# GENERAL EDUCATION REPORT 

Fall 2020

## INTRODUCTION

This is a preliminary report on the current state of the General Education Program at Seaver College. It has been nearly two decades since the last comprehensive evaluation of the Seaver GE program, which resulted in a few minor changes. ${ }^{1}$ There is not currently a cohesive system in place for assessing the learning outcomes of the general education requirements in spite of the fact that the program occupies approximately one half of all units taken by Seaver undergraduates. ${ }^{2}$ Meanwhile, much has changed across the landscape of higher education, and indeed, across the globe during this same period.

It is the work of the Seaver Faculty to ensure, first and foremost, that the general education requirements of Seaver College reflect our values as a Christian institution seeking academic excellence. It is also necessary, from time to time, to assess whether or not our stated academic outcomes and practices match the needs of our students as they move into the world.

The purpose of this report is to establish a starting point for a regular and meaningful evaluation of the GE program in light of these circumstances. What follows is a brief analysis of our current program vis-à-vis an updated student profile. This student profile is the result of a thoughtful, thorough and collaborative effort among the Seaver Faculty, as will be described below. Although the report includes some assessment data, the focus of the report is on how the current GE courses contribute to the attributes of the student profile. The report also includes comparisons to the general education programs of our peer institutions as identified on the OIE website. ${ }^{3}$ Finally, we include summary impressions about the GE program from alumni surveys.

The report is meant to be suggestive, not prescriptive.

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## PROCESS AND TIMELINE

In response to the need for regular and meaningful evaluation of the GE program, Dean Michael Feltner established a new Associate Dean Position at Seaver College, which took effect in fall 2018. In addition to duties related to curriculum, the Associate Dean of Curriculum and General Education chairs the General Education Review Committee. The primary task of this committee is to review the current GE program and generate a report, taking into account the unique character of Seaver College, the strengths of our faculty, and the needs of our students. If necessary, this report is intended to lead to General Education revision.

The GE Review Committee (GERC) consists of nine faculty members and the Associate Dean for Curriculum and General Education. Each division has one distinguished representative with an additional representative from Great Books. Representatives are chosen at the divisional level and voted on by the faculty. Current committee members are:

Gretchen Batcheller<br>Lauren Amaro<br>Fiona M. Stewart<br>Mason Marshall<br>Tuan Hoang<br>Bryan Givens<br>Rob Shearer<br>Brian Newman<br>Tim Lucas, co-chair<br>Paul Begin, co-chair, ex officio

## Spring 2019

By April 2019, the GERC had been elected. This committee began meeting in May. From June 2 to June 5, 2019, members of the Committee attended the AAC\&U Summer Institute on General Education in Burlington, Vermont. AAC\&U puts on this institute every summer to assist universities in identifying and implementing a plan for general education review and reform tailored to those respective institutions. While the summer institute did offer workshops and coaching, each group was afforded ample time to collaborate on their plan. The GERC created a plan and agenda for the review to take place during the 2019-2020 academic year.

## Fall 2019

The fall 2019 semester was dedicated to developing a student learning profile - the knowledge and skills that a Seaver undergraduate student should develop via the general education program. Best practices recommend that a robust general education review begin with collaboratively constructing a student profile. As Professor Paul Hanstedt from the AAC\&U Summer Institute suggested, educators should begin a GE assessment by focusing on the measure of the student rather than a particular curricular model. ${ }^{4}$

[^1]From August to September, several college units, including the eight academic divisions, campus life, and the career center met to develop their respective drafts of the Seaver Student Profile. Among questions they considered were:

1) What do we expect of Seaver College graduates?
2) Which attributes should they possess?
3) Which values and virtues might they evince?
4) How do we want our graduates to engage the world?
5) Which habits of mind or spiritual disciplines should they practice?

During the month of October, members of the GERC facilitated four forums to collaborate on the student profile theme across divisions and other units of the college. The GERC met three times during the fall semester to disseminate the extensive feedback on the student profile and distill that information into broader thematic categories. These are:

## - Ethical and Skilled Communication

- Intercultural Knowledge and Competency
- Creative Imagination \& Critical Reasoning
- Quantitative and Scientific Reasoning


## - Christian Heritage and Life

## Spring 2020

Based on the student profile developed by the faculty and distilled by the GERC, the committee set about to review how the current general education program develops students along the lines of our ideal student profile. The following resources were consulted:

1) alignment of current GE courses with goals that we have identified for our students
2) current GE learning outcomes for specific courses
3) most recent GE Program and course reviews
4) alumni surveys
5) data from peer and aspirational schools

From here the committee drafted a working document with preliminary findings and questions. The purpose of this report is to provide preliminary findings, ask questions about the current program, and make some general recommendations. The recommendations in this report are not binding; they are meant to be a catalyst for revision to the general education curriculum.

## STUDENT ATTRIBUTES AND ASSESSMENT

## I. Ethical and Skilled Communication

Seaver College graduates are ethical and skilled communicators. They are proficient writers in multiple genres and platforms. They are eloquent public speakers who are committed to the fair use of evidence and argument. They are equipped to participate meaningfully in the key scholarly and public discussions of their time in English and at least one other language.

The ancient Greeks, in their conceptualization of the liberal arts, believed that the study of rhetoric was foundational for producing effective and ethical citizens; this is no less true in the 21st century when communication spreads in unprecedented ways and with varying levels of competence. Global citizens must be able to critically assess truth among a surfeit of messages. They must also be able to generate messages that promote truth in the global community.

## Proposed Learning Outcomes

This attribute is addressed by learning outcomes in second language proficiency, speech and rhetoric, and English composition. Students should be able to:

## Language

- Discuss information, opinions, and emotions in spontaneous exchanges on familiar topics as well as possible and future actions.
- Understand and analyze the main idea, key details, and cultural viewpoints in written, audio, and audiovisual target language texts.
- Present information and viewpoints about familiar cultural topics and personal experiences in paragraph-length discourse.
- Identify, describe, and compare practices and perspectives of target language cultures (e.g., music, holiday rituals, family, etc.).
Speech and Rbetoric
- Learn the ethics of public speaking.
- Perform effectively in a variety of rhetorical situations.
- Structure, write, research, support, and deliver informative, persuasive, and ceremonial speeches.
- Understand basic principles of rhetorical analysis.


## English Composition

- Use writing to construct and communicate meaning as critical thinkers and responsible citizens.
- Learn to write effectively for different audiences and purposes, with an emphasis on argumentation and academic writing.
- Apply the rhetorical principles in order to critique written, oral, and visual texts.
- Develop the inductive and deductive skills needed for close reading and lucid writing.
- Assess their writing and address feedback from the writing center, draft workshops, and small group tutorials.


