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First-Year Curricula Review: College of Liberal Arts & Sciences

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To: Jeffrey Hecker, Executive Vice-President for Academic Affairs and Provost

From: Emily Haddad, Dean, College of Liberal Arts and Sciences 

Date: April 12, 2019

Subject: First-Year Curriculum Project Summary, CLAS

Chairs and directors in the College of Liberal Arts and Sciences have submitted reports on their majors. The reports are enclosed.

Several themes emerge as key findings across CLAS:

A. Approach to the curriculum in the major

Majors in CLAS can be loosely grouped into three categories according to their required or recommended curricula.

1. The curriculum is relatively sequential. This category includes all of the College's accredited programs—Art, Chemistry, Computer Science, Music, and Physics. These majors require the most total credit hours and may attract fewer late entrants.
2. Certain major courses are required or strongly recommended in the first year, but these courses constitute a minority of students' schedules, such that significant flexibility remains.
3. There are no explicit requirements for the first-year curriculum, although an entry-level course or two may be recommended. These majors are especially friendly to late entrants.

In addition, CLAS hosts two groups of first-year students without majors: Explorations (including pre-Engineering Explorations) and undeclared students matriculated in the College. Both groups of students take a first-year success course as part of a schedule intended to help them select and prepare for their eventual major. The enclosed reports describe Explorations advising in detail. Undeclared students in CLAS are treated identically except that the first-year success course is required for Explorations and strongly recommended for CLAS undeclared.

B. General Education and First-year Success Courses in the First Year

Departments tend to leave open the choice of gen. ed. courses. In major categories #2 and #3, gen. ed. often constitutes much of a first-year student's schedule. There may be only modest guidance to students or advisors on selecting first-year courses beyond those required or recommended in the discipline itself. For example, the posted first-year curriculum for the BA in Communication consists of 2 CMJ courses (chosen from 5 options), ENG 101, 5 gen. ed. courses in "Human Values and Social

Context,” and 2 gen. ed. courses in “Science” or “Quantitative Literacy.” The revised version outlined in the department report offers greater specificity by replacing some gen. ed. courses.

The clearest guidance on gen. ed. appears primarily in STEM programs in which science or mathematics courses outside the discipline are required, usually in a specified sequence. Majors in chemistry, computer science, and physics, for instance, all stipulate MAT 126 in the fall semester and MAT 127 in the spring. Unfortunately, as several chairs/directors note, students’ first-semester schedules may therefore include multiple courses with high DFWL rates. Departments usually recommend no more than two STEM courses in the first semester. A few departments outside STEM also offer systematic gen. ed. recommendations. The Political Science report notes, for example, that students are guided towards specific laboratory courses with lower DFWL rates, though this is not specified in the suggested four-year plan for the major. Psychology requires a biology course but is modifying its traditional recommendation that students take it in their first semester.

Art, Chemistry, CMJ, History, Music, and Physics provide a major-specific first-year success course taught in the department. Explorations also has its own course. All other students are registered for sections of LAS 150: Success in College, which is coordinated by the Advising and Academic Services Center (AASC) in the Dean’s Office and is taught mainly by professional advisors. Of the 309 students enrolled in fall 2017, 81% completed this pass/fail course (EAB). Interestingly, no department lists LAS 150 in its first-year curriculum even though most students in each major take it, unless the major offers its own course.

C. Background and Preparation

With the exception of placement in mathematics and foreign languages courses, students are typically assumed to be ready to take and succeed in a standard schedule for their major. Their high-school preparation (as indicated by courses completed, grades, or standardized test scores) is not necessarily considered in determining their schedule. The Explorations program is an exception in systematically including high school records in registration decisions.

D. Guidance on minors

Although all BA students must complete a minor or second major, first-year students may or may not be consistently encouraged to choose courses that could help them select a minor—whether based on individual academic interest, relevance to the major field, or preparation for a desired career. There are several advantages to early exploration of possible minors.

E. Assessment of the First Year Academic Outcome

CLAS courses serve a large number of first-year students in majors outside of the College. Often, first-year students in a major will constitute a tiny fraction of the students in the gateway course for the major. For example, PHY 121 enrolled 390 students in fall 2018, when there were just 15 new first-year physics students. In AY2017-18, only 28% of students in lower-division CLAS courses had a major in the College (EAB). The resulting large classes and uneven student motivation can affect the pedagogical

choices made by faculty members in ways that are not ideal for students with a declared major in the field.

There are several obstacles to informative assessment of the effectiveness of the first-year curriculum for majors. These include:

- As noted above, many gateway courses in CLAS serve primarily students who are not majoring in the field.
- Particularly in the humanities and social sciences, majors tend to grow over time, with relatively few students entering as first-years. In sociology, for example, the entering cohort in 2014 was 5 students, of whom 3 subsequently left the major. In AY2017-18, four years later, 17 students graduated with their BA in sociology. These are typical proportions for the sociology major and several others in CLAS. The first-year experience for a majority of sociology majors occurs in other programs and therefore cannot be assessed by examining the first year in the Sociology Department (or any other single program).
- Program assessment expectations focus on outcomes as students are completing the major after four years of study. Practices for assessing student learning outcomes in the first year as such are not consistently applied or well developed overall.

Rates of major retention into the second year vary from zero to 100% across majors. Departments report many reasons, both academic and personal, why students leave the major and/or the university.

Academic reasons include:

- Mismatch between program/course and students' expectations
- Inadequate high school preparation, especially in mathematics and/or writing
- Perceived lack of relevance or application for course content
- Unclear purpose for attending college
- Limited individual attention due to large class size
- Conventional instructional methods, creating a more passive than active learning environment
- Rigid fall/spring rotations, necessitating a long wait before a second attempt at a course
- Inconsistent use of (and perhaps quality of) advising

These observations are not new, nor are attempts to remedy the underlying issues. More comprehensive and systematic efforts should be considered and/or continued in the following areas.

1. Initial registration practices. Currently, incoming CLAS students are registered based primarily on their intended major and their responses on an online course preference survey that lists all lower-division general education courses available in that fall semester. Students are appropriately registered for the courses they need in the major, but their overall schedule may be less than ideal. In some cases, opportunities to align course selection to high school preparation may be overlooked by staff or rejected by students. The resulting schedule may or may not closely match the student's

interests, goals, or aptitudes. Efforts over the past three year to improve the initial registration process include:

- Replacement of the mailed paper survey with an online one. Reminders can now be sent with a link to the form rather than a new mailing, and responses are received immediately.
- Registration of eligible students who have not yet completed a form. In summer 2018, this was done in early August. We are now moving the bulk of registration to May. This timeline should enable better quality schedules to be created and should also provide the College with more time to resolve problems, such as waitlisted sections, before the semester begins.
- Planning is underway to replace the outdated math placement process with ALEKS or a similar product.
- Several 1-cr. courses of general interest have been added to facilitate 15-credit schedules that comply with the Think-30 initiative.

