are also required to complete a full year of calculus. The major is research oriented and is designed to prepare students for graduate studies or medical school, as well as careers in biotechnology and the pharmaceutical industry.

In addition to the four department-wide SLOs (DW-SLOs), the Molecular Biology faculty adopted three major-specific SLOs (MS-SLOs):

- MS-SLO #1, Discuss and analyze original scientific research articles on molecular biology topics.
- MS-SLO #2, Interpret data, including identification of control versus experimental samples.
- MS-SLO #3, Design controlled experiments to test specific hypotheses on a molecular biology topic.

In an assessment conducted in June 2011 by two members of the Keck Science Department, the two Molecular Biology majors scored an average of 3.5 on DW-SLO #1; of 4.0 on DW-SLO #2; of 3.0 on MS-SLO #3; of 3.5, 4.0, and 4.0 on three measures of DW-SLO #4b; and of 3.5 on MS-SLO #1. For DW-SLO #3, “Yes” was checked for one student, “Somewhat” for the second.

Given the small number of CMC students who graduated with a major in Molecular Biology in 2011, the adoption of major-specific program changes will await the collection of more data in the years ahead.

Neuroscience

[Student Learning Outcomes: 6](#) (in addition to the 4 department-wide SLOs). Graduates in 2011: 4

Assessment Methods: Use of [rubrics](#) to evaluate senior thesis and poster presentation.

Evaluation: First cycle completed in June 2011 by Neuroscience faculty.

Major-Specific Program Changes: None at this time pending future assessments.

The major in Neuroscience is an interdisciplinary program of 16 courses (maximum) designed to provide students with an appreciation of diverse approaches to understanding the function of nervous systems, as well as the ability to conduct investigations within a particular subfield of interest. Students majoring in Neuroscience complete: a common core program, a sequence of four electives determined in consultation with an adviser in Neuroscience (areas in which a student may elect to specialize include, but are not limited to, behavioral neuroscience, cellular and molecular neuroscience, cognitive neuroscience, computational neuroscience, motor control, philosophy of neuroscience, and developmental neuroscience), and a thesis on a topic related to the four course sequence. The major provides good preparation for graduate work in biology, neuroscience, and a variety of other programs including medical school or other graduate health professions programs.

In addition to the four department-wide SLOs (DW-SLOs), the Neuroscience faculty adopted six major-specific SLOs (MS-SLOs):

- MS-SLO #1, The Neuroscience majors program will help students begin to understand the structure and function of the nervous system at various levels of organization.

Neuroscience majors will:

- MS-SLO #2, Be exposed to a number of research techniques in neuroscience and will gain training in evaluating the strengths and weaknesses of various methods.
- MS-SLO #3, Be exposed to designing experiments, data analysis and critical thinking.
- MS-SLO #4, Be encouraged to appreciate the ethical issues surrounding neuro-scientific investigations on humans and animals.
- MS-SLO #5, Learn how to critically evaluate published scientific literature.
- MS-SLO #6, Learn how to present their research findings both in writing and orally at a forum of their peers.

In an assessment conducted in June 2011 by three members of the Keck Science Department, the four Neuroscience majors scored an average of 4.0 on DW-SLO #1; 3.7 on MS-SLO #1; 3.5 on MS-SLO #4; 4.0 on DW-SLO #2; 4.0, 3.5, and 3.8 on three measures of DW-SLO #4b; and of 3.8 on MS-SLO #5. For DW-SLO #3, “Yes” was checked for all four students. These are considered to be very positive learning outcomes.

Given the small number of CMC students who graduated with a major in Neuroscience in 2011, the adoption of major-specific program changes will await the collection of more data in the years ahead, although the results of this year's assessment and evaluation do not indicate the need for program changes.

Organismal Biology

[Student Learning Outcomes: 5](#) (in addition to the 4 department-wide SLOs). Graduates in 2011: 0

Assessment Methods: Use of [rubrics](#) to evaluate senior thesis and poster presentation.

Evaluation: There were no majors in 2011.

Major-Specific Program Changes: None at this time pending future assessments.

The Organismal Biology major provides a research-and-field-oriented background for students interested in research careers in either physiology or ecology/evolution and their allied fields. Although the focus of the major is at the organismal level, students receive a grounding in molecular biology as well and must take at least one upper division course in this area. Students also must focus in either physiology or ecology/evolution by taking at least three upper division courses in one of these areas.

In addition to the four department-wide SLOs (DW-SLOs), the Organismal Biology faculty adopted five major-specific SLOs (MS-SLOs):

- MS-SLO #1, Articulate the foundational scientific principles and findings in physiology, ecology, and evolutionary biology.
- MS-SLO #2, Apply foundational principles, especially evolution, in different biological subdisciplines.
- MS-SLO #3, Ability to clearly communicate scientific principles orally and in writing.
- MS-SLO #4, Apply critical, analytical, and scientific thinking skills, including:
 - a. develop scientific questions and apply a variety of research tools and methods for answering them;
 - b. read/understand original research;
 - c. use quantitative approaches to data analysis, presentation, and modeling; application of quantitative/analytical tools.
- MS-SLO #5, Articulate how science relates to current problems in the modern world, especially contemporary concerns such as conservation biology, climate change, and ecosystem degradation.

No CMC students majored in Organismal Biology in the academic year 2010–11.

Physics

[Student Learning Outcomes: 12](#) (in addition to the 4 department-wide SLOs). Graduates in 2011: 2

Assessment Methods: Use of [rubrics](#) to evaluate senior thesis.

Evaluation: First cycle completed June 2011.

Major-Specific Program Changes: None at this time pending future assessments.

The Physics major places a strong emphasis on computational and numerical techniques while still retaining the core material common to all physics majors. Many problems which are not readily solvable using traditional analytic methods will be incorporated into the program, and solutions will invoke numerical integration, computer modeling, and other numerical techniques introduced in the classroom and laboratory.

In addition to the four department-wide SLOs (DW-SLOs), the Physics faculty adopted 12 major-specific SLOs (MS-SLOs):

When confronted with an unfamiliar physical or dynamical system or situation, our students should be able to:

- MS-SLO #1, Develop a conceptual framework for understanding the system by identifying the key physical principles, relationships, and constraints underlying the system.
- MS-SLO #2, Translate that conceptual framework into an appropriate mathematical format/model.
- MS-SLO #3, If the mathematical model/equations:
 - a. are analytically tractable carry out the analysis of the problem to completion (by demonstrating knowledge of and proficiency with the standard mathematical tools of physics and engineering) or
 - b. are not analytically tractable, develop a computer code and/or use standard software/programming languages (e.g., Matlab, Maple, Python) to numerically simulate the model system
- MS-SLO #4, Intelligently analyze, interpret, and assess the reasonableness of the answers obtained and/or the model's predictions.
- MS-SLO #5, Effectively communicate their findings (either verbally and/or via written expression) to diverse audiences.

In a laboratory setting, students should be able to:

- MS-SLO #6, Design an appropriate experiment to test out a hypothesis of interest.
- MS-SLO #7, Make basic order-of-magnitude estimates.
- MS-SLO #8, Demonstrate a working familiarity with standard laboratory equipment (e.g., oscilloscopes, DMMs, signal generators, etc.).
- MS-SLO #9, Identify and appropriately address the sources of systematic error and statistical error in their experiment.
- MS-SLO #10, Have proficiency with standard methods of data analysis (e.g., graphing, curve-fitting, statistical analysis, Fourier analysis, etc.).
- MS-SLO #11, Intelligently analyze, interpret, and assess the reasonableness of their experimental results.
- MS-SLO #12, Effectively communicate their findings (either verbally and/or via written expression) to diverse audiences.

In an assessment conducted in June 2011 by two members of the Keck Science Department, the two Physics majors scored an average of 3.5 on DW-SLO #1; of 4.0 on DW-SLO #2; of 3.0, 3.5, and 3.5 on three measures of DW-SLO #4b. For DW-SLO #3, "Yes" was checked for one student, "No" for the other. For MS-SLO #8, "Not enough information to judge" was checked for both students. These are very positive results.

Given the small number of CMC students who graduated with a major in Physics in 2011, the adoption of major-specific program changes will await the collection of more data in the years ahead.

Science and Management

[Student Learning Outcomes: 3](#) (in addition to the 4 department-wide SLOs). Graduates in 2011: 1

Assessment Methods: Use of rubrics to evaluate senior thesis and poster presentation.