## Fulfillment of Learning Outcomes

At present, Seaver College includes at least five courses in the general education curriculum that directly address ethical and skilled communication. They are as follows:
$>$ First Year Seminar (written and oral communication)
$>$ COM 180 (oral communication)
$>$ ENG 101 (written communication)
$>$ Literature course (written communication)
$>$ Language series: 151, 152, 251 (oral and written communication in a second language)
$>$ Great Books and Social Action and Justice Colloquia*

* These courses specifically replace ENG 101. Great Books can replace COM 180.


## Assessment of Ethical and Skilled Communication

The annual Junior Writing Portfolio assessment process is the direct evaluation of writing skills among Seaver College students.

The Oral Communication core competency report in 2015-2016 indicated that students in COM 180 classes met milestone expectations (range of 2.3-2.7 out of a possible 4) in the freshman and sophomore levels and grew through further classes in their major to capstone levels at the junior and senior level (a mean of 3.2, with variation across majors). The report offers a value rubric for the core competency that may be reused or adjusted to future assessments.

Similarly, the last significant assessment report for lower-level language courses was from 2016. A majority of assessment of language courses occurs with upper-division language courses, pointing to a need to improve assessment of the 151,152 , and 251 courses for promoting the attribute described in this report.

## Comparison to Peer Schools

Seaver College requires one course each in both written and oral communication, along with second language equivalency at the 251 level. Table 2 shows the oral and written communication requirements at peer institutions indicated on the OIE website. All schools require a composition course, with three schools requiring three composition courses. Six schools require a speech and rhetoric course, most commonly an option among several courses. All schools save one require a foreign language course or series of two to four courses.

Table 1. Written and oral communication requirements at peer institutions

| Peer School | Composition | Speech and Rhetoric | Language |
| :--- | :---: | :---: | :---: |
| Pepperdine University | $\mathbf{2 ( 1 0 1 / L i t )}$ | $\mathbf{1}(\mathbf{1 8 0})$ | $\mathbf{3} \mathbf{M}$ (to 251) |
| Baylor University | $1(1301 / 02 / 10)$ | 1 M | 3 M (to 2310) |
| Calvin College | $1(100 / 101-02)$ | 1 M | 3 M (to 201) |
| Loyola Marymount | 2 | $1 *$ | $1 *$ |
| Macalester | $3(\mathrm{WA} / \mathrm{WC} / \mathrm{WP})$ | 0 | 4 M |
| Occidental College | $2^{*} \mathrm{M}$ | 0 | 2 M (to 102) |
| Santa Clara University | 3 | 0 | $2-3 \mathrm{~m}$ |
| Southern Methodist | 2 | 0 | 2 |
| University | 1 M | 1 M | $3-4 \mathrm{M}$ |
| St. Olaf College | 2 | 1 M | 3 M |
| University of San Diego | 2 | 0 | 2 M |
| Valparaiso University | $1(103 / 104)$ | $1(101 / 201 / 252)$ | 3 M (to 201) |
| Wheaton College |  |  |  |

Q = Quarter system
$\mathrm{M}=$ Multiple courses can fulfill
LMU * = LMU requires one course that fulfills the "Oral Skills" flag, a flag which could be completed by either a English speech course or a Foreign language course.

Occidental * = The First Stage Writing Proficiency Requirement is fulfilled by completing 2 Cultural Studies Seminars and passing 2 (of 3 ) writing evaluations in the student's first year.

## Conclusions

Given the assessment data and the comparison to peer schools, the committee contends that Seaver College graduates currently have the curricular opportunity to fulfill the attribute of becoming an ethical and skilled communicator. Our current offerings are appropriate and on par with other institutions, and our students are showing milestone levels of mastery in the GE and capstone programs upon graduation.

## II. Intercultural Knowledge \& Competence

Seaver College graduates who demonstrate intercultural knowledge and competence possess "a set of cognitive, affective, and behavioral skills and characteristics that support effective and appropriate interaction in a variety of cultural contexts" (AAC\&U, 2009, Intercultural Knowledge \& Competence VALUE rubric). ${ }^{5}$

This knowledge and competence is developed in harmony with Pepperdine University's Christian mission, even more than its focus on academic excellence, which requires the study of diverse worldviews and cultures. ${ }^{6}$ As the Pepperdine Statement on Diversity makes clear, it is precisely because of our faith that we remain "fully committed to diversity, equity, and inclusion" in all that we do. The University's Diversity Statement affirms:

Our faith also confirms that we are finite and therefore our knowledge is incomplete. It is through the inclusion and experience of others from diverse points of view that we often begin to see dimensions of truth previously unseen by us. Diversity not only enriches the educational endeavor, it is critical to it.
Perhaps the single most important place for this component of our Christian mission to become manifest at Seaver College is within the general education program. Elsewhere in our Statement on Diversity we employ the words "fully," "strive," "education" and "leadership." These are helpful for grounding the academic experience. The words "fully" and "strive" are key because they indicate a persistent and robust commitment to intercultural learning and competency. This should not be a temporary response to current issues, but rather a substantive commitment within our GE program that is coupled with a recognition that, as Christians who relentlessly pursue justice and mercy, we will always be striving for better. The words "learning" and "leadership" are likewise fundamental. One thing is to acquire intercultural learning, another is to develop empathy and to practice living it out with others. The PLOs and suggestions made below are meant to address these aspirations by formalizing the acquisition of intellectual knowledge alongside experiential learning.

In addition to fulfilling our Christian mission, there are also practical reasons for developing intercultural knowledge and competence. The 2016 Supreme Court case about affirmative action, Fisher v. UT Austin, contains an amicus brief issued on behalf of Fortune-100 and other leading American businesses states. These companies affirm that:

Such graduates have an increased ability to facilitate unique and creative approaches to problem-solving by integrating different perspectives and moving beyond linear, conventional thinking; they are better equipped to understand a wider variety of consumer needs, including needs specific to particular groups, and thus to develop products and services that appeal to a variety of consumers and to market those offerings in appealing

[^2]ways; they are better able to work productively with business partners, employees, and clients in the United States and around the world; and they are likely to generate a more positive work environment by decreasing incidents of discrimination and stereotyping. ${ }^{7}$
The Amici aver that their interest in and need for diversity - and, by extension, the state's interest in diversity in higher education - has become even more compelling as time has passed. ${ }^{8}$

## Proposed Learning Outcomes

Upon successful completion of the GE program, students will have achieved the following:

1. Students will have developed linguistic skills sufficient to discuss and compare life goals and experiences with people whose first language is not English;
2. Students will have developed knowledge and understanding of cultures other than that in which they themselves were raised, and the ability to engage empathetically with people from these cultures in a manner consistent with the Christian understanding of humanity being imago dei;
3. Students will develop an understanding of how social, political, economic and historical issues impact race and ethnic relations in the world.
4. Students will practice intercultural competence through engagement with people of other cultures, whether in the U.S. or abroad.