2. General education. The vast array of available general education courses carries a high risk of “choice overload” (<https://digitalwellbeing.org/the-jam-study-strikes-back-when-less-choice-does-mean-more-sales/>). In order to facilitate wise course selections that genuinely fulfill the purpose of general education, the following measures could be considered:

- Removal of upper-division courses (except writing-intensive courses in the major) from gen. ed. This change would complement the Senate’s recent decision to reduce the upper-division requirement for the bachelor’s degree from 30 credits to 15. It would also reflect the fact that many/most upper-division “gen. ed.” courses are designed primarily for majors rather than for the general education of the student body.
- Removal of courses that have as a prerequisite another course in the same gen. ed. category, except where more than one course is required in a given category. These courses do not meaningfully add to gen. ed. because students selecting them will already have met the specified gen. ed. category.
- Removal of courses that have not been taught in the past five years.
- Careful review of the remaining courses, retaining them only if student learning outcomes match the designated gen. ed. category.

Because so many CLAS majors have a relatively flexible first-year curriculum, the impact of “choice overload” may be greater here than in colleges where students’ first-year schedules are more tightly defined. For this reason, and as the home of about 75% of gen. ed. courses, CLAS can and should play a leading role in this effort. However, gen. ed. is a University requirement, and any changes must be approached from that perspective rather than as a CLAS-only initiative. Departments should, in principle, offer their majors sound advice on gen. ed. selection. The chaotic and amorphous state of gen. ed. makes this principle difficult to implement in practice. [Note: These remarks about gen. ed. do not represent a consensus within the College. They are offered by the dean in a hopeful spirit, and not as an initiative underway.]

3. Guidance on non-major courses in the first year. Currently, most CLAS majors post four-year plans in the catalog. For the catalog to be published in summer 2019, our goal is that each major will post a plan in the catalog, with particular attention to the first year. Departments will be urged to specify their guidance for first-year students.

- The plans should include a first-year success course (LAS 150 or a course in the major) in the first semester.
- For BA degrees, the minor should be addressed.
- Vague advice, such as “gen. ed. – 6 credits,” should be supplemented or replaced with more detailed guidance.
- Courses with the highest DFWL rates should be placed in the first semester only when delaying them would adversely affect students’ progress.
- Plans should include at least 15 credits per semester to comply with the Think-30 initiative.

The audience of this guidance is not only students themselves, but also academic advisors and other staff members involved in the registration process. It may be appropriate to supplement the catalog information with more detailed explanations on departmental websites. We are committed to supporting students’ intellectual exploration; the values of a liberal education are not compatible with rigidly prescribed academic paths. At the same time, to quote a CLAS department chair, “letting students loose among the plethora of gen. ed. options might be risky.”

4. Course-level curriculum and pedagogy. This project examined the first-year curriculum mainly in terms of its component parts—which courses are selected and in what order. A productive next step would be to extend this work into the parts themselves: the courses. An example may be found in the current reconsideration of content and pedagogy in MAT 122: Pre-calculus, a course taken in AY2017-18 by 666 students, of whom 492 (74%) were first-year students (EAB). Another approach to course-level curriculum change is represented by the development of COS 135: Applied C Programming to create new pathways for underprepared computer science majors (see enclosed departmental report, p. 12). The following principles should be considered in planning such changes:

- Changes should be based on analysis of local and national data and on practices well grounded in research on learning.
- For the broadest institutional effect, the focus for these efforts should be large courses with high DFWL rates. However, these courses tend to serve mostly non-majors, and the needs of majors (which may or may not differ) should be given due attention.
- New resources may be needed to create better conditions for learning. Recent investments along these lines include six additional TA positions for laboratory instruction in Chemistry, a new active learning classroom in Neville, and increased subsidy of the Maine Learning Assistant (MLA) supplemental instruction program. With a median fill rate of 94% in lower-division CLAS courses (EAB data, AY2017-18), there is little excess capacity. Continued faculty hiring is essential.

5. Assessment. Although many factors contribute to the success of a first-year student, their multiplicity should not discourage us from evaluating our efforts. The College's non-major first-year success courses (FYS 100, LAS 150) would be a good place to begin.

The first-year curriculum project has prompted useful deliberation on the coursework expected of first-year students. It has shown that there is more work to be done. Across the College, both the need for and the nature of the work vary. I look forward to speaking with you about how best to prioritize this work.

COLLEGE OF LIBERAL ARTS AND SCIENCES
FIRST-YEAR CURRICULUM PROJECT, SPRING 2019
DEPARTMENTAL REPORTS

Art:

Department of Art has three degrees relevant to the First-Year Success charge:

- BA in Art History
- BA in Art Education
- BA in Studio Art

1. Required First-Year curriculum:

A. courses in the discipline: BA in Art Education (AED) and Studio Art (ART) have the same studio and art history requirements for first year. The BFA in Studio Art can only be entered after the first year of studio requirements are completed.

- The 4 foundations studio courses for 12 credits: ART 100 Drawing I, ART 200 Drawing II, ART 110 2D Design, and ART 120 3D Design.
- The two ARH survey courses for 6 credits, ARH 155 and ARH 156
- BA in Art History (ARH) requires the 2 ARH survey courses, ARH 155 and 156

B. Gen Ed Courses that meet major requirements: our first year classes in discipline are Gen Eds, in Artistic and Creative expression (studio foundations) and (here ARH).

- Also, in AED the PSY 100 General Psychology course.

C. Other courses that meet major requirements: We use this category to identify elective groups of Gen Eds that fit major requirements. For example, in ARH, there are two studio art foundations classes required for degree, so the elective group is (all meeting Gen Art creative expression) ART 100, ART 110, ART 120, ART 200. Likewise, in ARH two language courses are required for degree, so Spanish or French are suggested as options (Cultural Diversity Gen Eds.)

2. Suggested Curriculum:

We suggest all BA students, in AED, ART, and ARH, take ART 104 Success in the Major. All faculty advisors work with students to identify academic strengths, and areas of interest, to assist in choosing Gen Ed options/Minor choices.

BA in ART HISTORY

First Year - First Semester

- ARH 155 - Art and Visual Culture in the Ancient and Medieval Worlds Credits: 3
- Foreign Language Credits: 3
- General Education Requirements Credits: 6
- Other Credits: 3 (e.g., minor, second major, or honors requirements)

First Year - Second Semester

- ARH 156 - Art and Visual Culture in the Modern Era Credits: 3
- Foreign Language Credits: 3
- General Education Requirements Credits: 6
- Other Credits: 3 (e.g., minor, second major, or honors requirements)

BA in AED Sample Course order

fall: 15-16

- 3--ART 100 (also gen ed #5)
- 3--ART 110
- 3--ARH 155 (also gen ed #5)
- 1--(ART 104 recommended)
- 3--PSY 100 (also gen ed #2)
- 3--GEN ED (mat 107 recommended)

spring: 16

- 3--ART 120
- 3--ART 200
- 3--ARH 156 (also gen ed #1)
- 3--ENG 101
- 4--GEN ED (lab science and Gen Ed #4)

