

WSCUC Interim Report

Please respond to each question. Do not delete the questions. Insert additional pages as needed.

Name of Institution: Harvey Mudd College

Person Submitting the Report: Laura Palucki Blake, ALO

Report Submission Date: March 1, 2016

Statement on Report Preparation

Briefly describe in narrative form the process of report preparation, providing the names and titles of those involved. Because of the focused nature of an Interim Report, the widespread and comprehensive involvement of all institutional constituencies is not normally required. Faculty, administrative staff, and others should be involved as appropriate to the topics being addressed in the preparation of the report. Campus constituencies, such as faculty leadership and, where appropriate, the governing board, should review the report before it is submitted to WSCUC, and such reviews should be indicated in this statement.

Following HMC's Educational Effectiveness Review in 2011, the WSCUC action letter of July 5, 2011 was used as a guiding document in planning for this interim report. The past three and a half years have seen faculty, program and department chairs, as well as the Assessment and Accreditation Committee, ad hoc Core Curriculum Working Group, the Division of Student Affairs, Faculty Executive Committee, and Office of Institutional Research and Effectiveness hard at work discussing and implementing practices, assembling data and reviewing policies, all of which serve to expand and our commitment to institutional effectiveness, diversity, and our capstone experiences.

The interim report narrative was drafted by Laura Palucki Blake, Director of Institutional Research and Effectiveness and Accreditation Liaison Officer with assistance from Lisa M. Sullivan, Willard W. Keith, Jr. Fellow in the Humanities, Professor of Economic History and Chair of the Faculty and Jeffrey D. Groves, Professor of Literature and Vice President and Dean of the Faculty.

Once the initial draft of the report was completed, it was shared with President Maria Klawe and members of the President's Cabinet as well as with the Assessment and Accreditation Committee, the Faculty Executive Committee, and members of the Division of Student Affairs. The draft was revised as appropriate. Although the Board of Trustees did not review this report, the board has received regular reports on the College's progress in the Educational Policy Committee and in meetings of the full Board of Trustees.

List of Topics Addressed in this Report

Please list the topics identified in the action letter(s) and that are addressed in this report.

- 1) Continued Progress in Implementing the College's Commitment to Gender and Ethnic Diversity
- 2) Educational Effectiveness
- 3) Capstone Courses

Institutional Context

Very briefly describe the institution's background; mission; history, including the founding date and year first accredited; geographic locations; and other pertinent information so that the Interim Report Committee panel has the context to understand the issues discussed in the report.

Harvey Mudd College (HMC) is an undergraduate college with a mission to educate scientists, engineers and mathematicians whose preparation in the humanities, social sciences and the arts enables them to assume leadership in their fields informed by a clear understanding of the impact of their work on society. HMC was founded in 1955. The first class of 48 students and seven faculty arrived in 1957, and the first bachelor's degree candidates graduated in 1959. HMC is a member of the Claremont Colleges, a consortium of five undergraduate and two graduate institutions located in Claremont, CA, and has been accredited by WSCUC since 1959. Currently, HMC offers nine undergraduate majors in STEM fields, as well as options to declare an independent program of study or design an off-campus major.

A low student-faculty ratio permits faculty and students to work together closely, notably in the college's summer research and Clinic programs. In addition to the nine program majors within disciplines, the curriculum is composed of two other components: the Core Curriculum, and the program in Humanities, Social Sciences and the Arts.

The "Core" as it is known, is a highly-coordinated and common set of courses which provide a foundation for advanced study. The Core includes: three semesters of mathematics, two and one-half semesters of physics, and a related laboratory, two semesters of chemistry and a related laboratory, an interdisciplinary "Core lab" selected from a rotating set of offerings, a half- semester writing course, a course in critical inquiry offered by the Department of Humanities Social Sciences and the Arts, and one course each in biology, computer science, and engineering. Students move through the Core as a cohort, which along with our Honor Code, facilitates a culture of collaboration and teamwork. Students must attempt all of their Core courses by the end of their fifth semester, and most students complete their core coursework by the end of their sophomore year. A faculty member serves as the Core Curriculum Director.

The program in Humanities, Social Sciences, and the Arts is one of the distinctive aspects of HMC. From its inception, the College has regarded a strong grounding in these areas to be an essential part of the education of engineers, scientists and mathematicians. In addition to the Common Core course, students must complete ten full semester courses in a coherent HSA program. This HSA program must include two key elements: a distribution of courses in different disciplines that exposes students to the varieties of intellectual approaches that inform the humanities and social sciences and concentration of courses in a single discipline or in an interdisciplinary field chosen from the distinct areas of liberal arts study offered at The Claremont Colleges.

In the fall of 2015, there are a total of 815 undergraduate students enrolled at HMC. Included in that total are 214 entering first year students. Nearly half (47%) of the student body is women, (46% of the first year class); Students underrepresented in STEM currently make up 19% of the HMC student body, (and 30% of the entering first year class). Of the fall 2014 cohort, 96% of first-time first year students returned for their second year of study.

Response to Issues Identified by the Commission

This main section of the report should address the issues identified by the Commission in its action letter(s) as topics for the Interim Report. Each topic identified in the Commission's action letter should be addressed. The team report (on which the action letter is based) may provide additional context and background for the institution's understanding of issues.

Provide a full description of each issue, the actions taken by the institution that address this issue, and an analysis of the effectiveness of these actions to date. Have the actions taken been successful in resolving the problem? What is the evidence supporting progress? What further problems or issues remain? How will these concerns be addressed, by whom, and under what timetable? How will the institution know when the issue has been fully addressed? Please include a timeline that outlines planned additional steps with milestones and expected outcomes. Responses should be no longer than five pages per issue

Progress in Implementing the College's Commitment to Gender and Ethnic Diversity

Diversity at the College was one of the primary themes of our Educational Effectiveness Review (EER). When the WSCUC team visited HMC in March of 2011, the College acknowledged that progress was needed in recruiting and retaining a diverse group of students. HMC is steadfastly committed to that effort, as well as to creating and sustaining an environment that contributes to success academically, socially and professionally. At the time, many new initiatives were being discussed or were in their beginning stages and much of this work continued and deepened since the EER visit.

Recruiting and Retaining Diverse Students, Faculty and Staff

The College has sustained its progress in recruiting a diverse group of students, achieving a new milestone in the fall of 2015, when we enrolled the most diverse entering class in the College's history. As can be seen in Appendix A, of the 214 entering students, 18% identify as Hispanic or Latino and 5% identify as African American. We have also seen a considerable increase in students who identify with more than one race or ethnicity (12%). Women make up 46% of this class, maintaining our previous gains in the representation of women. The College continues to welcome a larger number of first generation students (12.6% in 2015 as compared with 11.7% in 2014); and the international students in this class (12%) represent considerable diversity as well, hailing from 14 countries. Overall, the campus make-up is very different than in 2011 when White students were the plurality (58%, compared to 38% today).

Enrolling a diverse class starts with a diverse applicant pool, and the shift in our demographics is directly related to multiple years of efforts by staff, faculty and current students to increase the visibility of HMC in multiple communities and to build access pathways to our institution. We closely monitor our recruitment and admission numbers, and as is detailed in Appendix B, there has been a shift in each stage of our admission process. The number of applications has grown by 50% in the past 5 years, and while some of this increase in applications has come from White and Asian males, we have seen substantial increases in students who traditionally have been disenfranchised by highly selective liberal arts colleges - first generation students, African American and Hispanic/Latino students. Given HMC's role as a college offering only STEM degrees, we are also diligent in recruiting women, and are gratified to see that the increase in applications from women has outpaced the overall increase in applications, and that we have female enrollment numbers that approach gender parity. While we will continue to expand and develop our efforts to attract all qualified prospective students, the increase in the number of applicants from these

groups has made it possible for us to offer admission to and enroll a larger number of underrepresented students.