Studying abroad with Pepperdine's International Programs (IP) is one of the most memorable and meaningful experiences of Seaver College graduates. Equipping students with the skills and opportunities to intentionally engage people of other cultures enriches the transformative potential of their time abroad. The resulting intercultural competence has been shown to foster skills that can be transferred and applied to engagement with people of diverse communities and experiences at home. Similarly, the Social Action and Justice Colloquium (SAAJ) and the Pepperdine Volunteer Center (PVC) equip students with the intercultural knowledge and competence requisite to particular spheres of action. The cognitive, affective, and behavioral skills gained through participation in IP, SAAJ, and/or PVC are soft skills increasingly valued across professional fields around the world, increasingly needed in our fractured societies, and essential to young adults who want to lead lives of purpose, service, and leadership. Fulfillment of PLO 4 may be accomplished through the formalization of a requirement that all students participate in an intercultural experience. To this end, in addition to the above PLOs, the GE program should standardize what we are already doing by creating an Intercultural Requirement:

Students will have completed an intercultural experience with knowledge, sensitivity and confidence through participation in one of Pepperdine's International Programs, through

[^3]completion of the SAAJ Colloquium, by volunteering with Pepperdine Volunteer Center, or through an overseas internship.

These PLOs and the Intercultural Requirement leave room for flexibility (local, national, international) and student choice while fulfilling common goals alongside their peers, which in itself has the potential to foster intercultural knowledge and competence and a greater sense of inclusivity and belonging: nothing binds individuals together like pursuit of a common endeavor.

## Fulfillment of Learning Outcomes

The GE language sequence contributes to the fulfillment of PLO $1 \& 2 .{ }^{9}$ There is a broad spectrum of already required courses at Seaver College that also fulfill PLOs 2 and 3, including but not limited to courses that fulfill the World Civilizations requirement as well as courses in the fields of art history, fim, literature, Great Books ( V ), and select courses in international studies, communication, sociology, psychology and religion. It is assumed that many of the GE courses already contribute to PLOs 2 and 3, although this may not be articulated explicitly in learning outcomes.

The Intercultural Requirement fulfills PLO 4 and gives the option of an intercultural experience at home or abroad, as students prefer. Positively, the addition of this requirement as articulated here explicitly addresses the Seaver community's desire to foster a greater sense of inclusivity and belonging for each and every student - without falling into the trap of divisive ideological statements. Secondly, and also positively, it requires no additional units to be added to the GE.

## Assessment of Intercultural Knowledge and Competence

The most recent assessment on intercultural knowledge is the 2016 OIE report on "Diversity and Global Awareness. ${ }^{110}$ The report concludes that:
... the Pepperdine GE curriculum does not adequately address issues pertaining to diversity. One focus group participant pointed out that students could easily go through four years of college without taking a class that raised issues pertaining to diversity. Other participants explained that they had learned about diversity primarily through living and interacting with people of diverse backgrounds in the residence halls, but they noted that it would be easy to avoid such interaction. [...] Based on the results of this study, Pepperdine should consider developing more curricular and co-curricular programs that can help students gain deeper understandings of cultural diversity, self-awareness, empathy, social responsibility, and how faith and establishment systems affect issues of social justice and societal bias." (12)
Given that each of the learning outcomes for this attribute falls within existing programs, we can immediately establish the following:

[^4]- Every Seaver student needs to demonstrate competency in a second language at the low intermediate level by either taking or placing out of LANG 251 to graduate, thereby already fulfilling PLO 1 and PLO 2. If they have 'placed out' of the language requirement, thought might need to be given to whether they have fulfilled PLO 1 and 2 in a way that conforms with the spirit of these Pepperdine PLOs.
- PLO 2 is also regularly fulfilled via the World Civilization requirement.
- PLO 3 is partially realized in the American Experience component of the GE program.
- As for PLO 4, if $80 \%$ + of our students already study abroad before graduation, at least $80 \%$ of students are already fulfilling Intercultural Requirement. We also have an average of 53 students per year participating in SAAJ and 1,949 students serving through the Pepperdine Volunteer Center (PVC) (data based on a five-year average). We would need to create a system that formalizes intercultural learning in these environments.


## Comparison to Peer Schools

With second language equivalency required up to the 251 level, Seaver College requires between 0 and 12 units of language study; students regularly take 12 units of language to successfully complete the 251 level. This is towards the higher end but still on a par with language requirements in peer schools; several require less.

Intercultural knowledge and competence at peer schools is defined in a variety of ways and promoted in a variety of different ways (see Table 1). For example, some, such as Baylor University, require a 3-unit course on the US in global perspective, and another 3-unit course on 'contemporary social issues', in addition to $9+$ units in language (whether modern, classical, or biblical). This curricular approach is combined with 'living-learning communities'. Calvin University requires 20+ hours of cross-cultural engagement, some of which, like Baylor, involves living and learning together. ${ }^{11}$ Occidental requires three distinct culture and fine arts classes (U.S. Diversity, Global Connections, Regional Focus) in addition to a language requirement.

Table 2: Courses Required for Language, US Diversity, World Civilizations at Peer Schools

| Peer/Aspirational School | Language <br> Courses* | US Diversity | World Civilizations |
| :--- | :---: | :---: | :---: |
| Pepperdine University | $0-3$ | 0 | 1 |
| Baylor University | $0-3$ | 0 | 1 |
| Calvin College | $0-2$ | 1 | 1 |
| Loyola Marymount | 0 | 1 | 1 |

[^5]| Macalester College | $0-4$ | 1 | 1 |
| :--- | :---: | :---: | :---: |
| Occidental College | $0-2$ | 2 | 1 |
| Santa Clara University** | $0-3$ | $1-3$ | $1-3$ |
| Southern Methodist | 0 | $1-3$ | $1-3$ |
| University** | $0-4$ | 1 | 1 |
| St. Olaf College | $0-3$ | 2 | 2 |
| University of San Diego | $0-2$ | 0 | 1 |
| Valparaiso University | $0-3$ | optional | optional |
| Wheaton College |  |  |  |

*In all cases students are able to satisfy language requirements through other means such as SAT II and language placement tests.
** In the cases of Santa Clara and Southern Methodist, the categories do not fit into the categories that we have established. In both cases students must take a total of three courses that satisfy similar requirements. Students have a choice for all three courses.

## Conclusions

The 2016 OIE Diversity and Global Awareness report concludes: "Based on the results of this study, Pepperdine should consider developing more curricular and co-curricular programs that can help students gain deeper understandings of cultural diversity, self-awareness, empathy, social responsibility, and how faith and establishment systems affect issues of social justice and societal bias." These findings were emphasized by the GE Diversity Task Force report from 2017. Given the approach outlined above, the committee suggests that there is scope within the current curriculum for increased focus on developing intercultural knowledge and competence in Seaver graduates without taking a one-size fits all approach to their development.

