**Annual Program Assessment Report**

**Program: General Science**

**Academic Year of Report: 2018**

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**Section 1: Learning Objective Assessed for this Report**

* Address expectations of students entering the General Science Program, for example, timely degree completion.

For this assessment period, we decided to focus on the validation of student expectations of the Program. GS courses are taught by external units which precludes course content assessment by GS, consequently, General Science learning outcomes are all tied to the structure of the program. Student expectations are a valuable source of information for guiding changes to program structure. In contrast to many traditional science majors that recruit students as freshman and sophomores, the General Science Program gains most of its majors during their junior or senior year. At this point, students have identified potential shortcomings and strengths in their educational interests and developed a better understanding of how their education interweaves with their career plans and financial limitations. The students are therefore a valuable source of information for how the program can best serve student needs.

**Section 2: Assessment Activities**

While we had several ideas, informally validated through advising conversations, about which program features attract students to the major, the program had no standard metric for assessing student expectations. In April of 2018, the GS add/drop form was updated to include several questions that examine why students choose the General Science Major. Between April 3ed and December 6th 122 students added the major using the new form, and of those, 112 completed the new section. The majority of students (53%) indicated that they switched to the General Science major because it tracked better with their career objectives than their previous major, and a large minority of students (48%) indicated that GS would allow them to finish their degree sooner than their previous major. See Appendix A for a full list and distribution of responses. 56 of the 122 students indicated their career objectives. A large majority (88%) of these specified an interest in health fields, with the greatest interest being in medical programs (20%) and Physician’s Assistant Programs (18%). Unsurprisingly, most students that were referred to the GS program were referred by the Health Professions Program Advisors and were previously either Hyman Physiology or Biology majors.

 To assess the overall program size and student success, major numbers and GPA data was collected for all General Science and Biology (comparator) majors during fall term 2018 (appendix B). It is important to note that GPA based assessment is not the best metric for GS program success as many students are prompted to switch to GS because they are struggling in a traditional STEM major. The switch allows many of these students to complete their degree despite their previous struggles. For these students, a low final GPA is not indicative of problems in the GS program. That said, the average GPA of General Science majors is just slightly lower than that of Biology majors. GS class distribution (9% freshman, 11% sophomore, 30% junior, 49% senior) reinforces the observation that most students add the GS major during their junior and senior years. In addition, students do not often drop the major; while 122 students added the major between April and December, only 15 students dropped the major during the same period.

**Section 3: Actions Taken Based on Assessment Analysis**

The General Science Advisory committee met early fall term to discuss this data and other program matters. Partly as a result of this data, the committee decided to reconsider restructuring the program into formal discipline-specific tracks (education, forensics, pre-med, and self-guided). This decision is in part motivated by the observations that the large majority of GS students chose the major because of their interest in the health professions, and that within this group, there is interest in a broad range of subfields, each of which has a unique set of prerequisites. Only four GS students expressed career goals that aligned with two of the originally proposed tracks (education: 3 students, and forensics: 1 student). In addition, while many GS students are interested in health occupations, the pre-med track would be ideal for less than half of them because of its specific focus on medical school requirements; having a specifically designated pre-med track could alienate students interested in other health-related fields. In addition, the proposed pre-med track is considerably more credit heavy than either the current major or the other proposed tracks which is out of line with student interest in the major.

**Section 4: Other Efforts to Improve the Student Educational Experience**

The CAS Deans office approved an increase to the General Science budget which has allowed us to improve the educational experience for students in a couple different ways. First, the program now has the means to support career development workshops organized by the UO Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) student group. GS supported two such workshops this year, a resume writing workshop and a workshop on how to get involved in undergraduate research. The additional funding has also allowed GS to contribute more resources to peer advisor coverage in the Biology, Marine Biology, and General Science advising center. This has helped the program keep pace with the high advising demands of General Science students.

 The program also submitted a name change proposal this fall that, if approved, will better reflect the interdisciplinary nature of the program. The name change, from General Science to Interdisciplinary Science, was voted on and unanimously approved by the General Science Advisory Committee last spring. The proposal was written and approved by the GS advisory committee at the beginning of the fall term, and is now in the CAS Deans office awaiting approval and referral to the Provost’s office.