BA in Studio Art: First Year Suggested Course order

First Semester

- ARH 155 - Art and Visual Culture in the Ancient and Medieval Worlds Credits: 3
- ART 100 - Drawing I Credits: 3
- ART 110 - 2-D Design Credits: 3
- or
- ART 120 - 3-D Design Credits: 3
- ART 104 Success in the Major
- General Education Requirements/Electives Credits: 6

Second Semester

- ARH 156 - Art and Visual Culture in the Modern Era Credits: 3
- ART 110 - 2-D Design Credits: 3
- or
- ART 120 - 3-D Design Credits: 3
- ART 200 - Drawing II Credits: 3
- General Education Requirements/Electives Credits: 6
- All four studio foundation courses (ART 100, ART 110, ART 120, ART 200) are required before students take intermediate level studio courses

3. Expected student-learner outcomes:

A. The first group of bullets is printed on most of the first-year course syllabi, which include seats for majors and non-majors. They are outlined in more area-specific terms in some cases; and certainly are addressed in individual project rubrics, as well. In the first

year, students will be expected to hit appropriate grading benchmarks showing development in these areas:

- Understanding of professional standards and accomplishments
- Breadth and depth of knowledge
- Understanding of content, tools, and structures
- Independent and critical thinking
- Ability to articulate and express ideas with appropriate language
- Understanding that knowledge is collectively built
- Ability to effectively state and solve creative problems
- Ability to set, organize and realize goals
- Resourcefulness and tenacity in working through problems
- Innovative thinking in all phases of problem solving
- Confidence in ability to meet creative challenges of the field
- Awareness of the responsibilities of the artist to the larger community

Art majors specifically will:

- Be able to implement successful study, research, and creative art practices.
- Have clear ideas of the expectations of their chosen field and what they need to excel in it.
- Comprehend the curriculum that they'll pursue as majors.
- Understand the rich possibilities that the fields of Art Education, Studio Art and History of Art have to offer in themselves, how they serve one another, and their vital relevancy to society at large.
- Utilize effectively the resources that the University, the local community, and professional support services such as the Fogler Library and local museums have to offer.
- Have a mature sensibility of what a degree in their field will offer them in terms of a professional future.
- Have the ability to socially network effectively, a skill vital to professional life in the Arts.

How successful is the curriculum at producing expected outcomes?

B. Relatively successful. Our feedback from students who fail the courses are limited, but the most common and obvious reason for failure is lack of attendance. Students' stated reasons for this are quite variable, and include: prolonged illness or other personal emergency; lack of financial support: too many hours at job to focus on academics, not enough money to buy books/supplies/pay rent; class was "not what they expected" or "too much work," in quotes because hard to say how they would know this if not attending; and when they are frustrated with a topic and/or returned grade and don't use office hours to meet with professor during semester.

For majors who leave the program, the student feedback is often given in advising meetings and/or emails to instructors, and indicates a few patterns. One is that some students don't want to be in university and are here to please family or in lieu of knowing what else that would rather be pursuing. Another is that their high school did not prepare them for the level of work at university, and here writing is often cited as an issue, as is

the specific length/types of research papers common to Gen Ed courses. A very common trend is students who wish to matriculate in a more urban area.

4. Risks associated with this curriculum.

Largest curricular risks include: the (slim) possibility of Gen Ed choices including one or more high DFW courses; the ARH courses writing component can share some of the risks of writing intensive courses.

In first/fall semester, CLAS relying upon student forms to self-identify courses of interest/strength for Gen Ed enrollments, and can't guarantee enrollments in these areas anyway. Perhaps assigning a Gen Ed based upon highest senior year grade in related area would help

No discipline-specific writing intensive classes in first year (advanced ARH options work in later years), or discipline-specific mathematics options, to align with assumed interests. Arts disciplines have high number of atypical learners, not all working with accessibility office or able to be accommodated by standard classrooms—many highly creative artists tend to struggle in some academic areas. For this reason, discipline-specific courses serve as “applied” options for students, are more hands-on.

5. In light of risk assessment, what is the alternative first-year curricula?

The alternatives would be in the grouping of Gen Ed choices, to more specifically choose them to align with prior academic successes.

6. How we mitigate risk:

ART 104; Peer support; Advising. The ART 104 course is designed as a 1-credit experience to assist the student in building a support network that includes peers and advisor(s), and puts the student into the practice of focusing on academics while finding their place within the larger campus community.

ART 104 Successful Strategies for Visual Arts Majors class in first fall semester focuses on:

- Pairing student with academic advisor in face-to-face meeting early in semester, increasing likelihood of regular meetings. The first week's homework is to track down and meet the assigned Art advisor, and to make an appointment to talk to a counselor at the Counseling Center about a personal plan to manage stresses throughout the semester.
- Introducing majors to each other, to faculty, and to curriculum and degree expectations throughout semester
- introduces first-year students to majors farther along in program to gather advice and information about program, classes, university
- Identifying and sending students to research the support systems on campus, including counseling center, writing/tutor support, job

Peer Support: An information peer mentorship occurs in the structure of the ART 104 course, as upperclassmen visit the class to share in discussions of different areas, and as

the students interact at “assigned” visiting artist, class presentation, and gallery events. Our student group, the Art and Design Alliance, also serves in this fashion.

Advising: Our faculty has regular office hours to meet with students in classes and with advisors. Our advisors send out regular reminders of upcoming deadlines (academic, sometimes Financial Aid if we get the notice) and are available to schedule meetings in addition to the pre-registration planning. They also encourage students to work with the CLAS advising center, and to visit Financial Aid at least once a semester to stay on top of deadlines and aid planning.

7. How to better mitigate risk:

We’ve discussed formalizing the student mentorship program a bit, maybe having it as a fall project link between ART 499 Capstone and ART 104 FY Success.

Chemistry:

We offer BA, BS and BS-ACS certified degrees. The first-year curriculum is the same for each degree:

Fall Semester (15 credits)

CHY 105 (1 cr) Majoring in Chemistry
CHY 121 (3 cr) General Chemistry I
CHY 123 (1 cr) General Chemistry I Lab
MAT 126 (4 cr) Calculus I
ENG 101 (3 cr)
Elective (3 cr)

Spring Semester (15 credits)

CHY 122 (3 cr) General Chemistry II
CHY 124 (1 cr) General Chemistry II Lab
MAT 127 (4 cr) Calculus II
PHY 121 (4 cr) Physics I with lab
Elective (3 cr)

Why is this the required/recommended first-year curriculum?

- When students come in with the intention of being a chemistry major, we think it is important for them to take general chemistry, including lab, in their first semester. The general chemistry course sequence helps prepare students for upper level chemistry courses and the lab provides vital hands-on experiences with manipulating materials, equipment and instrumentation. Chemistry is an empirical science and developing hands-on expertise is vital to success in chemistry.
- The courses listed above are recommended rather than required because we have students with varying levels of math preparation and sometimes they are not ready to

take calculus in the first semester. Typically, this would mean taking pre-calculus in the fall and then starting with the calculus sequence in the spring semester. It is important for our majors to take math every semester so they have the prerequisites needed for some of our required upper level chemistry courses.