Evaluation: first cycle completed June 2011.

Major-Specific Program Changes: None at this time pending future assessments.

The Science and Management major is designed to provide students with a solid background in science as well as a grounding in managerial skills. The major requires a minimum of eighteen courses in addition to the

college's general education requirements. Majors complete a core program of eleven courses together with one of four sequences (biotechnology, chemistry, environmental, or physics) each consisting of seven courses; students may also propose their own individually designed sequence.

In addition to the four department-wide SLOs (DW-SLOs), the Science and Management faculty have adopted three major-specific SLOs (MS-SLOs):

- MS-SLO #1, Master the principles in their specific sequence/track (molecular biology, environmental biology, chemistry, physics, or other fields) and acquire the ability to apply them to solving problems including research questions.
- MS-SLO #2, Master the fundamental principles of economics and accounting.
- MS-SLO #3, Gain experience in the world outside the classroom.

In an assessment conducted in June 2011 by one member of the Keck Science Department, the one Science and Management major (with an individually designed sequence in engineering) scored 3.0 on MS-SLO #1 (overlaps with DW-SLO #1); 4.0 on DW-SLO #2; and 3.0, 2.0, and 3.0 on three measures of DW-SLO #4b. For DW-SLO #3, "Yes" was checked.

Given the small number of CMC students who graduated with a major in Science and Management in 2011, the adoption of major-specific program changes will await the collection of more data in the years ahead.

Keck Science Department-Wide SLOs Assessed with the Thesis Rubrics

The senior thesis evaluation rubrics for every major included the four department-wide SLOs—either as articulated above or in the overlapping major-specific formulation—and the scores by major for each have been presented.

As discussed, the 17 Biology majors scored very well on DW-SLO #1 (use of foundational principles to analyze problems in nature), averaging 3.5 on a four-point scale; 16 of the students were rated "Superior" or "Good" with only one student rated "Fair." For the 15 non-Biology majors, the average score for DW-SLO #1 was 3.7 with all students scoring "Superior" or "Good." Overall, the department has concluded that its students perform very well on this SLO.

For DW-SLO #2 (development of hypotheses and testing using quantitative techniques), the 17 Biology majors scored 3.3 overall, with only 12 of the 17 scoring either "Superior" or "Good." In contrast, the non-Biology majors scored 3.8 with only a single "Fair." This difference is likely due to the fact that the physical sciences tend to be more quantitative than the biological sciences, but as stated above the Biology faculty will explore this issue further in the fall.

For DW-SLO #3 (articulation of the role of science in the modern world), "Yes" was checked for 12 Biology majors, "No" for three, and "Somewhat" for two. For non-Biology majors, "Yes" was checked 11 times, "No" three times, and "Somewhat" once. Overall, the department has concluded that its students perform very well on this SLO (though some concern has been expressed that the senior thesis may not be the best assessment tool for this SLO).

DW-SLO #4b was assessed using three separate but related questions, and the results for the 17 Biology majors are an average score of 3.2. Notably, these students had lower average scores for this SLO than on the SLOs that directly involve scientific understanding and practice where the average was 3.5 for understanding foundational scientific principles and findings and for reading and understanding original research publications, and 3.3 for developing and testing findings using quantitative methods.

The same trend was seen for the 15 non-Biology majors. For these students, an aggregate average score for SLOs that directly involve scientific understanding and practice was calculated (since precise SLOs vary across

these majors), as were the average scores for the three measures communication in DW-SLO #4b. The results for these 15 students are as follows: 3.4 for DW-SLO#4b and 3.6 for aggregate results of all such SLOs across non-biology majors. A programmatic change stemming from this observation is described below.

Department-Wide SLOs Assessed with the Poster Rubric

The [poster rubric](#) used assesses department-wide SLOs #1 and #4 with the same four-point grading scheme employed in the thesis rubrics. Students present the results of their senior thesis in a public poster session held 2–3 weeks prior to finals week. During the session, each student presents his/her poster to the faculty grader, who is free to ask questions both during and after the presentation. One or two faculty graders evaluate each student’s poster. This past year, 11 CMC students presented their posters toward the end of the fall semester ([abstracts](#)), and 21 presented toward the end of the spring semester ([abstracts](#)).

The first question of the poster rubric (“Overall Understanding of the Science”) directly probes department-wide SLO #1, the second question (“Verbal Presentation of the Poster”) the department-wide SLO #4a, and the third question (“Quality of the Poster Itself”) the department-wide SLO #4b.

For the 17 Biology majors, the results of the poster rubric are as follows: DW-SLO #1, overall understanding of science, average = 3.4; DW-SLO #4a, effectively communicate scientific concepts verbally, Average = 3.6; DW-SLO #4b, effectively communicate scientific concepts in writing, Average = 3.5;

For the 15 students not majoring in Biology, the results were: D-W SLO #1, Average = 3.3; D-W SLO #4a, average = 3.4; D-W SLO4b, average = 3.4. As these data indicate, for the poster rubric students scored higher on the questions pertaining to department-wide SLOs #4a and 4b than on the question that pertains to SLO #1—i.e., in contrast to the results seen on the thesis assessment rubric, where students scored lower on the SLO that directly involves scientific understanding and practice as compared with department-wide SLO #4a. A potential reason for this difference is discussed below, as is a programmatic change that will be made in the department beginning in 2011–12.

Modification of the Thesis Schedule in Keck Science

Currently the departmental poster session occurs on a Friday late in both the fall and spring semesters (December 3rd and April 22 this past year), and on the following Monday students must submit their completed theses. In other words, students must prepare and present their posters exactly at the moment they are working to produce the final edited versions of their theses. This fact may explain why the quality of writing in the theses lags behind the students’ understanding of the science. In addition, because students haven’t fully completed their theses before presenting their posters, their understanding of the science may not be as refined at that point. Therefore, beginning next year, the poster session will be scheduled one week *after* theses are due. It will be of great interest to see whether this change in schedule improves the scores on both the thesis and the poster assessment.

Legal Studies

[Learning Goals:](#) 3 Student Learning Outcomes: 6 Graduates in 2011: 3

Assessment Methods: Use of [rubric](#) to evaluate senior theses.

Evaluation: First cycle completed May 2011 by CMC Legal Studies faculty.

Program Changes: None warranted at this time.

Legal Studies is an interdisciplinary and intercollegiate program primarily centered at CMC with courses also offered by Scripps College. It is only offered as a dual major at CMC, meaning it must be coupled with another major in a second discipline. The number of graduates has varied from 3-11 over the last five years. Since the major requires students to have a second primary major, students must choose which major in which to write

their senior thesis, and most chose their primary major to do so. Only two theses were written in the program in the last two years. For assessment purposes the faculty evaluated one thesis from 2009-10 and one from 2010-11. Program faculty developed six student learning outcomes.

- SLO #1, Students will demonstrate knowledge of the legal issue under consideration
- SLO #2, Students will demonstrate knowledge of the appropriate social science and/or humanities literature.
- SLO #3, Students will demonstrate knowledge of the philosophic, methodological, or Constitutional principles under consideration.
- SLO #4, Students will demonstrate knowledge of the relevant political institutions and/or public policies.
- SLO #5, Students will demonstrate sobriety of the analysis
- SLO #6, Students will demonstrate skillful communication of the arguments.

The overall evaluation of the two theses was a 3.0 on a 4 point scale with 4.0 a High Pass, 3.0 a Pass, 2.0 a Low Pass, and 1.0 a Fail. SLO #1 was scored at 3.0. SLO #2 was rated at 4.0, SLO #3 was 4.0, SLO #4 was 3.0, SLO #5 was 3.0 and SLO #6 was rated at 3.0. Based on the results of this small number of theses, the faculty does not currently contemplate changes in the program. However, they do intend to develop a more systematic and effective means of assessment in the next cycle of assessment. One idea they are exploring is to evaluate longer research papers (20-25 pages) done in Legal Studies classes by junior and senior majors, along with any senior thesis to expand the sample size. In the last six years, six of these research papers have evolved into academic publications jointly with Legal Studies faculty.

Literature

[Learning Goals: 5](#) Student Learning Outcomes: 8 Graduates in 2011: 20

Assessment Methods: Use of an [alumni survey](#) and use of a rubric to assess the senior theses

Evaluation: first cycle completed in spring 2010. Second cycle completed fall 2011 by Literature and Film Studies faculty.