Our faculty take a very personal approach to encouraging underrepresented minority (URM) students and women to enroll at HMC. We know from research, and from our own admissions questionnaire results (discussed later in this section) that personal interaction with faculty is important in recruiting diverse students. Our faculty make themselves not just visible but available at events, they regularly open their classrooms and offices to prospective students, they stop to talk when campus tours pass them by, and they correspond with prospective students via email. In 2012, Assistant Professor of Computer Science Colleen Lewis organized faculty to call admitted URM and first-generation students. The impact of this one effort resulted in a greater than expected yield of these students, and as such has continued each year since.

The Office of Admission has woven discussions about diversity into every aspect of their work. For example, when discussing the results of our Admitted Students Questionnaire, which is administered annually to matriculating and non-matriculating students, results are disaggregated to see if there are patterns among matriculating and non-matriculating URM students that should inform our practices (see Appendix C). In 2014, the admission office conducted a survey with URM alumni to better understand how to recruit and support URM students. The results of this survey have been used to inform programming and to highlight aspects of HMC and The Claremont Colleges that our alumni tell us positively impacted them during their time on campus.

For example, one of the initiatives that was in its beginning stages in 2011 was the Future Achievers in Science and Technology (FAST) program. The FAST program offers high school students from populations that are traditionally underrepresented in the STEM fields (science, technology, engineering and mathematics) an opportunity to experience Harvey Mudd College. The college pays to bring these students to the campus, and participants stay overnight in one of our residence halls, take a campus tour, sit in on classes, complete an interview with the Office of Admission, participate in a hands-on computer science workshop and discussions regarding admission policies, financial aid opportunities, campus resources and the benefits of pursuing a technical degree at a liberal arts college.

Since 2012, HMC has run 3 FAST sessions every academic year - two in the fall and one in the spring. Limited to 35 students a session, the FAST program has been effective in attracting underrepresented students to HMC (See Appendix D). On average, 64% of FAST participants go on to apply to HMC. Of the FAST participants who apply, acceptance rates vary by session (from 46% to 100%¹), and of the FAST participants offered admission, 30% have enrolled at HMC.

Because of their demonstrated academic success and leadership potential, FAST participants are particularly encouraged to apply for the [President's Scholarship Program](#), our most prestigious merit award. President's scholars are selected for their leadership potential as well as academic achievement and receive full-tuition scholarships, renewable up to four years. As of 2014, there have been 49 Presidential Scholars, and 28 of them were FAST participants (57%).

¹ The fall and spring FAST programs have slightly different motivations. Fall FAST is for high school seniors fully engaged in the admission process, whereas spring FAST is primarily outreach to high school juniors.

Three additional recruitment efforts warrant mention. HMC has also been more targeted in the purchasing of search names from a variety of sources to address our institutional priorities and to complement our selection process. Specifically, we've fine-tuned our parameters (at times narrowing and at times widening them), expanded our timing of when we purchase names, and have created publications that better align with the concerns of our targeted populations. Second, HMC provides travel vouchers to students who qualify to help defer travel costs to visit campus. These vouchers typically cover 75-80% of the costs of travel. Finally, in February of 2016 we will be launching the Women's Introduction to Science Technology Engineering and Mathematics ([WISTEM](#)) program, to be even more targeted in our outreach to girls by encouraging high school junior girls to gain a better understanding of the fields of science, engineering and mathematics.

Our Summer Institute (SI), which is discussed in more detail below, also has become a contributing factor to the diversity of our student body. A survey of SI participants conducted at the end of each year, suggests that the SI has become an important factor for some students in choosing to come to HMC (Appendix E).

We take very seriously the words in our strategic vision: "excellence and diversity at all levels." For HMC, excellence and diversity go together. To quote Vice President of Admission and Financial Aid, Thyra Briggs, "It is not excellence or diversity, it's excellence and diversity." To that end, we have also engaged in efforts to ensure the success of our students once they arrive on campus.

Students' retention from first to second year as well as 4 and 6 year graduation rates, in accordance with WSCUC annual reporting requirements, are available on our [website](#), and reported in Appendix F. These data are presented for entering first-year cohorts from 2004 to 2009, and are disaggregated by gender and ethnicity. The data in this table suggest that HMC students' first-to-second year retention rate remains very strong across all student groups. The first-to second year retention rate for all HMC students in the fall 2012 cohort was 99% for all students, regardless of ethnicity or gender.

As noted in previous retention and graduation rate analyses, departures continue to occur more commonly between the second and third year at HMC, particularly among Black and Hispanic students. When considering these trends, it is important to note that HMC's small enrollment size yields even smaller enrollments of traditionally underrepresented groups. Therefore, among Black students, a decrease in retention rates by 50% may, in fact, represent the attrition of one or two students, as was the case with the 2008 first-year cohort of Black students. Ultimately, while the data illustrate that HMC 4- and 6-year graduation rates continue to improve overall, the data suggest that there remains room for improvement. While it is difficult to account for students who leave HMC simply because they realize that they no longer wish to pursue studies in a STEM field, we have a responsibility to our students to provide the academic, personal and community support needed to encourage their completion of an HMC education.

Recruiting Faculty: The hiring of new faculty is another of the avenues we as a college have paid particular attention to with respect to diversity. In 2015-16, 42% of our faculty (48/114) are women; and 28% of (32/114) the faculty are underrepresented minorities.

One important factor in the discussion of faculty hiring is the small size of the College, we hire on average 5 full time tenure track faculty members a year, most of whom are replacement hires in existing

full-time tenure track faculty lines. Since 2011 we have completed 24 new tenure-track hires². Of those 42% (10) were women and 25% (6) were underrepresented minorities. For our contingent faculty, progress in new hires has been more varied over time, as can be seen in Appendix G.

In order to further supplement the procedures for recruiting tenure-track faculty that are described in section 4.2 of our Faculty Notebook, in July of 2015 The Dean of the Faculty, Jeff Groves, further delineated those procedures with the memo found in Appendix H. This memo describes our commitment to diversity, spells out specific procedures and processes to ensure a diverse applicant pool for faculty searches, and makes explicit the expectation for involvement of both the Associate Dean for Diversity (Darryl Yong) and the Associate Dean for Institutional Diversity (Sumun Pendakur) in the faculty hiring process. Both the Associate Deans have been increasingly involved with departments as they search for new faculty, and the memo serves to codify that commitment.

Given the quantity and pace of the changes in diversity taking place at HMC, the changes that have come about as we have worked to create a campus climate in which all members of our community feel welcomed, valued, and included have been the most encouraging and exciting part of our progress. Below we detail three of the central initiatives that comprise the main infrastructure that ensures our students, faculty and staff find support to thrive academically, professionally and personally at HMC.

The Office of Institutional Diversity

Since the review team visited campus, the Office of Institutional Diversity (OID) has put in place intentional programming to move our campus towards the goal of realizing the advantages of a diverse learning community and help develop the intercultural skills that students, faculty and staff need to succeed in our increasingly diverse environment. OID has engaged the HMC community in continued discussions about individual and group differences and how those differences strengthen our learning environment. Through its three-pronged mission of “awareness, allyship and action”, OID is intentional in its development of programming, learning outcomes, and its work shaping the curriculum to help all members of our community leverage the possibilities of a diverse learning community.