## III. Creative Imagination and Critical Reasoning

Most career paths are sinuous. Roughy 75 percent of American college graduates will go on to a career unrelated to their major, including math and science majors. ${ }^{12}$ They will change jobs between seven to eight times, on average. At the same time, we inhabit a world with increasingly unpredictable and complicated problems, such as those related to our political climate, global health, and the environment. In order for graduates to navigate what Paul Handstedt has dubbed a "wicked world," they will need to develop the ability to think both creatively and critically. Analogous thinking, abstract thinking, and the ability to reason through new and previously unknown problems will allow students to thrive as they move from one job to another, from one task to another.

## III-A. Creative Imagination

Students who graduate from Pepperdine should be able to engage in the creative, performative or receptive practices of an artistic discipline, recognize and describe the relationships between the component parts of an artistic medium using discipline specific vocabulary and analytic systems, situate and contextualize artistic practices within historic and cultural frames using methods of inquiry specific to the discipline, and apply creative approaches to develop solutions that are unique, unstructured and fluid. (Adapted from University of San Diego)

The fine arts tap into the core of humanity. Made in the image of the creator God, humans, in our diversity, have a mandate to create and uniquely express ourselves. Art is an intellectual pursuit, and the academic environment offers a unique opportunity to understand, explore, and question this pursuit through discussion, feedback, trial and error, and hands-on experiences. As Martha Nussbaum puts it, "artists . . . always ask the imagination to move beyond its usual confines to see the world in a new way" (2010, 23-24). Creative approaches to problem solving are at the heart of a fine arts education; as students apply materials to surface or create in a performative space or apply critical analysis to works of art, they advance towards creative and cultural discovery.

## Current General Education Learning Outcomes

This attribute is addressed by the following learning outcomes for the Fine Arts GE. Students who fulfill the fine arts requirement will do at least three of the following:

- Develop an awareness of and appreciation for a specific art form.
- Assess an art form critically and analytically.
- Have an applied or hands-on experience with a particular art form.
- Develop an awareness of how a particular art form is connected with other disciplines and/or with career opportunities.
- Acquire a general understanding of the history and chronology of an art form.

[^6]- Develop skills that will enhance and encourage future study and appreciation of the arts.
- Have a sense of responsibility and activism with regard to the place of the fine arts in the broader community.


## Distribution of Courses that Fulfill Creative Imagination

In order to develop their creative imagination, students in the current general education program choose from a wide variety of courses in four areas of study in the Fine Arts division: Art, Art History, Music, Theater (and one in Physical Education). All these courses address the learning outcome for fine arts. Students are required to take 2 units of fine arts. All of the courses fulfilling the Fine Arts GE requirement in ART and ARTH are 4 units, with the exception of ARTH 251, which is 3 units, while MUS, THEA and PE courses range between 0-3 units, with the bulk of the courses listed as 2 units. THEA 240, a 4 unit course, is the only exception.

## Assessment of Learning Outcomes

The only available assessment data found for the Fine Arts GE (Creative Imagination) is from 2015. This data only assesses writing competency for fine arts courses and sub areas.. Otherwise there is no assessment data available for Creative Imagination.

## Comparison to Peer Schools

Seaver College requires a single fine arts course to develop creative skills and sensibilities. Table 3 below shows the Fine Arts requirement at peer institutions that are listed on the OIE website. All but one of the peer schools does not require a fine arts course as a part of their core curriculum (though there is an art history option within an "Internationalism" that core competency). Only one school offers the option of a couple 2-unit Fine Arts courses from different disciplines to fulfill the 4-unit course requirement.

Table 3. The number of fine art courses required for the general education program at peer institutions.

| Peer/Aspirational School | Fine Arts <br> Course | Type of Fine Arts Course |
| :--- | :---: | :---: |
| Pepperdine University | $1 / 2$ | Visual and performing arts |
| Baylor University | 1 | Visual and performing arts |
| Calvin College | 1 | Visual and performing arts |
| Loyola Marymount | 1 | Visual and performing arts |


| Macalester College | 0 | An art history course is listed within <br> "internationalism" core competency not Fine Arts |
| :--- | :---: | :---: |
| Occidental College | 1 | Falls under Global Connections ( not Fine Arts) in <br> context of one other "system" |
| Santa Clara University | 1 | Visual and performing arts |
| Southern Methodist <br> University | 1 | Visual and performing arts |
| St. Olaf College | 2 | 1 |
| University of San Diego | 1 | Artistic studies \& literary studies |
| Valparaiso University | $1-2$ | Visual and performing arts |
| Wheaton College | Visual and performing arts |  |

## Conclusions

Undergraduates at Seaver college have a wealth of courses to choose from that fulfill the Fine Arts GE requirement. This affords students a great deal of flexibility and variety when selecting fine arts courses to complement their individual areas of study. When compared to peer institutions, Seaver College has similar requirements for creative imagination - that is, a one course requirement is devoted to an engagement with the fine arts. However, it does appear that the units and/or contact hour requirement at Seaver college are generally half of that of our peer institutions. Within the current 2-unit course requirement for the Fine Arts GE, students can opt for music or theater courses which generally require only 2-3 contact hours per week, or they can opt for Art and Art History courses which require four contact hours, twice the amount of contact hours per week as required by the Fine Arts GE.

## References:

- Nussbaum, Martha C. 2016. Not for Profit : Why Democracy Needs the Humanities (version New paperback edition.) New paperback ed. Public Square (Princeton, N.j.). Princeton: Princeton University Press.


## III-B. Critical Reasoning

Students who complete the GE program should be able to reason well and present arguments effectively. The ability to reason well and present arguments effectively is essential for any career or further education a student pursues after graduating from Seaver. It also is vital to a life of purpose,
service, and leadership. (For example, Christian leaders are urged to be "shrewd as serpents"; Matthew 10:16.)

## Proposed Learning Outcomes

Students who complete the GE program should be able to do the following:

1. determine whether and when some consideration counts as evidence for or against some claim;
2. distinguish between arguments and non-arguments;
3. charitably construct, accurately evaluate, and effectively present arguments from multiple perspectives;
4. determine which methods of critical analysis are appropriate when attempting to answer a question.

## Fulfillment of Learning Outcomes

For centuries critical thinking has been front and center in the liberal arts. At Seaver, almost every GE attribute is addressed not only by courses which feature that attribute but also by courses which focus on it. (Quantitative reasoning, for example, is addressed by mathematics courses that focus on math, and creative imagination is addressed by Fine Arts courses that focus on art, even though a range of other courses at Seaver involve math and art.) Critical reasoning is very unusual in that regard. Though, arguably, Seaver has many GE courses that feature critical reasoning, Seaver has none whose focus is critical reasoning. Noticeably absent from the GE program is the discipline of philosophy with many courses whose sole focus is critical reasoning.