Program Changes: The department adopted five steps to improve students' research including the appointment of a thesis coordinator, requiring a research paper in all single author classes, and requiring presentations of thesis results.

The Literature major is intended to provide students with an appreciation of our literary heritage, to permit them to develop enhanced skills of writing and speech, and to allow them to pursue in depth their own literary interests. Beginning in 2009, the Department adopted overall learning goals having intentionally formulated them in concert with the College's overall learning goals. Subsequent to the adoption of the learning goals, the members of the department identified eight student learning outcomes for the literature major.

- SLO #1, Students will demonstrate mastery of the basic conceptual vocabulary used in the study of literature – i.e., the ability to define and use terms appropriate to literary genres, literary techniques, rhetorical figures, and critical theory.
- SLO #2, Students will have a clear understanding of the standard periodizations of English literature and some of the major authors and works in each period.
- SLO #3, Students will demonstrate detailed knowledge of at least one major author's work.
- SLO #4, Students will demonstrate the ability to analyze a poem in terms of its meter, structure, argument, imagery, tone and other stylistic features.
- SLO #5, Students will have the ability to analyze a narrative (in a play, film, short story, or novel) in terms of its plot, characters, ethical concerns, themes, and structure.

- SLO #6, Students will demonstrate the ability to write clear and cogent prose.
- SLO #7, Students will have familiarity with various forms of research, including the use of the library, the Internet, and databases.
- SLO #8, Students will demonstrate the ability to give a considered and coherent rationale for the study of literature and its place among the humanities.

During the spring of 2010 the Department developed an [alumni questionnaire](#) regarding the major program. Four of the questions loaded heavily on the Department's student learning outcomes. Twenty-eight responses were received from alumni who graduated in 1997-2005. Of these, 82.1% of respondents indicated that their coursework provided them with the basic conceptual vocabulary used in the study of literature (SLO #1). Similarly, 75% indicated that the program gave them a clear understanding of the standard periodizations of English literature (SLO #2). 82.1% affirmed that their coursework provided detailed knowledge of at least one major author's work; in fact, many noted they have detailed knowledge of several major authors. Perhaps most compelling, 96.4% of respondents specifically noted that their writing skills were enhanced by their experience in the literature department (SLO #4) and 64.3% credited the literature department for their strong critical thinking and analysis skills (SLO #4). The department reviewed the survey responses and determined that the positive results recorded did not warrant changes in the program.

In addition to the alumni questionnaire, a subcommittee of three departmental faculty members, including the Chair, was formed to review senior theses over several years with respect to their suitability for use as an instrument for assessing student learning outcomes, and charged with making recommendations back to the literature faculty. The subcommittee reviewed a dozen theses (half of those produced in the two year period) and determined that the senior theses process in the department needed to be improved prior to formal use of the theses in spring 2011. However, the subcommittee analysis did provide some results regarding SLOs #1, #6, and #7. The faculty subcommittee decided that students' theses were generally well written (SLO #6); however, the analysis also revealed that students did not make effective use of the technical vocabulary of literary studies at the desired level (SLO #1). Similar findings were noted concerning SLO #7, effective use of secondary sources. Some felt that the degree to which students met the outcomes set for them in terms of research methods were uneven. The subcommittee also felt that students were choosing topics that did not build upon previous course work and, as a result, they often lacked a sufficient depth of acquaintance with their subjects to produce a first-rate senior thesis. Likewise, the faculty hoped to see greater use of the technical vocabulary of literary studies and more effective use of secondary sources.

In fall, 2011 the department met to discuss these findings and decided to take five steps to improve the program:

- 1) to produce a document for students explaining the expectations for the senior thesis and providing recommendations about the choice of topics;
- 2) to have an annual meeting for junior Literature majors in the spring semester in order to disseminate the department's advice about senior theses;
- 3) to mandate that all single-author classes (required of all majors) include a research paper to provide a model for a successful senior thesis;
- 4) to have a dinner with thesis-writing seniors in the first week of February at which students can present some of their results;
- 5) to appoint a departmental coordinator for the senior thesis program who will run a required colloquium for thesis writers to help them with the research process. The thesis coordinator will also be responsible for scheduling the events mentioned in items two and four.

The first four steps were implemented during academic year 2010-11, and the fifth, the thesis colloquium, is scheduled for fall 2011. In the fall of 2012, the department will once again review a selection of senior theses to determine if the steps taken have helped meet its goals.

Mathematics

Learning Goals = 8

Student Learning Outcomes = 4

Graduates in 2011: 15

Assessment Methods: Use of [rubric](#) to evaluate senior theses, evaluation of assessment quizzes, evaluation of writing, and a [comprehensive examination](#) (pending).

Evaluation: First cycle completed spring 2011 by Mathematics faculty.

Program Changes: The department is considering a change in the order of courses in the major.

Additionally, the department will require at least one written assignment in all math courses, and will require more oral presentations to provide a greater means by which to assess students' ability to communicate concepts in mathematics.

The Mathematical Sciences major offers courses in pure and applied mathematics to help prepare students for graduate education in mathematics, engineering, natural sciences, and economics. The Department also offers a sequence in Computer Science. The Mathematics major achieves breadth by exposing students to three basic components of mathematical thought: analysis, geometry, and algebra. The applied program provides a solid foundation for further study or work in statistics and computational science. To create a successful and on-going long term assessment and evaluation program the mathematics faculty selected four student learning outcomes. Students will:

- SLO #1, Demonstrate proficiency in calculus, linear algebra, differential equations, and probability theory.
- SLO #2, Demonstrate proficiency in one of three areas, pure mathematics, applied mathematics, and general mathematics.
- SLO #3, Demonstrate the ability to communicate mathematical concepts and ideas.
- SLO #4, Demonstrate the ability to apply effectively appropriate quantitative analysis and methods.

The Mathematics faculty has chosen several means of assessing student learning: assessment quizzes and embedded examination problems, the evaluation of senior theses, writing assignments and presentations, and comprehensive examinations. For this assessment cycle, the faculty chose to use assessment quizzes and theses as the primary tools for evaluation. Assessment quizzes are short exercises given during class time that test students on prerequisite material (SLOs #1, #2). The quizzes provide a quantitative means to check retention of material from previous courses. The quizzes were given during the fall 2010 and spring 2011 semesters by faculty teaching in all upper-division math courses. Each quiz includes 2-5 questions that require students to use prerequisite skills. Quizzes are graded on a five point scale and the scores are reported to the department's assessment committee.

The mathematics faculty met to discuss the results and determined that while basic topics in calculus require constant reinforcement, student retention in these areas is generally strong. Similarly, the math faculty believes it is meeting, if not exceeding its learning goals of imparting working proficiency in calculus and basic probability skills. Based on assessments in Math 140, and 131, some faculty have suggested that students should be exposed to basic proof techniques with more consistency in both the linear algebra and several variables calculus courses. There was, in general, concern that the department may not be meeting its learning goal that students should be comfortable with writing and understanding mathematical proofs. The assessment procedure has also raised, for discussion in the department, the question of whether Math 60 (Linear Algebra) should be required before Math 32 (Several Variable Calculus) and before Math 111 (Ordinary Differential Equations). This discussion will be resolved in the coming semester.

Mathematics Assessment Quiz**Data**

Math 109: Mathematics of Finance	N	Rating	Math 135: Complex Variables	N	Rating
Computing an expected variable	9	2.3	Line integrals	5	3.5
Use of the Chain Rule	8	4.1	Green's theorem	5	2.1
Math 60: Linear Algebra			Math 187: Deterministic Methods		
Proof by induction	7	2.5	Matrix algebra	9	3.8
Vector calculations w/ dot & cross product	7	4.3	Eigenvalue problem	9	3.1
Math 151: Probability			Math 31: Calculus 2		
Integration by parts	16	3.5	Use of the chain rule	29	4.2
Jacobian change of variables in integration	15	2.3	Finding relative extrema	11	3.5
Math 131: Introduction to Analysis			Math 171: Abstract Algebra		
Proof by induction	7	2.8	Counting permutations	8	3.1
Radius of convergence of power series	7	3.4	Pigeon hole principle	9	3.4
Math 152: Statistical Inference			Math 111: Ordinary Differ. Equations		
Distribution of a function of a random var.	14	3.6	A simple ODE, modeling	15	3.4
Fundamental subspaces for a matrix	15	2.6	Integration by parts	16	3.2
Math 32: Calculus 3			Math 140: Modern Geometry		
Integration by parts	8	3.2	Proof by induction	6	2.8
			Planes in space	6	3.6

The main concern with the current assessment quiz method is the difficulty in tracking whether students have taken their prerequisite courses from CMC or from another college. Overall, the procedure was found to be valuable by the faculty but in need of adjustments. The department will retain this method in the next assessment cycle, while seeking to be more uniform in its implementation.