- We don't have any required or recommended general education courses. Inclusion of elective courses in the curriculum gives students the opportunity to explore other fields and/or to pursue minors or concentrations in areas that are supportive of their career goals, e.g. medicine or pharmacy.

What practices, resources, and/or tactics are in place to mitigate risks?

- General chemistry is a difficult course to take in the first semester and many students struggle with the material. It is especially challenging to combine this with physics, math and another science, e.g. BIO 100. To mitigate the risk of taking too many difficult science courses in the first semester, we recommend that students only take chemistry and math in the first semester and then add physics to their course load in the second semester. Students who have an interest in pre-med or pre-pharmacy typically start adding in biology courses as electives in their second semester and/or second year.
- Also included in the first semester curriculum is the 1-credit advising class, CHY 105, which introduces students to the chemistry major, to the faculty and to each other, and gives them a glimpse of what lies ahead.

What additional steps can be taken to mitigate risk?

- For the past 6 months, the faculty have been engaged in discussions about our first-year chemistry courses with the goal of identifying ways that we can help students be more successful. We are currently discussing several evidence-based strategies for improving outcomes in general chemistry.

Communication and Journalism:

We are working to update and make consistent the first-year requirements across majors so that each includes the following.

The first semester would include a combination of these:

- 1) A major introductory course;
- 2) CMJ 150 Studying Communication and Journalism in College;
- 3) ENG 101;
- 4) A second major or minor required course, if known;
- 5) Gen Ed courses in Human Values and Social Contexts.

The second semester would include a combination of these:

- 1) A specific major required course;
- 2) A major elective course from the menu;
- 3) A second major or minor required course, if known;
- 4) Gen Ed courses in Human Values and Social Contexts.

The intent of this pattern is:

- 1) To ground students in the majors with an introductory course and a required course, as well as suggest a third elective course in the majors, which would give them 6-9 out of 30 required credits;
- 2) To help students adapt to studying the majors in college;
- 3) To take ENG 101
- 4) To pursue or plan to take the required second major or minor; and
- 5) To fulfill Gen Ed Human Values and Social Contexts required courses, and steer away from courses that may be high in DFW rates, and take math and science later on.

I think the primary risk would be the unavailability of seats in required second semester courses that sophomores to seniors would be taking still, such as CMJ 201 and 203, or that is often taken by non-majors as writing intensive, CMJ 136. Major elective courses also may not be available in the second semester. If we reserved a number of seats for first-year students, this eventually eliminate that problem. Because our majors have little stair-stepping and require 30 credits, students need only take 2-3 courses a year to graduate. We also designed them to be doable for incoming juniors, so those here for all four years either spread out the courses or take very few in the major until after the first year.

I should add that I have drafted this without faculty input at this stage, and will certainly take the task to the curriculum committee to work on by March 1. As they say, any mistakes in this are my own.

Suggested curriculum for the B.A. in Communication

First Year - First Semester

- CMJ 102 - Fundamentals of Interpersonal Communication Credits: 3
- or
- CMJ 103 - Public Speaking Credits: 3
- or
- CMJ 106 - Storytelling Credits: 3
- CMJ 150 – Studying Communication and Journalism in College Credits: 1
- ENG 101 - College Composition Credits: 3
- Second major or minor required course, if known Credits: 3
- General Education Human Values/Social Context Credits: 6-9

First Year - Second Semester

- CMJ 201 - Rhetorical Theory Credits: 3
- CMJ major elective Credits: 3
- Second major or minor required course, if known Credits: 3

- General Education Human Values/Social Context Credits: 6-12

Suggested curriculum for the B.A. in Journalism

First Year - First Semester

- CMJ 111 – Introduction to Journalism Credits: 3
- CMJ 150 – Studying Communication and Journalism in College Credits: 1
- ENG 101 - College Composition Credits: 3
- Second major or minor required course, if known Credits: 3
- General Education Human Values/Social Context Credits: 6-9

First Year - Second Semester

- CMJ 136 - Journalism Writing and Editing Credits: 3
- CMJ 211 – Journalism and Media History or other CMJ major elective Credits: 3
- Second major or minor required course, if known Credits: 3
- General Education Human Values/Social Context Credits: 6-12

Suggested Curriculum for B.A. in Media Studies

First Year - First Semester

- CMJ 100 - Introduction to Media Studies Credits: 3
- CMJ 150 – Studying Communication and Journalism in College Credits: 1
- ENG 101 - College Composition Credits: 3
- Second major or minor required course, if known Credits: 3
- General Education courses in Human Values/Social Context categories Credits: 6-9

First Year - Second Semester

- CMJ203 – Media Theories and Research Methods Credits: 3
- CMJ major elective Credits 3
- Second major or minor required course, if know Credits: 3
- General Education Human Values/Social Context categories Credits: 6-12

School of Computing and Information Science, New Media Design:

Executive Summary

We are experiencing a true crisis of low success and persistence rates among first-year Computer Science majors. For students who entered as Computer Science majors in the fall of 2016, only 44% continued on to the second year. Of those who did not continue, 17% changed majors, 26% withdrew from the University, and 13% were suspended. The problem seems to be particularly acute for those underrepresented in computing (for instance, women), those with less advanced math backgrounds, and those with no previous computing experience. The Computer Science faculty has been engaged in active discussions of how to address this crisis. We have identified many promising actions that could be taken in order to improve first-year student success. Most would require additional resources of one form or another, either

additional resources to the school or a redistribution of resources from other priorities. We have identified the following major factors contributing to this limited level of student success:

1. A particularly challenging first-year curriculum with multiple courses with high DFW rates.
2. Booming enrollments that have led to large class sizes and stressed available support resources beyond effectiveness. This is particularly apparent in the introductory programming courses that require students to develop completely new patterns of inquiry and approach.
3. Lack of diversity in the major creates additional risks for those from groups underrepresented in computing.

We believe the most promising approaches are those that restructure introductory courses and course schedules to provide more active learning, more contact between students and faculty/staff, more connections among students, more abundant help resources, and explicit guidance to students on expectations and success strategies. We believe this greater level of faculty and community support could make a dramatic transformation of the first year experience and lay a foundation for continued success in the major. We have identified the following major new actions that we believe can be taken to increase first-year student success and can be implemented with a reallocation of existing resources and additional resources already approved (two faculty searches are underway):

1. Offer COS 125 and 225 in both regular semesters (rather than just fall for COS 125 and spring for COS 225), providing more recovery opportunities for those who initially struggle and more flexibility for those who arrive with less math preparation or in the spring.
2. Add labs to COS 125 to provide more active learning opportunities and support resources.
3. Develop a first-year success course for COS majors and offer some sections for first-year students. With existing resources, we should be able to offer three sections, enough for roughly half our expected incoming majors.
4. Change the recommended schedule for the first semester to include COS 125 with labs (now four credits), a new first-year success course, and one fewer General Education course. This would be a total of 15 credits (down from 16), but only four full courses (down from five).
5. Explicitly define and assess first-year learning objectives through our ABET assessment process. A modest increase in faculty/staff resources would provide for a much more robust approach to increasing student success by enabling the some of the following actions:
6. Offer COS 126 in both semesters (rather than just spring), resulting in all critical path foundation courses being available both regular semesters.
7. Split large first-year courses into smaller sections to allow for more active learning and student engagement. We would target sizes of around 50 to allow us to use our active learning classroom in Neville 116.
8. Offer enough first-year success course sections to require it of all first-year students.
9. Dedicate faculty/staff time to helping build major-specific community connections and support resources to increase resilience among first-year students. Possibilities include support for student clubs, mentoring programs, professional development events, cohort-building opportunities at Summer Orientation, and/or a living-learning community.