## Assessment of Learning Outcomes

The Core Competency of "Critical Thinking" was assessed across Seaver College in 2017-2018. ${ }^{13}$ The report shows that, while some students demonstrate high levels of competency in critical thinking, this competency is unevenly distributed.

## Comparison of Peer Schools

Table 4: Comparison with Peer Schools and Aspirational Schools

> Peer School $\quad$ GE courses students take for GE credit whose sole focus is critical reasoning

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https://www.pepperdine.edu/oie/content/pdf/core competency data report critical thinking 2017-2018.p df

| Pepperdine University | 0 required, 0 elective |
| :--- | :---: |
| Baylor University | 0 required, 5 elective* |
| Calvin College | 1 required, 3 elective |
| Loyola Marymount | 1 required, 3 elective |
| Macalester College |  |
| Occidental College | 0 required, 2 elective |
| Santa Clara University | 1 required, 3 elective |
| Southern Methodist University | 0 required, 10 elective |
| University of San Diego | 0 required, 21 elective |
| University of Southern California | 0 required, 21 elective |
| Valparaiso University | 0 required, 4 elective |
| Wheaton College | 1 required, 4 elective |

* Elective courses are not required but can be taken in order to fulfill GE requirements.


## Conclusions

Where critical reasoning is concerned, Seaver contrasts sharply with peer and aspirational schools. As shown in Table 4, a course whose sole focus is critical reasoning is required at four of our peer institutions and is an option to satisfy a general education requirement at the others. In virtually all of the programs on our peer list, there is a requirement for a course in critical reasoning/thinking and/or philosophy. What Seaver does at present is define 'critical reasoning' loosely enough that virtually every course addresses the need for critical reasoning. Worth considering is the possibility of adopting a definition and learning outcomes that give critical reasoning more emphasis than it currently has.

## IV. Quantitative and Scientific Reasoning

Students who graduate from Pepperdine should be able to apply mathematical concepts to analyze and interpret quantitative data in order to solve a problem as well as apply scientific principles to investigate questions and draw conclusions about the social and the natural world.

Quantitative and scientific reasoning are core attributes of a well-educated individual who is able to make informed decisions in an increasingly data-driven, scientific and technological society. Rizki \& Priatna (2019) stated, "In the 21st century, the problems encountered in daily life are increasingly difficult and complicated. It is important for each individual to know and understand the role of mathematics in real life so that the individual is able to appropriately evaluate and consider the use of mathematics for meeting the needs of being a society member who is constructive, caring, and willing to think." Similarly, Hodson (2014) states that "scientific literacy doesn't just result in more skilled and more knowledgeable people, it results in wiser people, that is, people well-equipped to make morally and ethically superior decisions" (p. 916). This goes hand-in-hand with the Mission of Seaver College, which seeks "to provide a link between the knowledge and wisdom of the past and present with the challenges of the future., ${ }^{14}$

## Current General Education Learning Outcomes

This attribute is addressed by the three learning outcomes in mathematics and one from laboratory science in our current general education program. Students should be able to:

- Provide examples that illustrate the beauty, creativity, and pervasiveness of mathematics.
- Demonstrate logical reasoning ability and problem-solving skills that employ mathematical strategies.
- Demonstrate an understanding of the creation, use, and limitations of mathematical or statistical models.
- Understand the methods used by scientists to investigate and answer questions about the natural world and demonstrate the ability to assess the reliability and limitations of those methods.
The first three outcomes were revised by the mathematics program in Fall 2018.


## Fulfillment of Learning Outcomes - Quantitative Analysis

In the current general education curriculum, students can choose from a wide variety of courses from three academic divisions to develop quantitative reasoning. These include MATH 120, MATH 140, MATH 150, COM 240, POSC 250, PSYC 250, SOC $250 .{ }^{15}$ (See Figure 1.) These courses fall into three general categories: nature of mathematics ( $13.4 \%$ of graduates), calculus ( $23.0 \%$ of graduates), and statistics ( $22.2 \%$ of graduates). Each of these subjects addresses the three learning outcomes of the mathematics program from a different point of view. For students who graduated between Fall 2012 and Fall 2019, 26.4\% fulfilled the general education requirement in mathematics through AP Calculus and AP Statistics which gives credit for Math 150 or POSC/PSYC/SOC 250.

[^7]An additional $13.4 \%$ of students fulfilled this requirement through an equivalent course transferred at another institution. Although $39.8 \%$ of students fulfill the mathematics general education requirement elsewhere, $84.5 \%$ of students take one of the general education mathematics courses at Pepperdine. This is likely due to the fact that one or more of these courses are required for their major.

## Fulfillment of Learning Outcomes - Scientific Reasoning

In the current general education curriculum, students can choose from a wide variety of courses in Biology, Chemistry, Nutrition, Physics, and Sports Medicine in the Natural Science division to develop scientific reasoning. These include 11 different courses specifically offered for the general education program as well as 5 courses that are required for majors within the division. (See Figure 1.) All of these courses address the learning outcome for laboratory science. For students who graduated between Fall 2012 and Fall 2019, 14.6\% fulfilled the general education requirement in laboratory science through an advanced placement (AP) course. An additional 16.2\% of students fulfill this requirement through an equivalent course that is transferred from another institution. Although $30.8 \%$ of students fulfill the science general education requirement elsewhere, $77.7 \%$ of students take one of the general education science courses at Pepperdine. This is likely due to the fact that one or more of these courses are required for their major.

## Assessment of Quantitative and Scientific Reasoning

Recently, Seaver College conducted an assessment of the quantitative reasoning core competency (Bowman et al., 2020). Due to the urgency of completing this report by 2020, a sample of students were given a multiple choice exam entitled the Quantitative Literacy and Reasoning Assessment (QLRA). The results showed that the sample mean for Pepperdine ( $54 \%$ ) was higher than the sample mean of all schools who took the exam in $2013(46 \%)$, but lower than the average score for "selective four-year institutions" ( $60 \%$ ). The report concluded that the results of the assessment were "striking," but that equally striking were the results from selective four-year institutions. Student surveys given after the QLRA suggested that students "generally agree that quantitative reasoning is important but do not seem very confident in their abilities." The report suggests that quantitative reasoning be emphasized more across the Seaver curriculum. Although there are assessments of individual laboratory science courses, there is no common assessment for the general education requirement.

Although this report was a good baseline assessment, the AAC\&U recommends that the core competencies be assessed at the senior level using a common assignment that is aligned with the VALUE rubric. Amongst the five core competencies, Oral Communication, Critical Thinking, Information Literacy, Quantitative Reasoning, and Written Communication, three are formally emphasized in each major through the Presentation Skills (PS), Research Methods (RM) and Writing Intensive (WI) course requirements. One could argue that critical thinking is pervasive amongst all academic majors. Yet at this time, quantitative reasoning is not a formal requirement for all majors at Seaver College and therefore it is difficult to assess this competency beyond the general education curriculum.