The faculty also read senior theses against a departmental rubric. There were just two theses written in mathematics in 2011. Each was measured against three primary criteria and rated Proficient, Competent, Inconsistent, or Poor. Intermediate rankings were allowable.

Mathematics Theses Results, 2011	1	2
1. Selection and use of subject matter and sources. (SLO #3)	Competent	Proficient
2. Understanding of the mathematical content. (SLO #3, #4)	Competent	Proficient/Competent
3. Overall clarity of exposition and writing quality. (SLO #3)	Competent	Proficient/Competent

Overall, the mathematics faculty feels it is meeting its student learning outcomes as measured by the thesis but will continue efforts to encourage more math majors to write their thesis in the discipline. In the meantime, the department has agreed on an alternative means of evaluating students' ability to communicate math concepts and ideas. In 2011-12, the department will require that all mathematics faculty include at least one written assignment in each class. Graded on a five point scale, the results will be forwarded to a departmental assessment committee annually.

Additionally, the mathematics department assigned a subcommittee of faculty members to construct a [comprehensive examination](#) that it will begin implementing in the upcoming academic year. The exam will

cover basic calculus, differential equations, linear algebra and probability and it will be given to students during junior and senior year on an incentivized volunteer basis.

Middle East Studies

[Learning Goals: 2](#)

Student Learning Outcomes: 4

Graduates in 2011: 1

Assessment Methods: Use of rubric to evaluate senior theses and language testing.

Evaluation: There were no senior theses in Middle East Studies this year.

Program Changes: None warranted at this time.

Middle East studies is the College's newest major. It is an interdisciplinary major and is governed by an interdisciplinary Committee. The program faculty adopted four student learning outcomes:

- SLO #1, Students will demonstrate an understanding of Middle Eastern culture, society, and polity.
- SLO #2, Students are able to use primary and secondary sources effectively in carrying on research in Middle Eastern Studies.
- SLO #3, Students will have proficiency in a Middle Eastern language at an intermediate level or above.
- SLO #4, Students demonstrate effective and appropriate writing skills in communicating the histories and cultures of the Middle East.

CMC program faculty determined to assess all four of the SLOs by means of a rubric to evaluate the senior theses and by test scores to evaluate language skills. Because there were no seniors who wrote a thesis in Middle Eastern Studies this year, it was not possible to conduct an assessment of the senior theses or of language skills. We anticipate carrying out an assessment next year and will reevaluate the assessment tools if there are again no theses in the major.

Modern Languages

[Student Learning Outcomes: 6](#)

Spanish Graduates in 2011: 10

French Graduates in 2011: 6

Assessment Methods: In French, use of a rubric to evaluate [senior theses](#) and [oral interviews](#).

In Spanish, use of a rubric to evaluate [senior theses](#), [oral interviews](#), and [in-class presentations](#).

Evaluation: First cycle completed spring 2011 by Modern Languages faculty.

Program Changes: In French, more emphasis will be placed on developing oral and writing skills.

In Spanish, more emphasis will be placed on using target language sources in lower level courses, while upper level courses will add mini workshops on use of target language sources.

The Department of Modern Languages houses four languages: Arabic, French, Korean, and Spanish. Of those, French and Spanish offer majors, which consist of nine courses, and dual majors, which consist of seven courses. Arabic and Korean each offer four semesters of language instruction and two upper-division courses. Because of the consortial nature of The Claremont Colleges, all our language courses enroll students from all five colleges, and our French and Spanish students may take language and major courses at the other colleges as well.

It is difficult to analyze the French and Spanish majors in isolation, because the consortial nature of The Claremont Colleges means that we cooperate extensively with the French programs at Pomona and Scripps and with the Spanish programs at Pitzer, Pomona and Scripps. In practical terms, this means that students can

satisfy major requirements with courses taken at other colleges. We also encourage our students to study abroad and they may transfer back two classes for major credit for every semester abroad. Students are not required to take a minimum number of courses in French or Spanish at Claremont McKenna.

The learning goals of the Department of Modern Languages encompass the mission of the College and promote respect and appreciation of different languages, cultures, and societies. More specifically, in 2009 the Department voted to establish five learning outcomes for students completing the major in French or Spanish.

Students completing the major in French or Spanish should be able to:

- SLO #1, Speak and understand the target language(s) at the Advanced level, as detailed in the [ACTFL Proficiency Guidelines](#).
- SLO #2, Read and write the target language at the Advanced level.
- SLO #3, Demonstrate an understanding of the important issues in one or more national traditions represented by the target language(s).
- SLO #4, Use the target language(s) to discuss, orally and in writing, literary and visual texts of the target culture(s) critically and analytically, with appropriate vocabulary.
- SLO #5, Identify and incorporate appropriate sources in the target language in their research papers and presentations.
- SLO #6, Write an advanced research paper/senior thesis that articulates a sophisticated argument about a text or series of texts from the target culture(s).

The programs in French and Spanish evaluated selected graduating seniors during the spring of academic year 2010-11. In 2011, four CMC students graduated with a major or dual major in French; two were assessed in oral and written production. Ten CMC students graduated with a major or dual major in Spanish; five were assessed in oral production, and five in written production (due to random selection, some students were assessed in both areas, others only in one or the other). All graduating seniors enrolled in spring 2011 in an upper-division Spanish class at CMC were assessed, whether they were double or dual majors. The French written assessment was based on the senior thesis, and oral assessment on oral interviews. The Spanish written assessment was based on the senior thesis and on advanced research papers, and the oral assessment on oral interviews and in-class oral presentations.

The results of the written assessment in French using a four point rubric were as follows: Grammatical accuracy = 3, sources in target language = 3.5, articulation of a sophisticated argument about texts = 3.5. The French oral assessment resulted in scores on a four point scale of 3.5 for grammatical accuracy, 3.5 for the ability to discuss work and personal topics, 3.5 for pronunciation and flow, 4.0 for understanding of important issues, and 4.0 for ability to discuss texts.

In consultation with colleagues in French at Scripps, the French section faculty noted that they are generally meeting departmental targets for oral and written production and will continue to develop and reinforce oral and written skills as well as students' critical thinking.

The Spanish written assessment yielded the following results for the ten students whose work was assessed: Grammatical accuracy = 3.0, sources & research in target language = 3.2 and articulation of a sophisticated argument about texts = 3.2. The Spanish oral assessment results were: Grammatical accuracy = 3, ability to discuss work & personal topics = 3.8, Pronunciation and flow = 3.6, Understanding of important issues = 3.8 and ability to discuss texts = 3.8.

The Spanish section indicated that the department is generally meeting its targets for oral and written production. However, while students' upper-division research papers made use of secondary sources and criticism, the students usually used English-language sources. Students' ability to conduct research in the

target language was not as well developed as the faculty would like, so the Spanish faculty agreed to emphasize the importance of sources in the target language and to implement mechanisms to encourage students to use such sources. Upper-division courses in AY 2011-12 will include mini-workshops on locating and accessing target-language sources. The faculty also noted that oral presentations in upper-division classes have the potential to provide a great deal of information for assessment, so the faculty plans to observe more presentations in AY 2011-12 and to have more faculty members visit other classes' presentations. Finally, they hope to have at least one faculty member become an ACTFL-certified Oral Proficiency Interviewer, a process which requires attending a four-day ACTFL OPI workshop and continuing with on-line rating practice.

Philosophy (Phil)/Philosophy and Public Affairs (PPA)

[Learning goals: 4](#) Student Learning Outcomes: 12 Graduates in 2011: 8 (Phil), 5 (PPA)

Assessment Methods: Use of [rubric](#) to assess Senior Seminar (Capstone) Papers for all majors.

Evaluation: First cycle completed in spring 2011 by Philosophy faculty.