OID offers a number of educational series: *Identity Intersections*, which provides faculty an opportunity to reveal and discuss aspects of their lives with students; *Chew on This*, a lunchtime lecture and cultural competence series; *Voices*, which explores research and theory, blended with counterstories of Mudd students faculty and staff, and *Social Justice in STEM*, which focuses on ethics and issues such as GMO’s or drone technology. Each semester, OID offers a throughline series that focuses on topics ranging from campus climate and activism to the history of the diversity of inclusion. *Building Bridges*, is OID’s 6 week cultural competence and communication program for student cohorts. Additional programs include the faculty/staff book club, National Coming Out Day and Transgender Day of Remembrance, among others. During the 2014-15 academic year, OID provided a total of 36 workshops, seminars and presentations on issues of diversity, inclusion and social justice, and served 1,036 students, staff and faculty. A list of the range of events and programs and details about specific programming events can be found in the OID Impact Reports (Appendix I).

Through these opportunities, OID offers students, faculty and staff the skills, training and space for dialog to support one another as we pursue an inclusive community. Assessment of the impact of each of these

² Some of these hires were to fill the same open faculty line multiple times

programs is ongoing, and in 2014-15, 95% of respondents indicated they had a better understanding of the topic discussed in the program; 98% indicated they were willing to educate others about the topics in events and workshops; and 98% reported they planned to use the knowledge they gained to take action at Mudd and beyond.

In addition to programming, OID develops topical opportunities designed for the entire campus which engage us with critical topics and key issues as well as build advocacy skills. For example, in 2014-15 they provided training for faculty and staff on topics as varied as unconscious bias, conflict resolution and imposter syndrome.

OID staff members also coordinate the leadership and community aspects of the Summer Institute (SI) described below. The experiential workshops and group activities run by OID serve to reinforce the connections and support networks here as a “web of support” that includes academic, personal and professional aspects of our students’ lives.

OID staff mentors and advises many student organizations, including: Exploring Pan-Asian Identity and Culture (EPAIC); Black Lives and Allies at Mudd (BLAM), Society for the Advancement of Chicanos and Native Americans in STEM (SACNAS); Society of Professional Latinos in STEM (SPLS), People Respecting Individuals Sexualities at Mudd (PRISM), Asian Pacific Islander Sponsor-Mentor Program (APISPAM), and FEMUnion, the feminist student organization. It is worth noting that BLAM, SPLS and EPAIC are groups that started or relaunched in 2014-15 because of a critical mass of students, renewed interest and support from OID. These groups are vibrant and their events are attended by students from beyond those affinity groups.

The following are additional programs and offerings that have been undertaken to support our efforts to maintain a thriving, diverse community:

- Mudders Mentoring Mudders (M³) was conceived in 2011 by alumna Lupita Bermudez ‘09. M³ is designed for alumni, faculty and staff to provide support for students from sophomore through senior years. The program starts in the fall of their sophomore year, when many of the support mechanisms in place during the first year fall away, and the demands of coursework increase in intensity. Assessment of mentors and students in the program suggests that the program helps students find support, boosts students well-being and a sense of connection with similar motivated and high-achieving individuals.
- Teal Dot – provides bystanders the tools and confidence to become engaged and proactive in situations involving sexual assault and harassment where intervention is warranted. More than 120 HMC students have participated in Teal Dot since fall 2014 including proctors, mentors, dorm presidents, and other student leaders.
- Starting in 2015, programming specifically for parents of first generation and international college students was added to our Parent Orientation.

In the spring of 2016, Associate Dean for Institutional Diversity Sumun Pendakur and Professor and Associate Dean for Diversity Darryl Yong are offering a new course "Social Justice and Equity in STEM and Beyond" for HMC students. Even though this course was added just one week prior to the start of the semester, 43 students are currently enrolled in this course. This level of interest demonstrates a significant interest and awareness in these kinds of issues that we believe has been brought about by the work of many different people on campus.

In order to support the mission, vision and increasing use of OID resources, in the fall of 2015, plans were made to expand the OID space to include private offices and a large cross-cultural center. The new OID is a living room space available to all students for activities such as student group meetings, study groups, TV/movie showings and group meetings with OID staff and guests. In order to facilitate the sensitive conversations in which OID staff often engage, the new OID includes private offices for Deans Sumun Pendakur and Angelica Ibarra and for Graduate Intern for Inclusion Jennifer Rodil. Renovation of the designated space was completed over winter break, and the new and expanded OID opened its new space in January 2016.

In the fall of 2016, students designed and proposed a living and learning community (LLC) dedicated to issues of social justice, diversity and inclusion. The community, which was approved and launches next fall, will live together in a designated area of Drinkward residence hall. The LLC will provide both formal and informal opportunities to increase students' awareness of their role in and impact on society.

Finally, after campus-wide discussion in the fall of 2015, a new leadership position was added to the President's Cabinet in December of 2015. Associate Dean for Institutional Diversity Sumun Pendakur has agreed to serve on the President's Cabinet, and in this expanded capacity will continue to work to develop an inclusive and supportive community as well as to advise the Cabinet in all areas.

The Summer Institute

The Summer Institute (SI) is another initiative that has impacted the culture and climate of HMC as we become a stronger, more diverse institution. This program is a revised version of an older SI program dating back to the 1990's. Because this new incarnation was just getting underway at the time of our EER in 2011, we discuss it in depth here. The goals of SI are:

- To increase retention among participating students
- To promote academic success
- To foster leadership skills, social justice involvement and awareness
- To increase overall satisfaction with HMC

HMC's Office of Admission assists in the recruitment and selection of SI participants. Students are identified as candidates for SI if they have one or more of the following characteristics: lower tests scores, but a record of strong achievement in high school; first generation student; and/or coming from a high school that has a relatively low number of graduates attending four-year colleges. In looking at the characteristics of the 2011-2014 cohorts in Appendix J we can see that SI is more racially diverse than the student body and SI students tend to come from families with greater financial need. For example, in 2014, more than half of the first-generation students in the incoming class participated in SI.

The current iteration of SI is 4 weeks long and emphasizes academic preparation while enhancing its leadership, team-building, and multicultural literacy components. The program also has a significant second summer component, with participants having the option of a guaranteed position in the college's summer research program, or of enrolling in the summer math program. In the summer math program, students take part of the sophomore core math curriculum without the interference of other coursework. To date, the Andrew Mellon Foundation has supported 4 cohorts of students through both first and second

summer activities. Additional funding from Mellon will support some of the activities of a fifth cohort, as we move to more sustained sources of support.

SI was designed to align closely with HMC's Core curriculum. Students in SI complete Introduction to Academic Writing, or Writ 1, an intensive seminar designed to help students develop their writing and critical inquiry skills and provides students with effective writing strategies and conventions that apply across the various disciplines taught at HMC. By completing Writ 1 in the summer, students reduce their course loads by 1.5 units in the fall of their first year. They are not allowed to take additional courses that semester, freeing up extra time for their fall coursework, leadership opportunities and co-curricular activities.

SI also contains significant student development and community engagement components that are designed to help students grow holistically in their ability to connect with one another and deepen their understanding of diversity, identity and leadership.

Data on academic performance (e.g., GPA's, exam scores in key first-year courses, math diagnostic scores), as well as assessment regarding leadership skills, and social justice/multicultural competence are found in Appendix K. Additionally, there is strong evidence from our Cooperative Institutional Research Program (CIRP) and National Survey of Student Engagement (NSSE) data that SI helps students become more understanding and tolerant of different beliefs and people from other races.

Taken together, the findings suggest that SI plays an important role in acculturating students to the HMC community and college life, helping them form close relationships with people who can provide support, and improving their leadership skills, multicultural competencies, and social justice awareness. These findings were shared with the Board of Trustees at their January 2015 meeting, who recognized the impact that SI has made on HMC and expressed their support in continuing the program. We remain committed to continued use of feedback and evaluation to improve the program. To that end, in 2016 we're implementing a new model using a mathematics course as the centerpoint instead of the Writing course, and increasing the number of participants from 24 to 30.