10. Dedicate faculty/staff time to activities designed to increase diversity and inclusion through support for students from underrepresented groups and outreach to prospective students.
11. Increase faculty expertise in computing education research through the hiring of teaching and tenure-track faculty with expertise in that area. The following actions would require no additional personnel, but would require some additional funds:
12. Add MLAs to COS 125 and 140. Applications have been submitted to the program. This would require additional funds for MLA costs in the out years.
13. Increase TA resources to support low level courses in order to increase quantity and immediacy of feedback to students, support for struggling students, and capacity to develop online help resources.
14. Add additional staffed hours to the Boardman student lab.
15. Offer summer support for faculty interested in substantial curriculum revisions to first-year courses.
16. Offer travel support for faculty to attend conferences focused on computing education and student success. The faculty and staff of the Computer Science program are determined to turn around our first-year student success crisis and will be expanding our existing efforts to include items 1-5 on the list above. We would welcome the opportunity to see what we could achieve given the resources to undertake some or all of the items 6-16.

Supporting Material

For first-year students who place into Calculus (MAT 126)

1. What is the required first-year curriculum?
 - a. Courses in the discipline
 - Fall: COS 125, COS 140
 - Spring: COS 135, COS 225
 - b. General education courses that meet major requirements
 - ENG 101
 - c. Other courses that meet major requirements
 - MAT 126, MAT 127
2. What is the recommended first year curriculum?
 - a. Courses in major
 - No other courses in the major are recommended or generally available.
 - b. General education
 - Students will generally take three additional general education or elective courses.
 - c. Other recommended courses
3. Why is this the required/recommended first year curriculum?
 - a. What are expected student-learning outcomes?

As part of our ABET accreditation process, we have adopted six student learning outcomes:

SO 1: Analyze a complex computing problem and apply principles of computing and other relevant disciplines to identify solutions.

SO 2: Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of computer science.

SO 3: Communicate effectively in a variety of professional contexts.

SO 4: Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.

SO 5: Function effectively as a member or leader of a team engaged in activities appropriate to computer science.

SO 6: Apply computer science theory and software development fundamentals to produce computing-based solutions.

We begin addressing these outcomes in the first year. SO 1 and SO 6 are addressed by COS 125 (Introduction to Problem Solving Using Computer Programming), COS 135 (Applied C Programming), COS 225 (Object-Oriented Design, Programming and Data Structures), and COS 140 (Foundations of Computer Science) in different ways. The programming (COS 125, 135) and data structures (COS 225) courses teach students to think analytically identify and implement solutions to problems using computer programming and basic data structures. COS 140 teaches fundamental concepts (e.g., digital logic, race conditions, deadlocks, virtual memory) and techniques (e.g., Boolean algebra proof, circuit minimization, semaphores) and how they can be used to identify solutions to, and in some cases solve, problems. SO 2 is also addressed by the programming/data structures courses.

The first year begins to address SO 3 by requiring students to take ENG 101 and calculus (MAT 126/127). The latter teaches the students a "language" (calculus) that enables concise, unambiguous communication with scientists and engineers about problems that may involve computing solutions. SO 4 is addressed to some extent in COS 140, where the students are explicitly tasked to think about ethics (especially professional ethics) and to discuss some ethical issues as they pertain to computer science. COS 125 also often has required discussions of professional ethics. We only begin to address most or all of our curriculum's student outcomes in the first year, of course. The thresholds for success are necessarily lower in the first year than in later years, with the primary goal readying the students for successfully attaining the desired student outcomes in later years, with full attainment by the time of graduation.

b. How successful is this curriculum at producing expected outcomes?

We assess our students' attainment of student outcomes explicitly only in the sophomore and later years as part of our overall ABET assessment process. We do not at this time assess the first-year courses as a program in the same rigorous manner, although individual instructors do, of course, often assess their own courses' success. However, as we go through year three of our three-year assessment cycle this year, we are tasked with examining how well the curriculum as a whole is meeting our student outcomes and fixing any problems we find. This entails looking at all parts of the curriculum, including the first year. While formal assessment instruments have not been identified and applied (as they have in the courses used to assess the outcomes for ABET), we will be discussing the degree of success of the first-year courses in preparing students for continued progress in attaining our student outcomes. We will also examine the overall assessment process and how it should be modified, perhaps by instituting formal assessment in the first year as we do in later years.

That is not to say that we are not concerned with assessing the first-year curriculum on an ongoing basis. We regularly discuss this topic, both informally and at faculty meetings and take steps to resolve any problems we detect. Where we have noted shortcomings in the first-year

curriculum, we have taken steps to remedy them. Two examples from the past two years are illustrative. Prior to this year, COS 235 was a first-year course, covering hardware-level programming as well as more conceptual material. The instructor and faculty noticed that the students did not seem to be attaining mastery in both areas to the level desired. Consequently, the course was moved to the second year, and the hardware-level programming was moved to a new required course in the first year, COS 135. Another problem noted was that some of the students were unprepared for, and thus unsuccessful in, COS 125. The instructor noticed that this was correlated with the students' lack of readiness for calculus. Consequently, a new pathway through our curriculum was created that includes a different first-year curriculum, one that starts the under-prepared students in COS 120 (Introduction to Programming I) and COS 140 in the fall, followed by COS 135 in the Spring, with COS 125 and 225 being then taken in the second year, still providing a path for graduation in four years.

4. What are the risks associated with this curriculum (e.g., multiple high DFW rate courses in the same semester; excessive options for fulfilling General Education requirements without guidance)? There are multiple risks associated with this curriculum and other aspects of studying Computer Science.

They include:

- The required curriculum includes five high DFW courses in first year (with F17/S18 rates): COS125 (50%), COS140 (34%), MAT 126 (38%), COS 225 (38%), MAT 127 (33%). Preliminary analysis of student outcomes in fall 2018 suggests that many students fail all three required courses. Of students who earn a DFW in COS 125, about a third pass COS 140 and/or their math course. Of students who earn a DFW in math, only one student did not earn the same in COS125.
- Historically, required COS courses have strict prerequisite and have been offered once per year, requiring students who struggle with a course to wait until the next year to attempt the course again.
- With increasing numbers of COS majors, class sizes in first-year COS courses have grown to be large (regularly exceeding 100), increasing the potential for students to get lost.
- Many aspiring COS majors have no previous computing experience. The initial exposure to programming can be incredibly frustrating, with early attempts (and not-so-early attempts) resulting in error message after error message.
- The lack of previous experience can also limit understanding of what can be done with computing (and so limit the motivation to persist through frustrating times).
- The cohort of aspiring COS majors is not very diverse (in fall 2018, less than 10% of the entering cohort were female), increasing the risks for those from underrepresented groups.
- Other than ENG 101, there are no specific required or recommended General Education courses, potentially presenting an overwhelming number of alternatives.