Program Changes: The department faculty will adjust the curriculum to provide additional coursework and classes that focus on developing a stronger familiarity with historical philosophers. The department will also facilitate discussion about the best practices for assessing students' written senior seminar work.

Students studying Philosophy will come to grips with some of humanities most enduring and challenging questions. On average, the department has graduated about seven majors each year. In addition to the philosophy major, the department also offers the major in philosophy and public affairs, which permits students to draw on course work in economics and government in addition to philosophy and allows them to develop a specialized course program. The department faculty developed four learning goals and based on these learning goals, then adopted 12 student learning outcomes.

- SLO #1, Students will be able to extract theoretical positions from texts and conceptualize them in precise ways.
- SLO #2, Students will understand important criticisms of those positions given by other philosophers.
- SLO #3, Students will be able to offer their own views on theoretical problems and offer persuasive reasons for those views.
- SLO #4, Students will be able to clearly state what the views of historical figures were, the philosophical reasons or arguments they offer for their views, and how these views relate to the figures' broader philosophical position.
- SLO #5, Students will be able to interpret historical figures and evaluate the figures' philosophical positions, drawing upon textual evidence, analysis of the philosophical arguments, the ideas of the time, and/or modern insights into the same subject matter.
- SLO #6, Students will be able to engage with and evaluate the arguments of historical figures and offer persuasive reasons for their own views.
- SLO #7, Students will understand practical and ethical problems, including the complexities surrounding them.
- SLO #8, Students will understand why thinkers have offered different solutions to the problems.
- SLO #9, Students will develop their own solutions to ethical and practical problems and be able to offer reasons for their solutions.
- SLO #10, Students will be able to clearly and effectively present a philosophical thesis.
- SLO #11, Students will be able to present the ideas of others in a rigorous, informative, and fair manner.
- SLO #12, Students will be able to justify their thesis with compelling argumentation.

The philosophy department evaluates progress toward these goals in two ways. First, each year, all graduating majors undertake extensive self-assessment. The faculty developed a questionnaire for this indirect means of assessment that includes 16 questions dealing with theoretical philosophy, the history of philosophy, ethics, political and other related fields, and writing. Second, each year, a sub-committee of the philosophy faculty evaluates all final work from Philosophy 198: Senior Seminar in Philosophy, a capstone course required of all graduating philosophy and PPA majors. Senior seminar topics rotate from year to year, and student work is evaluated based on all goals relevant to that seminar. Senior seminar is scheduled so that each goal is periodically evaluated over several cycles of assessment. For this assessment, the faculty developed a rubric that utilizes a six point scale. The rubric includes the same four subjects areas noted above in the student questionnaire.

The results of this year's cycle of assessment of 13 students' senior papers by two readers drawn from the faculty reveal the following with a score of 1 equal to Excellent; 2 equal to Good; 3 equal to Moderate, 4 equal to Weak, 5 equal to Poor, and 6 equal to Does not apply: the average score for theory was 2.5, halfway between Good and Moderate, the average for ethics was 2.52, again nearly at the halfway point between Good and Moderate, and the average for writing was 2.57, still nearly the halfway point between Good and Moderate. History of philosophy was not a topic for evaluation in this cycle. Among individual students, three scored in the Excellent category and one scored at the lower end of the Weak category. On balance these scores were deemed satisfactory and do not point to the need for changes in the program.

The [indirect self assessment](#) by students asked a series of 15 questions inquiring about the learning they had experienced in the major program. The results were based on a five point scale with 1 equal to Very substantial, 2 equal to Substantial, 3 equal to Moderate, 4 equal to Fair, and 5 equal to Little, or was not taught these skills. Twelve students completed the questionnaire with the following highly positive results: The average response for all questions as a whole was 1.42, or well into the Very High category. Indeed, the lowest score recorded was a 1.9 or Substantial leaning towards Very high.

The department met in spring, 2011 to discuss the assessment results. Faculty agreed that the indirect and direct assessment results were in accord with one another and that generally, students seem to do quite well with respect to learning outcomes 1a ("Students will be able to extract theoretical positions from texts and conceptualize them in precise ways") and 1b ("Students will understand important criticisms of those positions given by other philosophers." The students do well, but are comparatively weaker with respect to learning outcome 1c ("Students will be able to offer their own views on theoretical problems and offer persuasive reasons for those views.") On their indirect assessments, students also indicated less confidence in their ability to develop their own solutions to ethical and practical problems (related to learning outcome 3c) than in other areas. Although the students' assessments of their own philosophical education were positive across the board, they rated themselves as slightly poorer with respect to their mastery of historical philosophical figures as opposed to their mastery of contemporary philosophy.

To address these concerns, the department aims to do the following:

1. Without detracting from attempts to teach students to extract arguments from texts, the faculty should make greater efforts in courses to instruct students in developing their own views on both theoretical and ethical/practical problems. They will continue to discuss the best ways to do this.
2. The department should try to offer more opportunities for our students to take courses on historical figures. As a first step in this area, Professor Kreines expects to offer a new course on Hegel in the upcoming academic year.

The department also plans to make slight adjustments to the assessment process next year as a result of what the faculty learned this year:

1. Although the students' indirect assessments should continue to be anonymous, faculty should ask them to indicate whether there are full, dual, or double majors, and whether they are majoring in Philosophy or in Philosophy and Public Affairs.
2. Insofar as possible, faculty should anonymize the student papers before having them read for Direct Assessments.

The department also noted one additional drawback to its direct assessment procedure: Insofar as the faculty readers of the senior seminar papers are unfamiliar with the material under discussion, their assessments of the quality of the student work are less reliable. Although the faculty has noted this drawback, they do not yet see a way to fix it, since it would be completely impractical to require a faculty reader to acquaint him or herself with all of the material taught in the Senior Seminar (which changes, topically, from year to year) before conducting the Direct Assessment. The department will revisit the issue next year to see if this continues to be a problem or if there are any further thoughts on ways to mitigate this problem.

Philosophy, Politics and Economics

[Learning goals: 5](#)

Student Learning Outcomes: 5

Graduates in 2011: 13

Assessment Methods: Progress towards these goals are gauged, among other things, by student performance on an appropriately designed senior comprehensive exam and by self-assessments carried out by PPE students during their senior year.

Evaluation: first cycle completed June 2011 by PPE faculty.

Program Changes: None warranted at this time.

Politics Philosophy and Economics (PPE) is a tutorial program for a select group of students that combines the three disciplines in classes taught by three faculty drawn from the participating departments and stresses written and oral communication skills. Approximately twelve students participate each year in the two year program for juniors and seniors.

There are five learning goals in PPE. Progress towards these goals will be gauged, at least initially, by student performance on an appropriately designed senior comprehensive exam.

The PPE Program gauges progress toward its learning goals by examining the following learning outcomes:

- SLO #1, Competence with the relevant analytic and quantitative skills.
 - a. Students will be able to formulate valid and well supported arguments in support of their positions.
 - b. Students will demonstrate competence in the application of standard economic models.
 - c. Students will demonstrate the ability to collect and marshal empirical data in economics and government.
- SLO #2, Engagement with theoretical problems in each of the constituent disciplines.
 - a. Students will be able to extract theoretical positions from texts.
 - b. Students will appreciate criticisms of theoretical positions.
 - c. Students will be able to offer their own views on such theoretical problems and offer reasons and/or data in their support.
- SLO #3, Application of distinct disciplinary approaches to practical questions and problems.
 - a. Students will draw upon the resources of each constituent discipline to understand practical problems and the complexities surrounding them.
 - b. Students will understand alternative solutions to such problems.
 - c. Students will develop their own solutions to practical problems and demonstrate the ability to offer reasons and/or data to support their solutions.

- SLO #4, Write prose that is both effective and engaging.
 - a. Students will be able to present a written defense of a position, drawing upon resources in economics, government, and philosophy where appropriate.
 - b. Students will be able to present in writing the positions, arguments, and data of others in a manner that is both rigorous and unbiased.
- SLO #5, Engage effectively in oral discussion and debate.
 - a. Students will be able to present an oral defense of a position that is both rigorous and effective.
 - b. Students will be able to engage critically through debate and discussion with a position presented by another.
 - c. Students will be able to draw upon relevant resources from all of the constituent disciplines in oral debate and discussion with others.