Office of Health and Wellness

For eight years, Harvey Mudd has had its own emotional health counselor to supplement the offerings in the Claremont Consortium and to recognize the differing needs of HMC students. In 2012, the now Division of Student Affairs recognized a growing need for psychoeducational prevention efforts to complement intervention-focused support for students. In January of 2013, Associate Dean for Student Health and Wellness Dr. Qutayba Abdullatif (Dean Q) was hired to lead the effort of establishing an initiative to increase and expand student personal and academic wellness based on the principles of positive psychology. In the following three years, Dean Q worked towards establishing an Office of Health and Wellness (OHW), which was launched in August 2015.

With a current staff of two (Dean Michelle Harrison was hired in Fall 2015), the office currently engages in relevant prevention and intervention efforts through individual, couples and group support meetings, outreach efforts to students, faculty and staff. The OHW runs empirically-supported prevention and training campaigns based in the public health and clinical psychology fields. OHW recognizes diversity as essential element in its mission, and through applied programming, OHW defines diversity globally to encompass marginalized groups in addition to racial, and ethnic groups. Operating within an 8-

dimensional model of wellness which includes cultural wellness, OHW is intentional about including marginalized student groups in its programming. Some examples include working with students with Disabilities (Dean Q also currently oversees ADA accommodations on campus and supervises 2 doctorate student interns who conduct free psychoeducational assessments to students); Trans-students; survivors of sexual assault; international students (OHW employs a part-time international student coordinator); religious students (a third graduate assistant is tasked with spiritual wellness programming on campus); students with mental health concerns; among others. OHW, therefore, complements OID's efforts to encompass additional diversity-related co-educational programming. For 2014-2015 academic year, a total of 16 programs were offered to students with approximately 974 instances of student participation. (See Appendix L for a list of recent programming.)

Finally, our analysis of data collected from multiple national surveys (the CIRP Freshman Survey, The College Senior Survey and the National Survey of Student Engagement) provide us with considerable insight into the degree to which our students feel academically, socially and emotionally engaged with the college. As can be seen in Appendix M, there is considerable positive evidence pointing to our students' experiences and campus climate. Perhaps the most telling is the finding (from the 2015 CIRP Freshman Survey) is that our students are increasingly arriving on campus from more diverse backgrounds, and have high expectations for diverse interactions while in college.

At HMC we have, and will continue to place a high priority on increasing the enrollment of students from underrepresented populations. Success in this regard required an expansion of the pool of qualified applicants from underrepresented populations. In turn this necessitated a plan to ensure that the college was able to support the more diverse student body. The infrastructure to support diversity on campus offered through the Office of Health and Wellness, The Office of Institutional Diversity and the Summer Institute, has changed our conversations about difference and allowed for honest engagement around diversity on campus, but our work is not complete. We continue to have conversations about the centrality of good teaching practices to diversity. They help all students, but are absolutely essential for first generation students and students underrepresented in STEM, who may feel that they are outsiders in a new and foreign environment. Our ability to focus on the individual student, combined with high expectations and appropriate scaffolding, can help create a sense of belonging that enables their talent to shine. We've known what works at least since Chickering and Gamson (1987), but as our work demonstrates, the issue is implementation. Vice President for Admission and Financial Aid, Thyra Briggs, has engaged this issue directly with the Department Chairs Committee (DCC), asking how we as a college should define "success". These discussions represent the creation of a stronger feedback loop between faculty and Admission, and have resulted in several avenues for investigation - among them that faculty and Admission participate in a case studies exercise so that faculty can see the materials the admission staff have available to them and advise us on which pieces should receive the greatest emphasis in the process. Because feedback like this is best if it goes both ways, Admission has also indicated it would be helpful if faculty would articulate in which areas our students are struggling most, and where within the application process an indication of a lack of preparation in those areas might be evident.

While these more diverse classes are still in the early years of their time at Harvey Mudd, the college is already seeing the anecdotal effects of a more diverse community through the kinds of conversations that are taking place throughout the campus.

Educational Effectiveness

Assessment at HMC is a multifaceted and comprehensive process. The first facet is the assessment of learning goals related to the College's mission. Second is the assessment of the learning outcomes for our Core Curriculum. Third is our assessment of the learning outcomes within our academic departments. Finally, the fourth component is the assessment of the outcomes articulated by student affairs. At any given time, assessment is taking place within all of these components in some form.

In 2011, HMC had already built the framework and infrastructure for assessment on the academic side of the house. All academic departments had learning outcomes and conducted routine assessment studies. The college had undertaken assessments of its new Core Curriculum, a pilot writing course (Writ 1) and its capstone courses, and we had made improvements on the basis of our findings. The Assessment and Accreditation Committee and the Office of Institutional Research worked together to ensure that assessment was on track to become a routine part of the College's work. The majority of departments had completed one program review, leading to course and program revisions.

However, assessment and the processes associated with it were still relatively new, and work done within our framework was not uniform in quality. Sometimes, we struggled to make use of assessment results, as integrating and/or comparing across departments was complicated. Finally, while the level of engagement on the part of the faculty was commendable, it was noted the assessment of the co-curricular aspects of the college was inconsistent.

Since that time, our assessment work has continued. As the practices associated with assessment have become more routine and comfortable for us, we have centralized and made more accessible our assessment work on the HMC website. Under the "Assessment of Student Learning" tab, we now have considerable information for internal and external audiences in one location. [Institution-wide and Core Curriculum outcomes](#) are delineated. While all departments list learning outcomes on their departmental webpages, we added a central access point here as well. We expanded and continue to update our assessment [examples and resources](#) as faculty and staff ask for more information to support their needs. We share the results of our assessments both by [instrument](#) and by Core learning outcome. This visibly demonstrates HMC's commitment to making public the results of our assessments, but perhaps more importantly, it has changed the tenor and depth of our conversations. We have learned as an institution to use these results to facilitate connections between assessment and our [data on student achievement \(e.g., graduation and retention rates\)](#) and to use both to inform our discussions of institutional effectiveness. For example, five years ago faculty members would not have cited our NSSE results in discussions about writing or have asked for assessment results in the discussion of the Core Curriculum, but now, that is routine.

Assessment in the Co-Curriculum

The commission also noted our need to "give same attention to quality assurance in student life and other areas that it has provided for the academic programs" and recommended that "the practices of assessment and program review be applied to the co-curricular aspects of the college."

Since 2011, student affairs at HMC has undergone considerable transformation. Most noticeably, the student affairs staff has reorganized and expanded to 16 FTE. In the fall of 2011, with the hiring of Mark Ashley as Registrar and Assistant Vice President of Student Information, the Registrar's Office was

moved out of student affairs and put under academic affairs. The increase in student affairs staffing can be attributed to the founding of the Office of Community Engagement, the addition of assistant deans/director-level positions in Residence Life, Health and Wellness and Student Activities, the addition of a second full-time administrator, and funding for three graduate assistants. This growth in staffing has allowed student affairs to expand programming and engage in strategic planning and assessment. More recently, in the summer of 2015, Vice President for Student Affairs and Dean of Students Marguerite (Maggie) Browning in September 2015 announced her departure, which set into motion considerable change in the leadership of Student Affairs. Jon Jacobsen, Professor of Mathematics and Associate Dean for Academic Affairs, was appointed to the role of Interim Vice President for Student Affairs. Leslie Hughes was appointed to serve as Interim Dean of Students, reporting to Jon, and Bob Cave, Professor of Chemistry, stepped in to fill Jon's position as Interim Associate Dean of Academic Affairs. In the fall of 2015 President Klawe convened a committee to engage in a consultative process with the Harvey Mudd community to determine whether these interim appointments should be extended beyond this academic year and to gather input on student affairs more generally. The process concluded in December of 2015 with Jon Jacobsen's appointment to a five year term as Vice President for Student Affairs and Dean of Students and Leslie Hughes' appointment as Assistant Vice President for Student Affairs.