## Comparison to Peer Schools

Seaver College requires a single mathematics course and a single laboratory science course to develop quantitative and scientific reasoning. Table 4 shows the mathematics and science requirements at peer institutions identified on the OIE website. All but one of the peer and aspirational schools require three courses between mathematics and science. Some of these schools require one mathematics course and two science courses and others require at least one of each for a total of three courses.

Figure 1: The percentage of students that complete each of the general education courses in mathematics and laboratory science. The percentages add up to more than 100 because some students take multiple courses. These plots show that students take advantage of the variety of courses offered to develop quantitative and scientific reasoning.



Table 4. The number of required mathematics and science courses for the general education programs at peer institutions.

| Peer School | Mathematics <br> Courses | Science <br> Courses | Total <br> Courses |
| :--- | :---: | :---: | :---: |
| Pepperdine University | 1 | 1 | 2 |
| Baylor University | 1 | 2 | 3 |
| Calvin College | 1 | $1-2^{*}$ | $2-3^{*}$ |
| Loyola Marymount | $\geq 1$ | 1 | 2 |
| Macalester College | 1 | 2 | 3 |
| Occidental College | 1 | $\geq 1^{*}$ | $\geq 2^{* *}$ |
| Santa Clara University | 1 | 2 | 3 |
| Southern Methodist University | 1 | 2 | 3 |
| St. Olaf | $\geq 1$ | $\geq 1$ | 3 |
| University of San Diego | 1 | 2 | 3 |
| Valparaiso University | 1 | 2 | 3 |
| Wheaton College |  |  |  |

* Calvin College requires two science courses, but students with three years of high school science credit can be exempt from one course.
** Santa Clara University only requires one mathematics and one science course, but students may choose from an additional group of science courses to fulfill a third general education requirement.


## Conclusions

The undergraduates at Seaver College have a wide variety of courses from which they can fulfill their requirements in mathematics and laboratory science. This gives students the flexibility to pursue their area of interest as well as complete their degree in a timely manner. In comparison to peer institutions, Seaver College requires one less quantitative or scientific reasoning course. Although we may aspire to increase in this area, Seaver College does not have the faculty or laboratory resources necessary to require an additional course. Since the related core competency is not emphasized within all majors, the faculty should consider whether a Quantitative Reasoning (QR) designation should be added to a course from each major. Both the quantitative and scientific reasoning learning outcomes should be assessed with a common instrument across all general education mathematics and science courses. The data from these assessments will inform faculty how to improve student learning within the existing courses. One challenge in assessing the general educational curriculum is that a large number of students fulfill these requirements through advanced placement exams or courses transferred from other institutions. Faculty may want to revisit discussions about the advanced placement scores and transfer courses we accept. ${ }^{16}$

[^8]
## V. Christian Heritage and Life

Christian Heritage and Life reflects our institutional mission. Pepperdine's Christian Mission, Vision and Affirmation Statements unite reason and revelation in the pursuit of academic excellence and the formation of servant-hearted purposeful leaders. These statements clearly affirm that we begin from the presupposition that God is and move forward with the confidence that he rewards those who diligently seek him (Hebrews 11:6). That is, Seaver graduates should, over the course of their studies, come to learn that there is no "firewall" between reason and revelation. ${ }^{17}$

Mr. Pepperdine's inaugural remarks at the founding of the institution signal the finely-tuned balance we still seek to attain in a student's experience at Pepperdine: "We want to present to you, in teaching and example, the Christian way of life. We do not compel you to accept it. You are free to make your own choice, but we want you to know what it is." This insight remains crucial. We, therefore, want Seaver students to know the story of Christianity in its historical context, be able to read, understand and apply the Biblical text, to use this knowledge to understand history and contemporary society, and to take this knowledge and apply it to their own lives. While we hope that Seaver students will grow in knowledge and love of Christ during their time at Pepperdine, the campus climate, and the structure of this part of the GE program must be such that no student (period) should ever feel unwelcome, excluded from the community, or of less value and dignity as a human being. Nor, indeed, should any student ever feel compelled to accept the Christian message.

Given our distinct identity and institutional mission, it is without question that the GE program must feature learning about Christianity. Much input has been gathered for the creation of this report via divisional meetings, faculty forums, discussions by the GE Review Committee and also from the Seaver strategic plan Community Day and Core Team meetings. There is broad consensus that the GE curriculum should contain learning that features Christianity (historical knowledge, Biblical knowledge, social impacts, personal impacts) and its application.

It is no guarantee that students will encounter questions of Christian commitment in their major coursework. If we are going to present the Christian narrative and ask that students apply it to their own lives, this must be done first and foremost within the GE curriculum. In order for this to happen, the GE program needs to be unequivocal and assertive in how it articulates and carries out the mission of the institution.

[^9]
## Proposed Learning Outcomes

Students who complete the GE program should be able to do the following:

1. Identify major historic and contemporary Christian beliefs and practices;
2. Interpret biblical texts in light of their historical and canonical contexts;
3. Identify and evaluate the ways in which Christianity interacts with culture and society;
4. Rigorously evaluate how Christian beliefs and practices apply to everyday circumstances.
5. Explore the reasons for which thoughtful adherents of Christian faith have found it to be true and transformative.

## Fulfillment of Christian Heritage and Life Learning Outcomes

At present, the Christian Heritage and Life component of our GE program is only explicitly articulated in one area - the Christianity and Culture requirement (9 units). In theory, however, learning that reflects our faith commitments and desired student outcomes is integrated seamlessly through the curricular as a whole. It is the case that this integration in courses outside of the REL sequence is not always made explicit via institutional assessment, specifically proposed PLOs $3 \& 4$.

The closest we come to articulating a desire for our students to develop into persons of Christian character is the final PLO of the Christianity and Culture requirement: "grapple with the implications of living a life of faith." ${ }^{18}$ Which kind of faith? We should be unequivocal about who we are and what are our desired learning outcomes. Our suggested PLOs (above) reflect a change here.

Whereas throughout much of this report we have used requirements at peer schools for comparative purposes, this is not necessary in the case of Christian Heritage and Life. We will chart our own course when it comes to faith and learning.

## Assessment

PLOs $1 \& 2$ are fulfilled through the REL 101 and REL 102. While the entire REL sequence (including REL 301) may be designed to fulfill PLOs 3, 4 and 5, these may also be met in other academic areas. For example, PLO 3 undergirds the work that is done in intercultural knowledge and competency while PLO 5 may co-mingle with work done to satisfy critical thinking. All in all, these last three PLOs already permeate our curriculum. We should demonstrate this clearly through learning outcomes.