5. In light of risk assessment, what are the alternative first-year curricula? Starting fall 2018, students who are not ready for calculus are directed to an alternate set of first-year courses that allow them to start to build a foundation in computing while they catch up in math. These courses serve as a prelude to the standard first year, rather than a replacement. This option is described in separate detail below.

6. What practices, resources, or tactics are in place to mitigate risks?

In recent years, we have adopted multiple practices meant to mitigate risks.

These include:

- COS 140 is supplemented with discussion sections to offset the large size of the lecture (over 120 students in fall 2018).
- Starting fall 2018, COS 125 requires a calculus placement (a passing score on section 3 of the math placement test). This requirement is in response to a belief that students in lower level math courses struggled in COS 125. Students without a calculus placement are directed to an alternative set of first-year courses (detailed below).
- In AY 17-18, SCIS outfitted a student computer lab staffed with peer tutors 20 hours per week, as well as TAs for programming courses. This lab serves as a place for students to work where help is readily available.
- In AY 17-18, SCIS outfitted a dedicated student lounge space for COS and NMD students to encourage group study and support.
- Typically COS 125 was offered only once a year (in the fall), requiring students who stumbled on their initial attempt to wait until the following fall to try again.

In spring 2019, we added a second section to increase recovery options for struggling students (as well as those who started in an earlier COS course or arrived in the spring). This experimental offering has attracted 68 students, including a number of non-majors taking advantage of the increased availability.

We plan to continue this spring offering, subject to the availability of instructional resources.

7. What additional steps can be taken to mitigate risk?

We have identified several additional steps that could be taken to mitigate risk. In the coming months, we will discuss which steps can be adopted given available resources. Some of the most valuable will clearly require resources beyond what is currently available in SCIS. These steps include:

- In order to facilitate recovery of students who initially stumble, as well as those who arrive off schedule, we could offer selected first-year (and second-year) required courses both semesters. The highest priority courses for increased offering are COS 125, COS 225, and COS 226. These courses lie on the critical path for progress in the major. The additional lecturer we are searching for now would enable us to offer COS 125 and 225 each regular semester, while additional courses would require additional instructional resources.
- Laboratory sections were removed from COS 125 some years back due to the scarcity of instructional resources. Adding back these labs would increase the resources available to students and facilitate positive connections. This change would primarily require additional TA and peer instructor resources.
- We have used peer instruction in the MLA model very successfully at the sophomore level to increase engagement and success. We believe the program would have even greater impact at the first-year level, increasing our ability to support active learning to large classes. For AY 19-20, we have applied for MLA support for both COS 125 and 140. After the initial years, this will require funds for additional student staff support. The large size of our first-year courses make this challenging, requiring substantial financial resources after the initial pilot period.

- A major-specific first-year success course would provide an opportunity to build major-specific success skills in first-year COS students. In recent years, we have not been able to offer such a course due to scarcity of instructional resources. We would like to supplement the in-class instruction of such a course with online resources. Because of the large size of the entering cohort, we would need to offer at least five or six sections to make the course available for all new first-year majors. This would require additional instructional resources.
- The 15-credit credit requirement (part of the Think-30 initiative) has proven to provide a disincentive for COS students to take the CLAS first-year success course (since they must typically choose between taking 17 credits or falling below the 15 credit level). We are exploring the feasibility of changing the required first semester curriculum by increasing the credit count for COS 125 to four (to reflect the restoration of labs described above), requiring a major-specific first-year success course, and reducing the number of expected General Education courses by one. This would result in a standard first semester curriculum of four courses and a total of 15 credits, allowing students to focus on a smaller total number of courses that are more intentionally chosen to build a foundation for future success.
- Increase faculty expertise in computing education research through the hiring of teaching and tenure-track faculty with expertise in that area, as well as supporting the professional development of existing faculty who wish to increase their expertise in this area. This expertise would help us improve our pedagogy while opening the door to emerging opportunities for research funding and publication.
- Break up large classes into multiple sections in order to increase interaction between faculty and students. The primary targets for this would be first-year courses, especially COS 125 and 140.
- Scarce TA resources for low-level courses make it difficult to get students the timely and detailed feedback on assignments that would allow them to learn most effectively from their early mistakes and misconceptions. Greater TA resources would increase quantity and immediacy of feedback to students, support for struggling students, and capacity to develop online help resources.
- Students report that the support resources of the Boardman student lab and lounge have been greatly beneficial to them. Increased staffed lab hours and after-hours access to the lounge could have an even bigger impact.
- More major-specific community connections and support resources could increase resilience among first-year students. Possibilities include support for student clubs and affinity groups, mentoring programs, professional development events, cohort-building opportunities at Summer Orientation, and/or a living-learning community. The key resource required for a substantial increase in these opportunities would be a staff member available to support logistics.
- Incorporation of soft skills more explicitly throughout the COS curriculum (rather than primarily at the junior and senior levels).
- Addition of explicit assessment of first-year learning objectives.
- Addition of explicit assessment of first-year experiences to learn more about what students believe would help them succeed and what factors influence whether they persist or not.
- Suggested sets of General Education course for first-year students with specific interests would provide guidance in initial course selection.

For first-year students who do not place into Calculus

- 1) What is the required first-year curriculum?
 - a) Courses in the discipline
 - Fall: COS 140
 - Spring: COS 125, COS 135
 - b) General education courses that meet major requirements
 - ENG 101
 - c) Other courses that meet major requirements
 - MAT 126 if qualified by spring

- 2) What is the recommended first year curriculum?
 - a) Courses in major
 - COS 120
 - b) General education
 - Students will generally take three additional general education or elective courses.
 - c) Other recommended courses
 - MAT 111 and/or MAT 122 as preparation for MAT 126

- 3) Why is this the required/recommended first year curriculum?
 - a) What are expected student-learning outcomes?
 - The general learning objectives are the same as the more standard required curriculum, with the caveat that students will have fewer total courses and so will likely have a lower level of mastery.
 - b) How successful is this curriculum at producing expected outcomes?
 - This is the first year that we have directed students into this alternative curriculum. We will have a more accurate idea of effectiveness in the coming semesters.

4) What are the risks associated with this curriculum (e.g., multiple high DFW rate courses in the same semester; excessive options for fulfilling General Education requirements without guidance)?

Although this alternative curriculum is generally recommended for students with more limited STEM background, it is not necessarily easier, but rather begins at a lower level of expected preparation. It shares many of the same risks associated with the standard curriculum and other aspects of studying Computer Science.