During this time of rapid change, student affairs has continued to place student growth and development at the center of its work. These efforts have yielded positive results, with all offices developing [student learning outcomes](#) that align with their mission and vision statements and serve to support the overall mission and vision of student affairs. Each office annually completes an Impact Report, which serves multiple purposes. Impact Reports highlight the work of the office; increase visibility and understanding of the office's impact on student learning and development; routinely lead to program improvements; foster discussions of the interrelatedness of our curriculum and co-curriculum; and increasingly have implications for planning and budgeting. [Impact Reports](#) are made public on office webpages (Appendix N.)

In fall of 2015, Dean Jacobsen led the newly renamed Division of Student Affairs (DSA) in a comprehensive program review, including a self-study and external review (See Appendix O). Given the transition, this review encompassed the entire division (Institutional Diversity, Community Engagement, Health and Wellness, Housing and Residential Life, Career Services, and Student Activities) and asked the reviewers to focus on strategic opportunities, including whether the division had relevant key performance measures and the extent to which DSA is effective in determining and tracking intended student learning and development outcomes. The external team concluded "the DSA team is meeting and exceeding many of the 'best practices' in the field [following the] Principles of Good Practice in Student Affairs espoused by the National Association of Student Personnel Administrators (NASPA)". The team noted the remarkable ethic of care and overall responsiveness of DSA to students and faculty, as well as their strong collaborations with academic affairs, which the team identified as a hallmark best practice in the field and an area in which HMC particularly excels. The team acknowledged that much of the work of DSA is proactive support for individuals (and the student body as a whole) and increasingly, crisis response for the acute needs of individual students, which can be hard to assess or to assert with confidence that a specific intervention prevented or ameliorated a crisis. However, DSA should identify and evaluate key performance measures to ensure effective deployment of finite resources and the team report provided valuable feedback to help DSA move forward in this direction, including strengthening the partnership with Institutional Research in all of the DSA offices.

We have made considerable progress in establishing assessment within the DSA. We plan to use the results of the program review to deepen the DSA's strategic, systematic and sustained approach to student growth and development. Drawing on what we know about assessing academic and student life programs and including student services, we will continue to build a culture of assessment that fully integrates the co-curriculum within our educational mission and encompasses the entire College.

Additionally, the Writing Center and its affiliated Academic Excellence Program, which are part of the Office of the Dean of the Faculty, but not explicitly included in our academic program review cycle, regularly assess the programming offered to students. These annual reports are shared with the Dean of the Faculty and the Core Curriculum Director. Examples of these reports are found in Appendix P.

While there has been considerable progress with respect to assessment overall, two events altered our expectations with respect to our trajectory, and they warrant mention here. The first was the College's commitment to growing the student body from 800 to 900. The second was the results of the assessment of our Core Curriculum, described in detail below.

Assessment of the Core Curriculum

In response to its charge to assess the colleges' Core Curriculum, in the 2014-15 academic year, the Assessment and Accreditation Committee (AAC) prepared a detailed report drawing on multiple sources of data, both direct and indirect (Appendix Q). Overall, the AAC report suggests that since the introduction of the revised Core, the College has seen improvements in student diversity, retention, writing skills and scheduling flexibility. The results were not uniformly positive however, with the report highlighting a loss of mathematical proficiency, negatively affecting downstream courses, a loss of laboratory skill proficiency and unintended consequences of scheduling flexibility, specifically students using increased flexibility to start work on major requirements earlier rather than enrolling in elective courses (such as foreign language and Humanities electives) to the extent originally intended. This report was shared with the Faculty Executive Committee (FEC) and with the full faculty at the April 2015 faculty meeting.

The Core Curriculum Working Group (CCWG), led by Core Curriculum Director Tom Donnelly was charged with informing and leading faculty and student discussions of the issues raised in the AAC's report, including the prospect of adding back one unit of math to the Core, the experience in experimental science (lab) and the issue of what one unit in the Core represents (time in and out of class and what the Core requires of students). The working group has conducted and reported to the faculty on results of a student survey about adding a unit of math to the Core and the results of a faculty survey asking about adding math and the role of experimental science in the Core. Additionally, in the summer of 2015, members of the CCWG analyzed 5 years of time spent in and out of class for each Core course to understand the issue of workload in the Core Curriculum. (Appendix R). Taken together, the results of these analyses suggest the following conclusions: The mathematical fluency of our students should be increased; the second semester is overwhelming for many students (it's a forced overload for half the semester); many faculty support electivity in the first and second semester (because the current manifestation of *E4: Introduction to Engineering Design and Manufacturing* actually requires the second-semester elective because of the student machine shop space limitations); the current configuration of Core Lab is weakly supported; but there is some energy for a three-semester lab curriculum; however staffing it as an Interdisciplinary Core Lab would be problematic.

At the December 2015 faculty meeting the CCWG presented two models to advance faculty discussion about changing the footprint of the Core to provide for increased math fluency and to address the issue of student workload (Appendix S). The faculty discussions that this work facilitated enabled us to think more deeply about the ways the current Core satisfies both faculty aspirations and student learning outcomes. In particular, the two models provoked an important conversation about what might best guide us in our decisions about Core reform. At the same time, we heard passionate pleas from concerned faculty that we need to balance faculty desires for careful deliberation about Core with a responsibility to attend quickly to the extraordinary load that has become associated with the second semester of the first year curriculum.

In December of 2015, the FEC asked the CCWG to accept a new charge for the spring semester that focuses on immediate student needs. The CCWG is investigating the extent to which there are feasible, low-impact opportunities to reduce student workload in the first year spring schedule. By "low impact" we mean options that could be implemented with limited retooling of existing courses. The results of that investigation are expected to be shared with the FEC before March 2016 with the intention of bringing a proposal before the faculty before the end of the academic year for possible implementation in spring 2017.

While much of our assessment work has necessarily focused on understanding and addressing the issues delineated in the AAC report, our assessment of writing in the Core and beyond has continued. Those results, which summarize the work of several assessment projects over multiple years, including focus groups on Writ 1E (the writing course students who do not pass Writ 1 take second semester of first year), analysis of NSSE writing module results, and a sustainability analysis, were presented to faculty at the November 2014 faculty meeting (Appendix T). Overall the results showed that Writ 1 has a positive impact on writing not only in the first year, but throughout our student's careers.

Assessment of College Growth

In approving the growth of the student body from 800 to 900 at its November 2013 retreat, the Trustees resolved:

“The Cabinet should conduct a review, when enrollment has reached 850, of the impact of that growth on the College community, core values and resource needs. The results will be evaluated by the Trustees before proceeding with further growth.”

The current models assume we will exceed 850 students in the 2019-20 academic year. In order to provide trustees with an update prior to crossing that enrollment barrier, we have developed a process and timeline (Appendix U) that completes a data-driven review by the spring of 2019. In the spring of 2014, the President's Cabinet asked the FEC to work with standing faculty committees to develop indicators that would help us understand how college growth is affecting our key values, practices and infrastructure. That work progressed throughout the 2014-15 academic year, and the indicators were initially presented to those Board of Trustees in May, 2015. With minor additions and revisions, the indicators list (Appendix V) was accepted in September 2015. The indicators were then shared with the full faculty at the November 2015 faculty meeting for comment. As a result, several supporting documents were developed, all of which can be found in Appendix W.

We have established an iterative process that keeps our community in the loop about the effects of growth so we can manage change effectively and proactively. Two faculty committees, the FEC and the AAC have key roles in this process. The involvement of the AAC is important because this committee will continue to be our lead committee as we approach our next comprehensive review in 2021, and we anticipate our growth efforts to be central to assessment at the departmental and institutional levels, and coordinated with our annual WSCUC reports and our next accreditation visit.