Department faculty assess what PPE seniors have learned by a variety of traditional metrics and their performance on an honors comprehensive, typically asking them to analyze or solve a complex problem using whatever facts and methods, both disciplinary and interdisciplinary, they have mastered in the course of their studies. The exam is open-book; take-home, honor-system. They are given three hours to complete the question. Normally, about ten of the 12 seniors take the exam. This year, six, or half the class, won departmental honors in April. The same six also got CMC Latin honors, based on their cumulative GPAs at graduation; two were elected to Phi Beta Kappa. One student, who did not take the comprehensive exam, also got Latin honors. This year's exam question follows:

Serious "Index" crimes in the U.S. more than tripled between 1964 and 1990. Then, in the 1990s, they declined by about 40%, 70% in New York City. They also fell by 20-40% in Canada. Why? What are the main causes of crime? Which of them change from year to year? What could have caused the increases up to 1990? The decreases since? Is crime a given of social and economic life, like tort? Are some categories of people more crime-prone than others? If so, should they be punished equally with others who have committed the same acts, or differently, each according to his own special "needs?"

Is punishment morally, constitutionally, or economically appropriate for someone with less than a full deck of understanding, foresight, self-control, and concern for others? Would individualized, therapeutic treatment be preferable? What functions do criminal sanctions serve? Which are most important? How well do existing sanctions serve each function? Can any system be described as just which is known to imprison and execute the innocent, which punishes twenty times as many males as females and seven times as many blacks as whites per capita, and locks up two percent of the adult male population, sometimes for nonviolent or even trivial offenses (3d Strike)? Are existing criminal sanctions consistent with, or at odds with rational economic choice? Is there any evidence that deterrence works? What changes would you advocate to make the system better serve the functions you specify? How well would you expect them to work? What are the odds that they would be adopted in the U.S.?

The faculty believe that this question addresses four of the five stated learning outcomes: develop analytical and quantitative skills; engage theoretical problems (justice, utility, etc); apply the disciplines to practical problems (crime and punishment); and do it with effective, engaging writing. For the fifth outcome, engage effectively in discussion and debate, see *internal, informal* and *external, informal*, below, and the [students' class video](#).

Table 1 summarizes the measures used and compares the outcomes with the subsequent, independently-awarded college Latin honors.

The composite ranking averaged the five measures consulted, grades in each leg of the PPE program, overall GPA, and performance on the comprehensive exam, giving equal weight to each. As is typical, this year the five measures tracked each other closely. They also tracked the all-course GPA and CMC Latin Honors, which were mostly determined by professors in other, non-PPE courses. Generally, but not always, the students who are best, worst, or middling by one measure are also so by others. The department has found it appropriate

Table 1. Six Measures of PPE Senior Learning, 2011

Names omitted	PPE1ab	PPE11ab	PPE110ab	GPA cum	Ave	WE12	WE Ave	CMC Latin Honors
1	12	12	12	11.52	11.9	12.0	11.9	MCL
2	11.5	11.5	11	10.91	11.2	11.8	11.3	CL
3	11.5	11	11.5	11.06	11.3	11.6	11.3	CL
4	11	11.5	11	11.09	11.1	11.6	11.2	CL
5	11	11	11	11.40	11.1	11.6	11.2	CL
6	11	11	11	11.00	11.0	10.9	11.0	CL
7	11	11	10	10.15	10.5	10.9	10.6	
8	10.5	11	10	10.33	10.5	10.9	10.5	
9	10	11	10.5	9.65	10.3	11.6	10.5	
10	9.5	11	11	9.63	10.3	10.9	10.4	
11	11	11	11	11.35	11.1			CL
12	10	11	10.5	10.13	10.4			

Average 10.8 11.2 10.9 10.7 10.9

over the years to give a comprehensive exam to test the students' abilities to integrate the evidence and approaches of the three disciplines. The comprehensive exam rankings in Table 1 are by Elliott; others are similar. In the view of the faculty, even the worst exams showed quite a bit of sophistication, learning, and progress toward attainment of the stated goals and outcomes.

As noted, most, but not all of these formal academic-assessment inputs are from

CMC faculty, and hence, the process could be suspect for being too inward and self-referential to keep the students competitive in today's placement market where the ladders have recently become drastically steeper, and the gates narrower. The faculty uses several internal and external checks to hedge against this possibility. *Internal*: there are three faculty evaluators of differing ages and perspectives, and their evaluations roughly match. *External, formal*: the faculty does take into account formal outside evaluations, such as GPAs and Latin honors. These usually match that of the faculty evaluators. The PPE offerings are too broad and varied for standardized external tests of any or all of the sub-disciplines to make much sense.

Internal, informal: The PPE faculty involve the students themselves extensively in informal evaluation, reading each other's papers and commenting on each other's, and the professors', efforts in class to explain and address social problems, such as the rise and fall of crime rates. PPE faculty knows of no other program that involves students so deeply and continually in mutual evaluation.

External, informal: PPE classes offer a glowing example of CMC's learning experience at its best. Visiting dignitaries often get invited to sit in on a class and add their insights and comments: Donald McKenna, CMC's founding trustee; Congressman David Dreier, Chair of the House Rules Committee, Carol Mosley Brown, Democratic Presidential Candidate, Gloria Killian, of the Innocence Project, Nancy McCallin, head of the Colorado Community College System, and Adrian Wood, Chief Economist for the UK's Department for International Development, are examples.

By their junior and senior years, a different form of outside assessment becomes more available: that of their peers, employers, graduate programs, and prize and scholarship committees who judge them in competition with others for sought-after positions. The PPE program is small enough, and close enough, that faculty can pay more attention than most to their students' success in competing for such positions. This assessment is entirely external. These outcomes, in aggregate, are the acid test of whether the students have mastered enough of the skills PPE faculty attempt to teach – reading, writing, listening, thinking, discussing, debating, analyzing, problem-solving, co-operating, communicating, and so on – to compete successfully in a tough market against others from other programs and schools. PPE tries to keep track of such outcomes, and have

found over the years that graduates of the program have gotten more than their share of the most sought-after positions and honors. Two classes provide two sets of examples.

The first set is the pre-recession Class of 2007 encompassing fourteen students, included the president of the CMC student body, the president and valedictorian of the senior class, one of CMC's two Rhodes regional finalists (the other was his girlfriend); three of CMC's four Truman nominees, both of its two finalists, and its one Truman winner. The same Truman winner also won an Udall prize for promise in developing environmental policy and co-founded Fantasy Congress, a politics fantasy game. By contrast, Harvard had 3 Truman winners that year from a class of 1,700, putting Harvard ahead of us by two in Truman winners per institution, but also putting our little class of 14 ahead of Harvard by a factor of 40 in Truman winners per capita.

The second set of examples is from this year's post-recession graduating seniors, the Class of 2011. Of twelve students, three are still interviewing for jobs, and one will take an extra year of science courses to qualify for medical school. One has won a Rotary Fellowship to Argentina. Two will be working for Google, both of them veterans of the National Mock Trial championships last year. One will be in law school, University of Texas at Austin. One is a California Capital Fellow finalist. One will do consulting for Deloitte. One, at this writing, will be a journalist in Singapore for CNBC Asia. One will be working for AEI Press in Washington. He won the national parliamentary debating championship last year.

Student demand has more than doubled since 2007; there are long lines at the PPE table at freshman orientation; and sophomore applications are more and better than ever before. Last fall the program had 27 applications for no more than fourteen places, and these included half of the top tenth of the sophomore class. That level of interest would not be expected if the students did not highly value the skills PPE offers.

Changes: The faculty have considered, but not adopted, changes -- holding the comprehensive exam earlier, making it closed-book, requiring it of everybody, or monitoring it more closely, either starting and stopping everyone at the same time or actually gathering them in a room to take the exam. Each of these has pros and cons, but, in every case, the students have strongly preferred the existing permissive, optional honors-system test in late March. Student performance on comprehensive exams has not been at odds with their performance by other measures, and the faculty has found no strong reason to change the existing arrangement.

Psychology

[Student Learning Goals and Outcomes: 8](#)

Graduates in 2011: 39

Assessment Methods: Use of [Halpern Critical Thinking Assessment](#); use of multiple choice examination for graduating seniors; use of a survey of seniors asking for their assessment of their achievement of the departmental learning outcomes.

Evaluation: First cycle completed in spring 2010. Second cycle completed spring 2011 by Psychology faculty.

Program Changes: None warranted at this time.