They include:

- The required curriculum includes five high DFW courses in first year (with F17/S18 rates): COS 120 (33%), COS 125 (50%), COS 140 (34%), MAT 122 (35%), MAT 126 (38%).
- With increasing numbers of COS majors, class sizes in first-year COS courses have grown to be large (regularly exceeding 100), increasing the potential for students to get lost.
- Many aspiring COS majors have no previous computing experience. The initial exposure to programming can be incredibly frustrating, with early attempts (and not-so-early attempts) resulting in error message after error message.
- The lack of previous experience can also limit understanding of what can be done with computing (and so the motivation to persist through frustrating times).

- The cohort of aspiring COS majors is not very diverse (in fall 2018, less than 10% were female), increasing the risks for those from underrepresented groups.
- Compared to students following the standard curriculum, students following this curriculum are subject to a potential delay in progress resulting in longer time to degree. This risk is caused, in large part, by the combination of strict prerequisite requirements and historically once-a-year offerings of foundation courses.
- Other than ENG 101, there are no specific required or recommended General Education courses, potentially presenting an overwhelming number of alternatives.

5) In light of risk assessment, what are the alternative first-year curricula?

We have identified no alternatives that don't involve either multiple high-DFW courses or an increased time-to-degree.

6) What practices, resource, or tactics are in place to mitigate risks?

- Starting fall 2018, students who were not ready for calculus were advised to take COS 120 as preparation while they increased their math preparation. We grouped these potential majors into a separate laboratory section of the course in order to begin to build a cohort identity.
- Typically COS 125 was offered only once a year (in the fall), requiring students who were not able to take the fall offering to wait until the following fall to begin. In spring 2019, we added a second section to increase recovery options for struggling students (as well as those who started in an earlier COS course or arrived in the spring). This experimental offering has attracted 68 students, including a number of non-majors taking advantage of the increased availability. We plan to continue this spring offering, subject to the availability of instructional resources.
- Other practices described above also benefit this group of students.

7) What additional steps can be taken to mitigate risk?

All possibilities for further mitigating risk discussed above would also benefit this group of students.

New Media:

Executive Summary

New Media majors are generally successful academically in their first year. First-year NMD courses have low DFW rates, with the overwhelming majority of students earning a C- or above in their early courses and being qualified to continue. In the most recent cohort for which data are available (those who entered fall 2016), 67% of entering NMD majors were retained into the second year in the same major, while only 7% are suspended. Despite their successful experiences in first-year NMD courses, however, 27% withdraw from the University before their second year, due to a variety of reasons. Because we believe the causes for withdrawal are broader than problems with specific courses, our approach to improving first-year success must also take a broad approach.

We have identified the following issues as potential contributors to students leaving after the first year:

1. Uncertainty about the nature, requirements, relationships, expectations, and potential directions of components the New Media major, leading to confusion, frustration, and reduced motivation to pursue the major.
2. Increasing class sizes in lower level courses, stressing interactions between students and faculty, reducing a sense of community among students, and disrupting a sense of connection to the major.
3. Factors outside the New Media major that impact students' academic performance, motivation, or ability to persist at UMaine.

We will undertake the following actions to address these issues and improve first-year student success:

1. Improve communication with potential and beginning NMD students about the nature of New Media, the role of required courses, expected learning outcomes of courses, and possibilities for future career directions. A first step toward this action will be discussions among the New Media faculty to arrive at consensus (or at least general agreement) on these topics.

2. Identify ways to preserve student

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3. Undertake additional information gathering about factors important to the first year success of first-year NMD students. This will include quantitative analysis of factors that may lead students not to persist in the New Media major (grades, demographics, other responsibilities), explicit assessment of student learning objectives, and discussions with first-year students about their to learn more about what students believe would help them succeed and what factors influence whether they persist or not.

Supporting Material

1. What is the required first-year curriculum?
 - a. Courses in the discipline
 - Fall: NMD 100, NMD 104 Spring: NMD 105, NMD 106
 - b. General education courses that meet major requirements
 - ENG 101
 - c. Other courses that meet major requirements
 - No specific other courses are required.
2. What is the recommended first year curriculum?
 - a. Courses in major
 - No other courses in the major are recommended or typically available.
 - b. General education
 - First-year students generally take five additional general education and elective courses.
 - c. Other recommended courses
 - No other specific courses are recommended.

3. Why is this the required/recommended first year curriculum?

a. What are expected student-learning outcomes?

New Media has no explicitly defined expected first-year student learning outcomes, though we had begun discussion of what they might be for NECHE assessment efforts. Informally, faculty describe expected outcomes as a foundation of skills needed to succeed in later courses (specific skills still to be defined), coding experience, good design skills, ability to think creatively, ability to work collaboratively, and experience making projects “their own.”

b. How successful is this curriculum at producing expected outcomes?

No formal assessments are yet in place and two first-year courses are only partway through their inaugural offerings. Faculty feel that students are doing well in their development of coding skills and are building collaborative connections. We need to continue asking this questions and to put more formal assessment procedures in place.

4. What are the risks associated with this curriculum (e.g., multiple high DFW rate courses in the same semester; excessive options for fulfilling General Education requirements without guidance)?

This specific curriculum is new in AY 18-19, with two mostly new first-year courses being offered this spring. This makes it difficult to accurately evaluate specific risks. More general risks include the following:

- With increasing numbers of NMD majors (and interest in NMD General Education courses), class sizes in first-year NMD courses have grown to be large (exceeding 50), making it difficult to preserve the hands-on nature of many NMD courses and increasing the potential for students to get lost.
- First-year students are often not familiar with New Media as a potential major when they arrive at UMaine. Accordingly, they often do not begin the year in the appropriate NMD courses, making it essential to ensure there are alternate paths for those who discover an interest in NMD during or after the first year.
- It is typical for students, even beginning NMD majors, to be uncertain about what constitutes New Media. This can lead to confusion about why courses are required, what defines key learning objectives, and how required courses build toward later courses and potential careers.
- Other than ENG 101, there are no specific required or recommended General Education courses, potentially presenting an overwhelming number of alternatives.

5. In light of risk assessment, what are the alternative first-year curricula?

Alternative curricula primarily address the problem of students who did not take the required courses in the first semester. Specifically, we are in the processing of altering the curriculum so that it can be begun in either semester.

6. What practices, resource, or tactics are in place to mitigate risks?

- NMD 104, 105, and 106 are supplemented with laboratory sections to offset the large size of the lecture (50-80 students). In spring 2019, NMD 106 will be piloting the use of MLAs to support student learning.
- In AY 18-19, SCIS outfitted a student computer lab staffed with peer tutors 20 hours per week, as well as TAs for introductory courses. This lab serves as a place for students to work where help is readily available, as well as check out equipment for some foundation courses.

- In AY 17-18, SCIS outfitted a dedicated student lounge space for COS and NMD students to encourage group study and support.