In January of 2016 the Office of Institutional Research and Effectiveness began developing templates for data sharing that would allow for the analysis of trends and the aggregation of data across indicators and over time, and expects to start sending relevant data to committees in March of 2016. Committees should then be reporting the results of their analysis back to the FEC by April of 2016.

The growth decision has inspired considerable and continued discussion on campus. One particularly productive discussion was a broad conversation about the HMC mission, and was grounded in concepts and themes found in the Core Curriculum. The timing of this could not be better, as it gave us the opportunity to combine our discussion about growth with our work on the Core Curriculum and frame them in light of the 2013 revision of the WSCUC standards for accreditation.

WSCUC's 2013 Handbook of Accreditation requires colleges to address the "Meaning, Quality and Integrity of the Degree." In addition, the handbook now explicitly names five core competencies that are expected to be a part of the degree. As we moved forward with the assessment of the mission and Core Curriculum, we returned to WSCUC's core competencies of critical thinking, information literacy, quantitative reasoning, written communication and oral communication, all outcomes that are represented in our Core Curriculum learning outcomes, competencies that are central to our mission as well.

As an institution, we continue to move toward the "learning paradigm" and away from the "instruction paradigm." What we mean by this is that our focus is on student learning and we are working toward aligning our institutional priorities around the evidence we collect about that learning. As our evidence and capacity continues to grow, we expect this effort will only gain traction. Our Assessment and Accreditation Committee is connected to strategic discussions about our Core Curriculum and growth of the college, and we have worked to build explicit connections between our academic program assessment and our division of student affairs.

Capstone Courses

When the WSCUC team visited in March of 2011, they concluded that our capstone experiences (either a senior research thesis or a Clinic project) were an effective way to demonstrate mastery of many of departmental learning outcomes. However, our assessment of capstone work revealed that our capstone experiences did not reveal a significant engagement by students with the issue of the societal impact of their work.

The recommendation made by the team in this regard was that the College "broaden the definition of capstone projects and the learning outcomes that students are expected to demonstrate in order to place more emphasis on the social responsibility aspect of the mission." Reflecting on this advice, and believing that the capstone should not be the first or only opportunity for students to demonstrate their engagement with this issue, we have taken a more expansive view about where and when in their HMC experience our students make links between their technical education and its impact on society.

Experiential Learning and Community Engagement

In January of 2013, HMC established the Office of Community Engagement (OCE) and promoted Gabriela Gamiz to Director of Community Engagement. In August of 2013, Brian Gray was brought on as Homework Hotline Coordinator and in August of 2015, he was promoted to Assistant Director of Community Engagement. Together they have organized and developed coherent, sustainable community engagement at HMC. Since then, the OCE has worked to develop service-learning courses with faculty and established the Holden Faculty Fellows fund to support faculty in developing new service-learning courses. The OCE has also developed endowed funds to provide housing and travel costs for students pursuing unpaid summer internships with nonprofit organizations focused on social justice. The OCE offers a number of opportunities for students to become involved in their communities, such as Days of Service and Alternative Spring Break. The OCE is intentional in partnering with other offices, (e.g., Residential Life, Institutional Diversity) to provide training and support to students currently involved in community engagement efforts as well as those considering involvement. In a very short period of time, OCE has established that community engagement at HMC is more than one-time opportunities for our students. They promote sustained involvement that is driven by the needs and wants of local communities and stakeholders and asks our students to truly connect and extend their knowledge in ways that serve our community and instill a sense of civic identity and commitment.

In keeping with this mission and vision, The OCE has developed a set of learning outcomes that guide their work in the above areas. As a result of participation in OCE activities, students will be able to:

- 1) Assess the impact of their actions and societal role on the campus and broader community by:
 - o Explaining the benefits and challenges of various models of engagement.
 - o Describing the community in terms of access to resources; social-economic and educational backgrounds; and historical developments.
 - o Identifying how their efforts may affect the autonomy of the broader community.
- 2) Evaluate how their efforts benefit the community while preventing harm to community autonomy.
- 3) Contribute to an ethical relationship between the campus and the broader community.

One of the ways OCE promotes the connection between science and society is through the development of [courses with an engagement focus](#). In her role as Director, Gabriela Gamiz manages the logistical components of making a community partnership possible, and faculty report that logistical support from OCE provides them with the ability to focus on course content and pedagogical methodologies that more successfully integrate community engagement within class activities and assignments.

Working with Associate Director for Research and Experiential Learning (ADREL) Karl Haushalter, OCE also runs a workshop series for faculty interested in integrating experiential learning into their courses. Through a series of readings from the educational research literature, guest speakers, and discussions, the participants develop lesson plans that intentionally integrate disciplinary knowledge and the impact of one's work on society. The series also provides the opportunity for faculty to network with other faculty who share a common interests, learning from and with one another. Specific discussion have centered on the following themes: what is service-learning? its history?; how it is defined at Mudd?; building community engagement into the curriculum; initiating and sustaining community partnerships; reflection; and navigating obstacles and barriers in community engagement.

The OCE has grown HMC's [student internships](#) into a vibrant, impactful program. With the three new funding sources, we are able to award twice as many placements, adding 4-5 more students every summer. During their internship, students complete self-reflective journals chronicling their experience. Recognizing that these journals are an excellent authentic assessment of student's experience, the OCE has content-coded the journal entries and identified common themes:

- By the 8th reflective journal entry, 100% of the students understood the societal impact of their work. Some statements made by students were:

"I found that all of my work was devoted towards creating a more equal nation, a more equal world, so that people of all faiths can live in harmony and not worry that their religion puts them in danger of excessive violence, displacement, or death. I feel that whatever task I may have been working on, whether big or small, my work was for a greater purpose."

"The work that I did this summer was about returning the right to energy access, healthcare, and communication to communities that were lacking these things."

"I think that my work did help achieve a small victory in social justice. Being able to change someone's perspective in that way was definitely a victory in favor of achieving equality in food because education is the first step in change."

- At least 90% of students commented on the importance of the following areas in the work they were doing:
 - communication
 - listening to community needs and life stories
 - personal and professional identify formation

Again, the words of students seem particularly relevant here:

"I feel like I've grown immensely, intellectually and emotionally, in these five short weeks. I was so confused all year at Mudd ... it was quite a struggle trying to figure out what I want to do with my life. And being here has helped me solidify a potential IPS (Independent Program of Study) as well as future careers and internships."

"The learning curve was quite steep at the beginning of the summer, but these relationships helped me to overcome that and grow confident in my place within the organization. Once I realized this, I was much happier with my place in the organization, better able to communicate and work with the team, and allowed myself to contribute to my full capability."

Recognizing the opportunity to deepen the impact of this assessment, in the spring of 2016, the OCE began developing a rubric (adapted from AAC&U's VALUE rubric on Civic Engagement) in order to better understand how internships contribute to a student's ability to identify relevant knowledge from scientific fields; understand the factors involved in connecting that knowledge to make an impact in the community served; and be reflective about the aims and accomplishments of any actions that resulted.

The Homework Hotline is a free, over-the-phone tutoring service for students in grades 4-12. HMC students staff the hotline Sunday through Thursday from 6-9pm, and answer calls about math and science. The program employs about 40 students each semester via regular campus wages and work-study

positions. During the fall 2015 semester, the hotline took 1874 calls with a team of 38 students. To evaluate the impact of the homework hotline, tutors participate in a focus group annually. Results provide information about the quality of their experience and the quality of training, as well as the impact of their experience in their educational development. HMC tutors indicate an increase in their problem solving abilities, as well as an increase in their ability and comfort in communicating complex topics to others.

Reflection and evaluation represent critical components of all the programming done through OCE. Internal and external sources are constantly queried about the impact of community engagement efforts, and as a result we have strengths on which to build. OCE has clearly demonstrated in a very short period of time their impact on the community. The OCE will continue to work collectively on campus and with the broader community to educate and empower one another to make meaningful contributions to society, and is positioned to convey the impact that community engagement has on students' ability to articulate the societal implications of their work.