The Psychology department is one of the largest programs at the College graduating nearly forty students every year. The program is somewhat unique in that it offers students opportunities to engage in applied research through several research institutes and laboratories on the CMC campus. Students who devote themselves to the study of psychology will achieve a variety of learning goals. These goals flow directly from an understanding of psychological science and its applications. In accordance with the American Psychological Association's Report on the Undergraduate Psychology Major (APA 2008), the Department specified the following student learning outcomes for psychology majors:

- SLO #1, Knowledge of major concepts, theories, and empirical findings in psychology.
- SLO #2, Understanding of research methods in psychology, including research design, data analysis and interpretation.
- SLO #3, Development of critical thinking skills and use of the scientific approach to solve problems related to behavior and mental processes.
- SLO #4, Application of psychological principles to areas such as education, law, business, politics, and medicine.
- SLO #5, Awareness of ethical behavior in research and applied settings.
- SLO #6, Technological literacy.
- SLO #7, Oral and written communication skills.
- SLO #8, Understanding of socio-cultural and international diversity and complexity.

Thirty-eight graduating psychology majors in AY 2009-10 and 37 in AY 2010-11 were required to take on-line multiple choice test with 60 questions selected from the following areas: research methods (15 questions which included ethics), social psychology (8 questions), biological psychology (10 questions), developmental psychology (5 questions), health and well-being (5 questions), learning (5 questions), memory and cognition (5 questions), and psychotherapy and mental disorders (7 questions) was created. Questions were selected at random for each student from a pool of questions in each of these areas. Regardless of the courses students selected to complete their major, most of psychology majors should have some knowledge of these key areas in psychology since multiple courses would include content from these areas (e.g., biological psychology would not only be learned in neuroscience courses, but also as a topic in psychological disorders and treatment, memory and cognition, developmental psychology, and other courses). The test permits assessment of SLO #1, knowledge of major concepts, theories, and empirical findings in psychology, SLO #2, research methods, and SLO #5, ethical issues in research.

As expected in 2009-10, given the emphasis the curriculum currently places on research methods, the highest percentage of correct responses were in the research category, SLO #2, 84%. This was also true for the ethics component, SLO # 5, 84%. The percentage of correct responses for SLO #1, theories, was 63%. The average for all parts of the test was 65.9%. The lowest score, 57% was on health and wellness issues.

In AY 2010-11, the psychology department preceded the assessment with a series of questions that determined the students' psychology course taking patterns at CMC, the other 5-C institutions and at other institutions (e.g., during study abroad). To provide a comparative measure, all students enrolled in a lower-level division psychology course in the spring 2011 semester were required to take the assessment within the first 2 weeks of the semester. Of the 223 students who completed the assessment, 87 had reported that they had not taken any previous courses in psychology—including a high school AP course. Therefore, these 87 students were isolated and treated as the Control Group, and served as a comparison group for the senior majors.

Out of a total 60 questions, the Psychology Seniors answered approximately 38 questions correctly ($M = 38.32$, $SD = 6.06$) while the Control Group answered approximately 29 questions correctly ($M = 29.26$, $SD = 6.80$). An independent sample t-test reveals that this difference is statistically significant, $t(122) = 7.00$, $p < 0.001$, *Cohen's d* = 1.41.

In spring 2011, all graduating seniors were also asked to complete a well-validated, standardized critical thinking assessment (the Halpern Critical Thinking Assessment; Halpern, 2010). The assessment measured five dimensions of critical thinking (SLO #3); verbal reasoning, argument analysis, thinking as hypothesis testing, likelihood and uncertainty, and decision making and problem solving.

This is the department's first year of data collection using this metric, so it does not have pretest data to compare critical thinking gains, but it was able to compare CMC seniors' scores to a published, standardized sample¹. Thirty-three seniors took the assessment. Scores on the assessment ranged from 98-143, with an average of 124.97. The CMC average was above the standardized sample average of 110.54. Only 12% of the

Halpern Critical Thinking Assessment Results, spring 2011	Mean	SD	Norm Mean	Norm SD
Overall Critical Thinking (0-206)	124.97	11.354	110.54	20.031
Verbal Reasoning (0-34)	13.48	2.694	10.10	3.236
Argument Analysis (0-41)	28.97	4.172	25.40	6.014
Thinking as Hypothesis Testing(0-46)	29.48	5.696	25.68	6.214
Likelihood & Uncertainty (0-24)	13.91	2.697	10.54	3.579
Decision Making & Problem Solving (0-61)	39.12	3.839	38.82	5.813

CMC seniors scored below the standardized average and all of their scores were within the first standard deviation below the mean.

The remaining 88%

of our seniors scored above the standardized mean, 58% of them were within the first standard deviation and 30% were within the second standard deviation.

Finally, all graduating seniors responded to a survey in spring 2010 in which they were asked about psychology's learning outcomes—which of the outcomes they believe they achieved and which they believe they have not achieved. 44% of the respondents answered that they had learned adequately all of the 8 student learning outcomes. 38% indicated they had adequately learned all but one, and 19% said they had learned all but two adequately. The SLO where students wished they had a better grounding was SLO # 6, technical knowledge. It primarily related to comfort using the SPSS statistical package. The survey of seniors was an interesting informal assessment; the department will consider issuing a direct survey assessment to alumni to gain information from those who graduated 5-15 years ago.

Based on the results of these multiple means of assessment, the department believes it is generally meeting its student learning outcomes, and it will closely monitor the next several assessment cycles to determine if programmatic or curricular changes should be implemented.

Religious Studies

[Learning goals: 3](#)

Student Learning Outcomes: 6

Graduates in 2011: 3

Assessment Methods: Use of [rubric](#) to evaluate senior theses.

Evaluation: First cycle completed June 2011 by Religious Studies faculty.

Program Changes: The Assessment Committee has recommended that the department make changes in the senior thesis program. First, while students normally are asked to write a thesis that deals with two or more religious traditions, some students are permitted to write on a particular problem that only uses the approach of a single religious tradition. In such cases in the future, students will be asked to explain how their interpretation might differ from other theoretical or historical approaches in an introductory chapter not currently required. Second, since students with a dual or double major may write a thesis in either of the two disciplines, when they choose to do one in the other discipline, they will be asked to provide a literature review, historical analysis, and critical theory in Religious Studies as part of the thesis project. Third, all faculty will be asked to include the department's student learning outcomes in their course syllabi and to identify the ones that are to be met in the course.

¹ The test was normed on a mixed sample—about 50 community adults, 50 CMC students, 50 Cal state students, and 50 community college students.

Religious Studies is a recently formed department, having been formerly joined with Philosophy until 2008. Since 2005, all five of the undergraduate colleges in Claremont have cooperated in a joint program that has established a common curriculum and major for all Claremont Colleges students. Courses taken in the major are not considered to be cross-registration course but can be counted at all of the Colleges as a “home college” course. At present 16 full-time faculty participate in the program and offer over 80 courses. About 15-20 students graduate each year in Religious Studies across all five colleges.

To support these three goals, the faculty identified six student learning outcomes.

- SLO #1, Students will be able to demonstrate an understanding of the texts, beliefs, and practices of more than one religious tradition.
- SLO #2, Students will be able to trace the historical development of at least one religious tradition from its origins to the present.
- SLO #3, Students will be able to identify and analyze the intersections between religious traditions and major social and cultural issues (e.g., politics, gender, ethnicity, race, ethics,).
- SLO # 4, Students will be able to work with multiple sources of information (e.g., textual, performative, material, philosophical) used in the study of religion.
- SLO #5, Students will show proficiency in a variety of disciplinary approaches to the study of religion (e.g., historical, philosophical, anthropological).
- SLO #6, Students will be able to analyze and assess religious phenomena through the use of critical theories (e.g., literary criticism, gender theory, post-modern and post-colonial analysis).