[^10]
## OTHER FACTORS

## I. OIE Data Report findings

The fall 2018 OIE Data Report containing general education-related survey data from the Higher Education Research Institute (HERI), the Cooperative Institutional Research Program (CIRP), and the Seaver College Senior Survey and the OIE Alumni Survey issued the following summary points:
$>$ Graduating seniors have a lower perception of the overall contribution of the general education (GE) curriculum to their knowledge, skills, and personal development when compared to Seaver College alumni. ${ }^{19}$
$>$ Graduating seniors on average perceive the GE curriculum contributing "somewhat" to their knowledge, skills, and personal development.
> Seaver College alumni perceive the GE curriculum contributing "sufficiently" to their knowledge, skills, and personal development.
$>$ Both graduating seniors and alumni report that the GE curriculum is "burdensome," especially in regards to load.
$>$ Both graduating seniors and alumni report that they would prefer more flexibility in their course selections.

## II. First Year Seminar

The First Year Seminar is a seemingly integral part of the General Education Curriculum. The stated goal of this course is to introduce students to both the college experience and to academic inquiry. Nevertheless, it is the portion of the general education requirement that may be in the most dire need of revision. The critiques offered below are based on a 2019 self study by a faculty committee.

- There are too many divergent PLOs for a single 3-unit course.
- Learning outcomes are inconsistently articulated across the Seaver website and Academic Catalog.
- There is uneven distribution in faculty representation from different divisions.
- The student experience in FYS is uneven.
- There has not been clear leadership. Historically, no one has "owned" FYS in any meaningful way.
- The Christian heritage of Pepperdine is unevenly presented, especially now that the Mission and Heritage series has been suspended.
- FYS courses are not integrated into the rest of the general education curriculum.

[^11]The creation of an Associate Dean of Curriculum and General Education is a positive step. The next step is to seek clarity on what, exactly, we aim to achieve with a first year seminar. Is it an understanding of the institution and its Christian heritage with a smattering of academic learning, or is it to provide an academic seminar with a smattering of orientation? Finally, it is important to note that best practice is to provide FYS that are part of an integrative first year experience.

## III. Units Required

The most recent OIE survey reveals that both graduating seniors and alumni find the GE curriculum to be "burdensome" in terms of load. The same critique has been articulated regularly in the Graphic over the years. ${ }^{20}$ The sheer amount of GE units has most recently been highlighted through the strategic planning process. ${ }^{21}$

A Seaver undergraduate must take 63-64 units in the general education program or 49-50\% of the total units required to graduate. (A student that starts their language courses at the 151 level takes an additional 8 units.) All but one of our peer and aspirational schools have general education programs that represent between $22 \%$ and $40 \%$ of the total units required to graduate as shown in Table 5. In many cases, these courses must be taken at Seaver and this is a particular burden for transfer students and students who are trying to complete prerequisites for graduate and professional programs.

Table 5. Total General Education units at Pepperdine University and Peer Institutions.

| School | General <br> Education <br> Units | \% of <br> Total <br> Units | Prescribed <br> Units | Choice <br> Units | Choice <br> Units |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Pepperdine University | $63-72$ | $49 \%$ | 36 | 25 | $43 \%$ |
| Baylor University | $49-56$ | $40 \%$ | 15 | 34 | $69 \%$ |
| Calvin College | $49-65$ | $40 \%$ | 12 | 37 | $75 \%$ |
| Loyola Marymount | $30-38$ | $25-33 \%$ | $15-18$ | $15-18$ | $50 \%$ |
| Macalester College | $36-48$ | $28 \%$ | 0 | 36 | $100 \%$ |
| Occidental College | $32-48$ | $25 \%$ | 0 | $32-48$ | $100 \%$ |
| Santa Clara University | $48-57 *$ | $27 \%$ | 12 | 36 | $100 \%$ |
| Southern Methodist University | $34-38$ | $28 \%$ | 13 | 21 | $62 \%$ |
| St. Olaf | $14-16 * *$ | $40 \%$ | 1 | 13 | $93 \%$ |
| University of San Diego | $30-51$ | $22 \%$ | 3 | 27 | $90 \%$ |
| Valparaiso University | $47-49$ | $38 \%$ | 12 | 35 | $75 \%$ |

[^12]| Wheaton College | $54-74$ | $44 \%$ | 10 | 44 | $82 \%$ |
| :--- | :--- | :--- | :--- | :--- | :--- |

* Santa Clara University is on the quarter system.
** St. Olaf lists each course as one credit.


## IV. Choice

Second to the question of unit load is that of student choice. The most recent OIE report states: "Both graduating seniors and alumni report that they would prefer more flexibility in their course selections." Students must take three prescribed "Western Culture" courses, two prescribed religion courses, ENG 101, COM 180, POSC 104, HIST 204, and then choose two courses among PSYC 200, SOC 200 and ECON 200. Students may choose which courses to take in the third religion course as well as the mathematics, laboratory science, fine art, literature, world civilizations, and language requirements. Even here, however, many of the choices are not really options due to prerequisites or limited availability. Students have at least four options to fulfill their general education requirements in only $43 \%$ of the units. As shown in Table 5, at all but one of our peer institutions the proportion of units in which students have at least four course to choose from is $69 \%-100 \%$. (Note that the proportion of units with flexibility at SMU is $62 \%$, but the overall general education program only represents $28 \%$ of the units required to graduate.)

In virtually every case, the general education requirement is linked to a specific discipline or set of disciplines within a division. ${ }^{22}$ In other words, the GE program is tied more to faculty specialization than to the skills that we know are vital to a well-rounded Seaver graduate. There is an attempt to link GE requirements to Knowledge, Skills and Perspectives, but this facet of the GE program is only articulated in the catalog and does not play a significant role in the distribution of GE requirements. ${ }^{23}$

## V. Distribution v. Integration

As alluded to in the previous section, the GE curriculum at Seaver College is a so-called distribution model. Consequently, emphasis is placed on what is taught over what is learned. This is, perhaps, one of the leading factors in student disillusion: the GE curriculum feels like a mandatory checklist and not an integrated, purposeful system. There is no lens or means by which students are asked to actively make connections with other fields of knowledge. There is no integrative experience or cumulative project.

## VI. Diversity

There is no question that the current GE curriculum needs to address diversity in an explicit and meaningful way. The most recent SFA statement on racial injustice, which promises to implement a

[^13]cultural competency component, is an explicit acknowledgement of this void. That we have not yet addressed this deficiency is, perhaps, the most glaring example of our own inability to change in order to meet our students' needs. It must be addressed immediately and in a meaningful way. All but one of our peer institutions explicitly address diversity within their general education program.