Integrative Experience

One of the places in our curriculum where the impact of science and technology on society was embedded in our curriculum was in our Integrative Experience (IE) requirement. A requirement in our Core Curriculum from 2000 until 2009, IE courses provided students with opportunities to integrate scientific or technical content with social consciousness in interdisciplinary courses. IE courses were offered across all academic departments, with the considerable involvement of our Humanities, Social Science and the Arts faculty, and they were frequently team-taught. Included in this category were courses that:

- included consideration of one or more issues involving the relationship of science or technology with contemporary society;
- were offered in parallel with clinic or research involving groups of students in critical reflection on the ethical and social issues involved in their projects and/or prior projects; and
- project-based courses that specifically address a societal need, in the performance of which students substantively consider the wider set of societal issues that create the context and need for their actions.

All IE courses/experiences required a final paper or project with demonstrable evidence of significant self-reflection and critical analysis, and an oral presentation of the work in a forum that allows open discussion of the work in a community setting. IE was extremely successful in generating new courses that were popular with students. In 2008-09, there were 23 courses that met the IE requirement offered at HMC, excluding courses offered at one of the other Claremont Colleges or independent IE projects. Assessment of IE courses indicated that even though the requirement was one IE course, roughly 40% of students took more than one, and that students in each major were about equally likely to take more than one IE course. Believing that the popularity of the courses indicated that faculty would continue to offer them and students would continue to take them even without an explicit requirement, in 2008 the Strategic Vision Curriculum Committee (SVCC), recommended to the full faculty as part of our Core revision that the IE requirement be removed. This was voted on and approved by the faculty in spring of 2009 and the requirement was removed for the class entering in fall 2009.

In the fall of 2015, Associate Dean for Research and Experiential Learning (ADREL) Karl Haushalter began an investigation into the impact of removing the IE requirement. Results, detailed in Appendix W, suggest that the number of IE courses taught has dropped from a high of 22 in 2008-09 to 5 in 2015-16.

Even including courses that were developed after the requirement was removed but would likely be eligible for the designation, we still see a considerable decrease in courses with an IE focus. While the courses offered remain popular and enrollments strong, this represents a diminished opportunity for our students to engage with faculty and peers about the moral, ethical and societal implications of the technical skills they are learning.

This analysis also looked at the impact the removal of the IE requirement had on student learning outcomes associated with the requirement. HMC administers the National Survey of Student Engagement (NSSE) regularly, and every three years, we participate in a consortium of Associated Independent Technical Colleges and Universities (AITU). The consortium adds 20 supplemental questions to the survey that ask students about the connection between their technical education and the impact of their work more broadly. These data are useful as it provides additional HMC data not normally available in a NSSE administration, but it also allows us to compare ourselves with a group of schools similar in mission and focus (see Appendix X for NSSE results).

Results from our NSSE data suggest to us that for first years and seniors, our technical skills (using math and using scientific methods) are consistently higher than AITU peers. With respect to the impact of our work on society and preparation for ethical decision-making, both HMC and AITU schools see lower means overall. HMC first years remain comparable with the other AITU schools on these items, but the same cannot be said for seniors. We were keeping pace, or even outpacing AITU schools during the time the IE requirement was in place (2003-2009). Now in 2015, as the first group of students to not have that requirement were surveyed, we see a marked drop in the reporting of those skills and abilities. Specifically looking at the data for seniors, we see that previous gains were not sustained for items relating to: recognizing conflicts of interest, identifying and disclosing factors that might endanger the public, being able to make decisions consistent with the health and safety of the public, understanding the professional code of ethics, integrating environmental sustainability, and understanding how their professional work might impact society.

As a result of this analysis, ADREL Karl Haushalter is currently drafting a proposal to open a discussion about the role of IE in our curriculum and how we might think about reintegrating these skills and abilities. Reinstating the IE requirement is not without debate within the context of the current structure of curriculum. The IE courses were largely team-taught, making them resource intensive. Currently Writ 1 is team-taught, and there has been discussion around altering the Core labs to be more integrative and multidisciplinary.

Another option besides a specific IE course requirement would be to increase the intentionality of these issues throughout the curriculum. Two departments have already made revisions in this regard. The required first-year Core chemistry course underwent an extensive revision in 2015-2016 and the new course, *Chem 23AB: Chemistry in the Modern World*, focuses on how chemistry relates to global and societal challenges. The Biology Department has also revised its required first-year course *Bio 52: Introduction to Biology* to examine topics in genetics, molecular biology, and evolution through a focus on infectious diseases that affect poor and vulnerable populations (cholera and HIV).

We also offer support for curricular change through the Mellon Presidential Leadership grant, which supports courses co-taught between technical disciplines and the humanities (*Art 179D: Fluidity: Art Science and Images*, combining mathematics and studio art, and *E106: Engineering Materials*, combining

engineering and art were both offered in fall 2015). We are happy to report that two students are continuing the work started in the fluidity course this semester in independent studies.

Finally, departments embed discussion of the societal implications of their work within courses and assignments. For example, in *MATH 198, Undergraduate Mathematics Forum*, the goal of the course is to improve student's ability to communicate mathematics to general audiences. In one of four presentations they prepare for the course, students are asked to prepare a talk that demonstrates that, as an HMC student, they have a "clear understanding of the impact of [their] work on society" and results suggest that students find this authentic and natural reflection point for talking about how their work can be used to address the complex problems of the world.

Regardless of the approach taken, these results clearly indicate the need for the College to continue its conversation about how and when we intentionally engage our students so that they understand and contribute to the interaction between science, technology and society. Fulfillment of our mission necessitates that we provide our students with ample opportunities to critically analyze the issues involved in the interaction between science and society and that we prepare them to thoughtfully examine their own beliefs and attitudes regarding how they might leverage their technical expertise professionally to address the complex problems in contemporary society.

The Hixon Center for Sustainable Environmental Design

The Hixon Center for Sustainable Environmental Design offers our community yet another avenue for integrating technical skills with societal purpose. The Center was launched in 2014, and under the leadership of Director Tanja Srebotnjak and her staff, the Center formally opened on September 25, 2015. The Center is expanding student and faculty experiences and promoting awareness of sustainability and environmental issues with a focus on design and systems thinking both at the college and within the larger Claremont Consortium. The Center works with its community partners to invigorate innovative thinking, scalable local action and global engagement, and to instill a high level of ethical and professional awareness in HMC's graduates concerning some of today's most critical environmental challenges.

The Hixon Center is actively helping our community make connections between the academic and practical by promoting sustainability as both an intellectual enterprise and an actionable, moral imperative. Several initiatives are already underway at the Center, covering pedagogy, collaborative research, campus operations and community engagement:

- The development of two new academic courses: Life Cycle Assessment (in Engineering) and Environmental & Spatial Statistics (in Mathematics)
- Research collaborations with Harvey Mudd faculty and external partners on (i) assessing the risks associated with unconventional oil and gas production in California and (ii) studying the design and effectiveness of bioswales and raingardens to absorb, filter and store stormwater run-off and capturing associated pollutants
- The improvement of campus sustainability through the launch of a green office certification program as part of a multi-pronged focus on waste reduction and recycling
- Support of the Claremont Energy Challenge, a 2-year building energy efficiency competition, with research, strategic planning and data analysis
- Plans for an inaugural biennial sustainability conference in 2016 that showcases student and faculty research, do-it-yourself exhibits and talks

Many of these areas intersect and form interesting synergies and typically have intentional student involvement with the aim of servicing both educational and societal impact questions. Director of Institutional Research Laura Palucki Blake and Tanja Srebotnjak have partnered to develop assessments for center activities as well as separate needs assessments for students, faculty and staff.