Although the department had five graduating seniors this year none chose to write a senior thesis in Religious Studies (All were dual or double majors). Thus, the Departmental Assessment Committee chose to assess five senior theses written in the spring of 2009-2010. The two faculty members who conducted the assessment used a rubric derived from the Association of American Colleges and Universities VALUE project. Scores were recorded as High Pass-Capstone = 4, Pass-High Milestone =3, Pass-Milestone =2, and Benchmark or Not Applicable =1. The assessment of the senior theses yielded the following results. One thesis was scored at the highest level, Capstone, on four of the six SLOs. A second thesis was scored at the Benchmark level for four of the five SLOs because it was considered to be too theological or normative based and reflected the period when the Philosophy and Religious Studies departments were conducted as one department. This was somewhat true of a third thesis, although it contained a more analytic approach. A fourth thesis was a joint project with International Relations and although it won best thesis award for 2009-10, it was too heavily weighted towards IR to score well in Religious Studies. A fifth thesis scored at the High Milestone in three SLOs and Capstone in one. Overall, the five theses were scored at an average of 2.5, or midway between High Milestone and Milestone. Students scored best on SLOs #5 and #3 and least well on SLOs #1 and #6. As noted earlier, part of the difficulty was that several theses reflected the issues of theses written without a focus on more than one religious tradition or with too much emphasis on a second discipline.

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MA in Finance

[Student Learning Outcomes: 10](#)

Majors in 2011: 12

Assessment Methods: A variety of metrics as explained below

Evaluation: First cycle completed fall 2010 by Economics and Finance faculty.

The lone graduate degree program at Claremont McKenna, the MA in Finance program is unique in its objective to adhere to the College's mission while providing advanced and marketable training in finance. The faculty developed 10 student learning outcomes to frame its departmental objective. Graduates will be able to:

- SLO #1, Demonstrate an understanding of the theory and practice of corporate finance from a managerial perspective.
- SLO #2, Perform financial statement analysis and corporate valuation for informing business decisions.
- SLO #3, Understand the roles of risk and uncertainty and imperfect information in rational decision-making.
- SLO #4, Develop a thorough grounding of asset pricing and portfolio management.
- SLO #5, Demonstrate understanding of the pricing and uses of standard derivative instruments.
- SLO #6, Demonstrate understanding of the elements of competition, strategic positioning, and the broader context in which the firm operates.
- SLO #7, Use state-of-the-art econometric modeling tools to improve decision-making.
- SLO #8, Have a working knowledge of modern financial databases and data analysis software.
- SLO #9, Present research and analysis in a logical and coherent manner in both oral and written communication.
- SLO #10, Be able to identify and analyze ethical issues in business and finance.

The MA program has adopted an evaluation cycle in which assessments are conducted at the conclusion of the spring semester, results are compiled over the summer and in depth analysis and conversation regarding the results' impact on the program occurs in the fall. The department completed its first full cycle of assessment in spring 2010. The program's assessment committee consisted of Professors Darren Filson, Eric Hughson, Lisa Meulbroek, and Joshua Rosett. Senior Associate Dean of the Faculty Jerome Garris also participated in the committee's discussions.

The department faculty used three main devices (2 indirect and 1 direct) to help them assess learning outcomes and improve the program. First, the professors teaching the graduate courses conducted mid-semester evaluations. The format of the evaluations varied by course according to faculty preferences, and the purpose of the evaluation was solely to improve the course. We have attached the most basic format of the evaluation form. In follow-up conversations (particularly involving courses that had not been taught before), several faculty members described how they learned a lot from the mid-semester evaluations, and expect several changes in course content as a result.

Second, exit interviews were conducted of all 2010 students in the program. The interviews lasted 20 minutes each. Students were provided the list of questions in advance and asked to focus attention on particular questions if appropriate. Subsequently, the members of the faculty teaching in the graduate program (Filson, Smith, Hughson, Meulbroek, Cronqvist, Rosett, and Yu; Barnea was absent) met to discuss the summary of the responses and to consider possible changes to individual courses and the curriculum as a whole. Discussion is ongoing, and while it is too early to summarize the changes that will be implemented, it seems likely that substantial changes in course content and the curriculum as a whole will result from the exit interviews and related conversations.

Third, the RDS assessment committee collected graded course materials from professors teaching in the graduate program in order to assess how well the current courses address the program's learning outcomes. The assessment method relies on questions, assignments, and exams embedded in the course material of each course. There is a close correspondence between the learning outcomes and the content of our courses, so this is a particularly suitable assessment method for the program. For each of the seven learning outcomes assessed in this cycle, the committee selected an appropriate question, assignment, or exam and summarized student performance using the rubric of a scale. The scale varies in appropriate ways given the nature of the graded content. In each case, a description was provided of how the graded material addresses the learning outcome, and faculty provided a summary of how students performed on the scale:

SLO #1: This is a broad objective, and we decided to use an entire exam from Professor Meulbroek's *FIN 330: Corporate Financial Management* to assess how well students met this objective. SLO #2: At the very end of Professor Rosett's *FIN 440: Advanced Accounting Analysis*, he had the students conduct a financial statement analysis. The assignment involved a complete analysis from start to finish based on data provided by the professor. As this assignment addresses the learning outcome directly, it is particularly suitable for assessment. On an 8 point scale, the average performance was 7.3, and the lowest score was a 7. RDS views a 7 as an acceptable level of performance on this scale, so the faculty believes this learning outcome has been achieved. However, Professor Rosett noted that early in the semester there was a wide disparity in student performance in his course, so the RDS faculty is currently discussing ways to better prepare students for advanced accounting.

SLO #4: RDS used two group assignments from Professor Hughson's *FIN 340: Investments* to assess this learning outcome. Students formed groups of two or three. The first assignment was designed to show how badly a mean-variance portfolio optimizer works when the inputs are past returns and past return correlations. Estimation errors cause allocations to place too much weight on assets with high sample means. Students performed well overall, but some made errors in the Sharpe ratio calculations. In the follow-up assignment, students worked through how to address the problems with the mean-variance optimizer by using a single index model to estimate average returns. Mean-variance optimization and single index models are fundamental to portfolio management, so these assignments are appropriate for assessment. On a 3 point scale, the average performance on the two assignments was 2.8, and the lowest score was a 2.5. We view a 2.5 as an acceptable level of performance on this scale, but Professor Hughson still plans to make changes to his course that will hopefully lead to fewer errors on similar assignments in the future.

SLO #5: To assess this learning outcome, RDS faculty used a group project from Professor Yu's *FIN 420: Asset Pricing and Derivatives*. Students formed groups of two or three. The assignment asks students to implement a binomial model of option pricing using Matlab. The students were given code provided by global-derivatives.com and asked to modify the code to examine the convergence properties of the model as the number of steps in the model is increased. The binomial model is one of the fundamental models of option pricing, and the exercise familiarizes students with the distinction between European and American options, which are two of the basic types of options. On a 10 point scale, average performance was 8.75, and the lowest score was an 8. The faculty views an 8 as an acceptable level of performance on this scale and does not anticipate programmatic changes at this time.

SLO #7: RDS faculty used an embedded exam question from Professor Filson's *FIN 320: Financial Econometrics* to assess this learning outcome. The exam question asks students to describe how to conduct an econometric event study from start to finish. Event studies are designed to estimate the impact of particular events on the value of affected firms, so they are particularly useful econometric procedures for informing decision making. The question asks students to discuss typical lengths of estimation windows and event windows and reasons for the lengths, the method for estimating abnormal returns, and how to construct test statistics to test hypotheses about cumulative abnormal returns. On a 10 point scale, the average performance was 8.8, and the lowest score was a 6. Given that this was an exam question rather than an assignment or group project

question, the faculty viewed an 8 as an acceptable level of performance, and all but one student achieved at least an 8 on this scale.

SLO #8: RDS faculty used a group project from *Professor Rosett's FIN 440: Advanced Accounting Analysis*. The project had students obtain data from Compustat and conduct an econometric analysis using Stata, the main econometric software package used in the Masters program. All groups completed the project correctly, so according to this measure this learning outcome as been achieved. However, Professor Filson noted that in Financial Econometrics, several students still had some difficulty with advanced modeling using Stata, so there is still room for improvement in student understanding of data analysis software.

SLO #9: RDS faculty used a writing assignment from Professor Smith's *FIN 430: Economics, Strategy, and Organization*. Each student had to prepare a five-page memo to outline the underlying economic factors that are important in assessing the choice of a major airline to acquire a regional airline (as opposed to managing the relationship using subcontractors). Students provided a rough draft, received feedback from Professor Smith and their peers (using a peer-review methodology developed in cooperation with CMC's writing center), and then provided a final draft. Based on the final draft, on a 3 point scale, the average performance was 2.55 and the lowest score was a 2. While the faculty considers a 2 to be minimally acceptable, it would like to see our students achieve scores of 3, and will consider ways to improve student writing in years to come.