## VII. Assessment

The only ongoing assessment of the GE curriculum occurs via the Core Competencies. The PLOs of the various, disconnected requirements are not assessed at regular intervals. Whether or not changes are made to the current GE curriculum, more meaningful assessment needs to be done.

## CONCLUSION, RECOMMENDATIONS AND TIMELINE

It is high time that the Seaver Faculty address the First Year Seminar, diversity, the high unit demand of the GE program, and the lack of flexibility and choice. These changes should honor the attributes and learning outcomes described in this report. We recommend that we revise the current GE program in the following ways:
(1) address in a meaningful way the quantity of units;
(2) introduce more opportunity for student choice;
(3) address relevant questions of diversity;
(4) strongly consider creating a general education system that is more integrative;
(5) closely align GE PLOs with the Seaver student profile and develop a system for regular assessment;
(6) and create a program for faculty to develop innovative courses that will enhance our general education program.

In order to do this, we propose the following process:

Dec. 1, 2020-Feb. 28, 2021 Reflect and study with Seaver Faculty Association (SFA)
Mar. 1, 2021-Apr. 1, 2021 Suggest and brainstorm solutions with SFA
Summer 2021
GERC develops separate models for consideration
Fall 2021
End of Fall 2021
Spring/Fall 2022
Fall 2023
Collect and evaluate feedback from SFA on different models.
GERC proposes a motion for SFA ratification
Prepare curriculum, including documents for SAC/UAC
Implementation of new curriculum for incoming class

To help ensure transparency and to gain important insight about student needs and experiences, we will include student representation on the GE committee.

The General Education Review Committee believes that a revision of the General Education program is an opportunity to refocus the Seaver education on the needs of our students and the values of our institution. The committee understands that faculty are concerned GE program changes may lead to staffing changes, but we envision that within a revised program we will be able to offer smaller, high impact courses that more closely align with faculty interests. Adding flexibility will integrate more academic programs into the GE program and increase the demand for course sections taught by our existing faculty. Students may also be empowered to take responsibility for their own education and become lifelong learners by pursuing their own interests. Although there may be fewer required units in the GE program, when students are exposed to the liberal arts in smaller courses with passionate faculty, they will consider taking additional courses in that discipline and this will bolster the enrollments in our academic programs. Revisions to the program will also prepare our students to be servant leaders in our increasingly diverse nation and engage in a global economy. Finally, the process of debating revisions to the GE program will require that we rearticulate the value of a uniquely Christian liberal arts education offered at Seaver College.


[^0]:    ${ }^{1}$ The English Composition requirement was altered from a two course sequence to a three unit English Composition course and a four unit literature course for the 2004-2005 Academic Year. A Fine Arts requirement was added in that same year. Physical Education was removed for the 2006-2007 academic year. Core Competency requirements were added for the 2003-2004 academic year, but these did not have any substantive impact on unit totals.
    ${ }^{2}$ The GE requirements range from 63-64 units, or 49-50\% of the 128 units needed to graduate.
    ${ }^{3}$ A list of peer institutions for Seaver College can be found at https://www.pepperdine.edu/oie/accreditation/accreditation-peer-institutions.htm.

[^1]:    ${ }^{4}$ Paul Hanstedt, General Education Essentials. San Francisco: Jossey-Bass, 2012.

[^2]:    ${ }^{5}$ Retrieved from https://www.aacu.org/value/rubrics/inquiry-analysis
    ${ }^{6}$ https://www.pepperdine.edu/diversity/

[^3]:    ${ }^{7}$ See Fisher v. UT Austin, p. 6
    https://www.scotusblog.com/wp-content/uploads/2015/11/14-981-bsac-Fortune-100-and-Other-Leading-Businesses-In-Support-of-Respo....pdf
    ${ }^{8}$ Fisher v. UT Austin, p. 7

[^4]:    ${ }^{9}$ The language PLOs are available in section I.
    ${ }^{10} \mathrm{https}: / / \mathrm{www}$. pepperdine.edu/oie/content/pdf/pep ilo_report_diversity_and_global_awareness.pdf

[^5]:    ${ }^{11}$ https://catalog.calvin.edu/content.php?catoid=11\&navoid=359

[^6]:    ${ }^{12}$ David Epstein, Range. New York: Riverhead, 2019. 50-51.

[^7]:    ${ }^{14}$ See "The Mission of Seaver College." https://seaver.pepperdine.edu/about/our-story/seaver-mission/
    ${ }^{15}$ Six other courses, MATH 220, MATH 141, MATH 151, MATH 250, MATH 270 and MATH 316, are currently included, but students rarely use these courses to satisfy the mathematics requirement because one of the other seven is a prerequisite or required for their major.

[^8]:    ${ }^{16}$ See: Rizki, L. M. \& Priatna, N. (2019). Mathematical literacy as the 21 st century skill. Journal of Pbysics: Conference Series, 1157(2019), 1-5; Hodson, D. (2014). Nature of science in the science curriculum: Origin, development, implications and shifting emphases. In M. R. Matthews (Ed.), International Handbook of Research in History, Pbilosophy and Science Teaching (pp. 911-970). Springer; Bowman, J. et al. 2020; Quantitative Reasoning Assessment. https://www.pepperdine.edu/oie/content/pdf/qe report 2020 final edited.pdf; Accreditation Peer Institutions. 2020. https://www.pepperdine.edu/oie/accreditation/accreditation-peer-institutions.htm

[^9]:    ${ }^{17}$ Michael Horton, Core Cbristianity: Finding Yourself in God's Story. Zondervan, 2016, 15. Or, as Nathaniel Sutanto puts it: "God's revelation constitutes an organic unity such that its assimilation into human knowledge will form a single organism of scientific knowledge in which knowledge of the whole precedes the parts, with theology as the unifier of the diverse fields of inquiry" "Herman Bavinck on the Image of God and Original Sin," International Journal of Systematic Theology, vol. 18, no. 2, (April 2016), p. 174-190, 177.

[^10]:    ${ }^{18}$ See pp. 101-102 of the most current Seaver Catalog (2020-2021). https://seaver.pepperdine.edu/academics/content/2020-seaver-catalog.pdf

[^11]:    ${ }^{19}$ Ratings are based on a four-point scale with $1=$ very little, $2=$ somewhat, $3=$ sufficiently, and $4=$ considerably.

[^12]:    ${ }^{20}$ See https://pepperdine-graphic.com/give-students-more-choice/ See also https://pepperdine-graphic.com/ges-slow-student-progress/
    ${ }^{21}$ Of all the comments collected about academics, the issue that received the most attention was diversity. A close second is the burden of the current GE curriculum.

[^13]:    ${ }^{22}$ Business is the lone exception. Business does not explicitly have a course within the GE curriculum, but MATH 140 is a requirement for all business majors and exists primarily to serve those majors.
    ${ }^{23}$ See p. 96 or the 2020-2021 Academic Catalog.