Identification of Other Changes and Issues Currently Facing the Institution

Instructions: This brief section should identify any other significant changes that have occurred or issues that have arisen at the institution (e.g., changes in key personnel, addition of major new programs, modifications in the governance structure, unanticipated challenges, or significant financial results) that are not otherwise described in the preceding section. This information will help the Interim Report Committee panel gain a clearer sense of the current status of the institution and understand the context in which the actions of the institution discussed in the previous section have taken place.

- Following the departure of Vice President for Student Affairs and Dean of Students Marguerite (Maggie) Browning in September 2015, Jon Jacobsen, Professor of Mathematics and Associate Dean for academic affairs, was appointed to the role of interim Vice President for Student Affairs.
 - In the fall of 2015 President Klawe convened a committee to engage in a consultative process with the HMC community to determine whether interim appointments should be extended beyond this academic year and to gather input on student affairs more generally. The process concluded in December of 2015 with Jon Jacobsen’s appointment to a five year term as Vice President for Student Affairs and Dean of Students and Leslie Hughes’ appointment as Assistant Vice President for Student Affairs.
- In January of 2016, we began a search for a new position of Title IX Coordinator and Student Accommodation Advisor. Reporting to the Dean of the Faculty, this position will provide needed executive leadership for both Title IX and ADA accommodations.
- There have also been changes in personnel in other leadership positions:
 - Laura Palucki Blake replaced Janel Hastings as Director of Institutional Research and Effectiveness and WSCUC ALO in November 2013
 - Professor Karl Haushalter replaced Professor Liz Orwin as Director of Research and Experiential Learning in July 2014
 - Debbie Bills replaced Liz Baughman as Associate Vice President for Advancement Services in November 2014
 - Professor Tom Donnelly replaced inaugural Core Curriculum Director Professor Bill Daub in July 2015
 - Professor Rachel Levy replaced Professor Debra Mashek as Associate Dean for Faculty Development in July 2015
 - Professor Lori Bassman will assume the role of Associate Dean for Academic Affairs from Professor Bob Cave (July 2016)
 - Associate Professor Dagan Karp will assume the role as Associate Dean for Diversity from Professor Darryl Yong (July 2016)
- “The Campaign for Harvey Mudd College: HMC 2020: Envisioning the Future” went from the private phase to the public phase in February of 2014. As of February 1st, 2016, \$128,285,331 of the \$150,000,000 goal (85%) has been raised.

- The R Michael Shanahan Center for Teaching and Learning officially opened in September of 2013. The Shanahan Center occupies the space of HMC's first classroom building. The Shanahan Center, a 70,000-square-foot academic building, provides flexible and technologically-advanced classrooms, lecture halls, faculty offices and public spaces to support a range of pedagogies and learning styles. Approximately 85% of our courses are taught in the Shanahan Center. As a result, we have been able to explore uses of vacated lecture space:
 - Renovations to the Galileo Auditoria/Libra Deck are in the design phase. A faculty committee provided valuable input towards the renovations and the future use of the auditoria as classrooms and event space. The renovations are scheduled to start in May 2016, with the Libra Deck slated for completion at the end of August 2016 and the Galileo auditoria for completion in May 2017.
 - Project crews are converting an unused classroom in the Jacobs basement into a space where students may fabricate all manner of items. The intention is to utilize this temporary space as a prototype for a much larger facility planned in a future academic building.

- The Wayne '73 and Julie Drinkward Residence Hall is the newest dormitory on campus, opening in August of 2015. With three floors and housing 131 students, it is the largest and tallest dormitory on campus.

- In 2015-16, we are searching for five tenure-track faculty positions:
 - Biology (experimental genomics)
 - Computer Science (field open)
 - Engineering (electrical, emphasis on communications)
 - Physics (field open, emphasis on experimental or theoretical physics)
 - The Annenberg Chair in Leadership funded by Howard Deshong and the Annenberg Foundation (field open)

- We have taken leadership roles in our collaborative relationships with our sister Claremont Colleges:
 - Beginning in 2014, a three year grant from the Teagle foundation has allowed the Claremont Colleges to consider and develop ways to collaborate more intentionally. Directing the project is HMC Associate Professor of Psychology Debra Mashek
 - Established in the fall of 2015, The Rick and Susan Sontag Center for Collaborative Creativity ("The Hive") is initially housed on the Pomona campus and co-directed by HMC Professor of Engineering Patrick Little and Pomona Associate Professor of Physics Dwight Whitaker. The Hive is an innovative setting that aims to foster creative development and equip students to work collaboratively to address future ambiguous problems and complex challenges.
 - Discussions are underway with Claremont McKenna College regarding the possibility of a new initiative between HMC and CMC on computational technologies and their applications beyond computer science to a broad set of disciplines.

Concluding Statement

Instructions: Reflect on how the institutional responses to the issues raised by the Commission have had an impact upon the institution, including future steps to be taken.

Reflecting on the issues raised by the Commission has contributed to sustained and steady improvement with respect to gender and ethnic diversity at the college, Institutional Effectiveness, and our Capstone Courses.

As a result of the time and commitment put into recruitment, admission and retention, we have seen considerable change in the overall make-up of the HMC student body. We have involved our Associate Deans for Diversity more purposefully in our faculty recruiting process to ensure we continue to recruit and retain a more diverse faculty. Our Office of Institutional Diversity, Office of Health and Wellness and Summer Institute provide a backbone of support for our entire campus. Through their continued advocacy and intentional programming, they have strengthened the College and made it a more welcoming, inclusive community.

We have also seen considerable evolution in HMC's assessment processes and the general atmosphere around assessment. The time and commitment put into the assessment of the co-curricular aspects of the College, as well as ongoing curricular assessment, has strengthened the processes of assessment and where to focus our attention and resources. Our continued evolution with respect to assessment has moved us in a more holistic direction, rather than seeing assessment as the sum of discrete activities. As the faculty's assessment practices improved, it has strengthened the institutions ability to ask questions of itself, and we now find ourselves using assessment findings in ways that cut across the campus (for example in our discussion of the Core Curriculum). As we think about our next steps, we want to refine our assessment processes to establish quality and to encourage faculty and staff to work together to use data and analysis to make necessary changes to curriculum and co-curriculum that improve the student experience.

We remain steadfast in our commitment to continue nurturing our culture of assessment at HMC so that faculty and staff see assessment not as an "add-on" activity they have to engage in, but as something embedded in and integral to the college's ability to provide the best instruction and services possible to our students.

We recognize that even in the short time since our 2011 visit, our world has grown increasingly more complex. It is clear that HMC students will need to do more than catalog, understand, and describe the challenges we face. In order to address those challenges, our students will require an understanding of the pervasive technological and scientific foundations of our society, as well the human beings who inhabit it. We want the four years our students typically spend at HMC to function as an opportunity for them to push themselves not just intellectually but also morally, and to think deeply and broadly about the world and their place in it. Our work has revealed that more emphasis needs to be placed on the societal impact portion of our mission. The College is engaging in a broad discussion of how and where this should be explicitly and intentionally addressed in the curriculum and reinforced in the co-curriculum.

Finally, as we move forward, we have strengths from which to build in order to achieve our next steps. As we grow our student body and our campus, we want to make certain we do so in ways that retain our core vision and meaning as an institution, while simultaneously strengthening the pathways to a STEM

education for all who seek it. To do this, we can draw on much work, all of which has been informed by our own internal data and evidence, including our growth indicators completed in 2015, the research done by the Core Curriculum Working Group on student workload and balance, and the work done by OID critically examining our campus climate and promoting a vision of inclusive excellence. Taken together these will ensure we articulate with confidence the skills and abilities that distinguish a Harvey Mudd graduate.