 Finally, the general science program nearly doubled in size during the last 5 years, from 140 registered majors during winter term 2014 (W14), to 266 registered majors (W18). The graduating class has more than doubled, from 43 students to 101. Happily, GS commencement ceremony turnout is quite strong; to accommodate the increase in students, families, and friends the program has worked with the UO commencement office this year to switch venues from the Willamette Atrium to the EMU Ballroom. It is likely that we will need to use an even larger venue next year.

**Section 5: Plans for Next Year**

Our main assessment related goal for next year is to create and implement a substantial student graduation survey that will accomplish two things: First, allow us to further assess the structure and value of the program and second, encourage students to reflect on the courses they completed within the program, how they interconnect, and how they promote the development of competencies sought by employers and professional schools.

**Appendix A**

**Data gathered from new GS add/drop form between April 3ed and December 6th, 2018**

**Responses to the prompt: Why are you changing your major (please select all that apply?) (n=112)**

* 53% (59) The major better tracks with the courses I need for my career objectives than my previous major
* 48% (54) The major will allow me to finish my degree sooner than my previous major
* 31% (35) I am more interested in the coursework required for this major than for my previous major
* 21% (24) More of the courses I have already taken apply to this major than to other majors
* 18% (20) The interdisciplinary nature of the major appeals to me
* 17% (19) The major was recommended to me by another advising office
* 1% (1) Other (please specify) (one student added GS because it accepts C- grades, unlike HPHY)

**Career interests (n=56)**

* 20% (11) Medical School
* 18% (10) Physician’s Assistant Programs
* 11% (6) Nursing Programs
* 9% (5) Dentistry School and Orthodontics
* 7% (4) Physical Therapy Programs
* 5% (3) Veterinary Medicine Programs
* 5% (3) Optometry School
* 5% (3) Middle/high school science teacher
* 4% (2) Pharmacy School
* 4% (2) nutrition/food science
* 1 health policy
* 1 Medical Sales (Equipment/pharm)
* 1 naturopath
* 1 Forensic Science
* 1 wildlife/conservation Biology
* 1 Material Chemistry or Physics Research
* 1 geomorphology

**Offices that referred students to the General Science Program (n=19)**

Note: advising conversations suggest that this information is significantly underreported; far more student where likely referred to GS from other advising units than this data suggests.

* Health Professions Program Advising (8 students)
* Academic Advising (4 students)
* Department of Computer and Information Science Advising Office (4 students)
* Department of Human Physiology Advising Office (2 students)
* Center for Multicultural Academic Excellence (1 student)

**Majors Previous to GS (n=122)**

* 30% (37) Human Physiology
* 25% (31) Biology
* 12% (15) Exploring
* 8% (10) Biochemistry/Chemistry
* 7% (9) Computer & Information Science
* 2% (3) Psychology
* 2 Pre-Business
* 2 Physics
* 2 Pre-Education
* 1 Anthropology
* 1 Earth Science
* 1 Economics
* 1 English
* 1 Journalism
* 1 Mathematics

**Appendix B**

**IDR data regarding all GS and BI (comparator) majors fall, 2018**

**GS Major Numbers and GPA:**

 **All GS majors UO GPA (all GS) registered F18 UO GPA (registered)**

Total 324 2.86 250 (77% of total) 2.95

Freshman 30 (9%) 2.65 17 (7%) 2.85

Sophomore 37 (11%) 2.71 26 (10%) 2.78

Junior 97 (30%) 2.96 86 (34%) 2.95

Senior 160 (49%) 2.87 121 (48%) 3.01

**BI Major Numbers and GPA:**

 **All BI majors UO GPA (all BI) registered F18 UO GPA (registered)**

Total 940 2.91 757 (81% of total) 2.95

Freshman 355 (38%) 2.67 272 (36%) 2.73

Sophomore 177 (19%) 3.00 144 (19%) 3.08

Junior 172 (18%) 3.04 146 (19%) 3.07

Senior 236 (25%) 3.07 195 (26%) 3.13

**Additional Majors and Minors**

12% GS majors have an additional major and 41% have one or more minors

28% have 1 minor

9% have 2 minors

3% have 3 minors

1% have 4 minors

14% BI majors have an additional major and 27% have one of more minors

21% have 1 minor

5% have 2 minors

1% have 3 minors