7. What additional steps can be taken to mitigate risk? Mostly, we need to better understand the risks, which should become clearer as we implement the new curriculum. Some things that already have presented themselves as possibilities:

- Clearer communication with students about the nature of New Media, the role of required courses, expected learning outcomes of courses, and possibilities for future career directions. But first, faculty need to agree on what those positions are; we have begun conversations.

- Deeper quantitative analysis of factors that may lead students not to persist in the New Media major. Poor performance in required courses does not seem to be a major factor. Other hypotheses include difficulties adjusting to college, financial challenges, too much time spent at outside jobs, and decisions that college is not right for them. We would appreciate any central resources that would help us understand these forces.

- Addition of explicit assessment of first-year experiences to learn more about what students believe would help them succeed and what factors influence whether they persist or not.

English:

The English Department took up Provost Hecker's charge to improve First Year Student Success in the English Major in substantive discussions at department meetings on January 31 and February 28, 2019. The Undergraduate Studies Committee thoroughly addressed the matter in their meeting of March 6, 2019, providing responses to the seven guiding questions. Chair Evans received credentials for, and initial self-guided training on, the EAB platform in early March. He and Dean Haddad also discussed approaches to the charge in their routine meeting on February 6, 2019. This report documents four key findings that will guide the department's continued attention to this important matter.

Key Finding 1: Plentiful Choice Requires Robust Advising

Curricular reforms initiated in 2006, which have been reviewed and revised regularly in the intervening years, offer a "plentiful choice" experience to English majors. The faculty remain firmly committed to this model but acknowledge that its success, from the standpoint of the newly matriculated major, depends heavily on the kind of robust advising that enables a student to make good progress in the major while choosing wisely the courses that further their general education and their secondary interests.

Improvement Plan and Implementation Timeline for Finding 1

In the months ahead, we will undertake a careful review of the advising process from the moment a student accepts admission with a declared English major, through to the successful completion of their first year. We will update advising materials to include sample guided pathways (AY19-20) and will update the "Suggested Curriculum for the B.A. in English" in the Catalog (AY20-21). An ad-hoc subcommittee on "recruiting and retention" will be re-convened (AY19-20). Rather than waiting for majors "to come into focus," we will make a concerted effort

to engage them early and often, in both formal advising and instructional settings and in less formal ways (orientations, receptions, open houses).

Key Finding 2: Better Monitoring of Lower-Division “Core” Completion Rates Needed

The courses available to first semester students include English 170: Foundations of Literary Analysis and English 205: Introduction to Creative Writing. In cases where the English 170 requirement is already met, a major is eligible to take English 222: Reading Poems (prerequisite: three hours of English) and English 271: The Act of Interpretation (prerequisite English 170). Ideally, students complete the “core requirements” of 170 – 222 – 271 by the conclusion of their third semester.

A preliminary review of EAB data for English 170 for the five years from AY13-14 to AY17-18 reveals completion rates ranging from 82.9 (AY17-18) to 90.9 (AY15-16), with an average of 86.7. Non-passing grades (of D, F, W, I, L) range from a high of 17.6 (AY17-18) to a low 10.2 (AY15-16) with an average of 13.56. For a small-capped course staffed predominantly by seasoned full-time faculty these numbers seem high.

Improvement Plan and Implementation Timeline for Finding 2

We will undertake comparable analyses for all first-year eligible courses, including English 222 and 271 (the remainder of the “core” courses), English 205: Introduction to Creative Writing, English 131: The Nature of Story, and English 129: Topics in English (see below). We will debate the motion sometimes advanced that a “majors only” section of English 170 should be offered, or that an alternative “gateway” course be developed.

Key Finding 3: Atrophy of First-Year Topics Courses

English 129: Topics in English was designed with increased retention in mind but has been, in recent years, less frequently offered in the “live” format recommended for majors and seldom staffed by full-time faculty.

Improvement Plan and Implementation Timeline for Finding 3

We will consult with Dean Haddad and others in administration to determine whether first-year seminars remain integral to the strategy for first-year retention.

Key Finding 4: Role of First-Year Composition Course

Though not required of the English Major uniquely, English 101: College Composition does play an important role in the first-year experience of many of our majors. The course is often taken concurrently with English 170 in the fall and faculty differ on the wisdom of the combination, some citing anecdotal evidence that the courses complement and reinforce one each other, with others pointing to poor performing 170 students as evidence that 101 should be a prerequisite to 170. A comparable conversation should be had regarding the Honors Civilizations sequence 111 - 112 that functions as an alternative to English 101 for Honors students.

Improvement Plan and Implementation Timeline for Finding 4

We will gather more data on the relation of 101 to 170 in advance of our May Work Days and discuss the matter further then. In response to an informal query from NSFA, received earlier this year, we will discuss the feasibility of offering “early warning” notifications for the advisors of students performing poorly in the opening weeks of English 101. This program-wide alert system would apply to English majors as well.

Explorations

- 1. What is the required first-year curriculum?**
 - a. Courses in the Discipline**
 - b. General Education courses that meet major requirements**
 - c. Other courses that meet major requirements**

There isn't a specific or sequential list of courses that newly accepted students in the Explorations programs (Undecided and Pre-Engineering) take during their first year. Instead, schedules are dependent on major/course interest that is shared and communicated with the Advising and Academic Services Center.

Students' first semester schedules are arranged by the Academic Advisor and Success Instructor based on the information provided by the student on their “Course Preference Forms”. Students who are generally listed as undecided will be registered for a variety of courses that will fulfill several different general education categories and sub-categories. Furthermore, their science and math performance from high school and SATs/ACTs are considered prior to registering them for any STEM based courses. We attempt to register students for courses that are diverse in size and are also spread out across the week. For example, we do not consider only Tu/TH or M/W/F requests unless there is an extenuating circumstance (i.e. commuting, family responsibilities, health).

Students who indicated they are interested in a specific major will be registered in a balance of courses that will continue to fulfill general education categories and sub-categories but will also fulfill introductory coursework towards that major. Students who are Pre-Engineering will be registered for a math course based on their Math Placement Exam scores. They *may* also be registered for a physical science if they pass part three (this allows them to enter an engineering major sooner). If the student only passes part one or two, they are only registered for a math course and will not be registered (or advised) for a science course until they reach calculus one (MAT 126) during a future semester.

- 2. What is the recommended first-year curriculum?**
 - a. Courses in major**
 - b. General Education**
 - c. Other recommended courses**

As mentioned in my response from question one, the recommended first-year curriculum for Exploration students are dependent on what they have listed on their “Course Preference Form”. However, I have summarized some examples:

Exploration (Undecided) students who have indicated they are undeclared about a major or “special interest”: 16 credit load which will include the 1-credit First Year Seminar (FYS 100) and five 3-credit courses that will fulfill several general education categories and sub-categories. Students are generally registered for ENG 101 until we have met our reserved limit.

Explorations (Undecided) who indicated an interest in a certain major: These are students who were generally not accepted in their first choice of major when they applied to UMaine or are beginning to consider a specific major after being accepted into Explorations. They will be enrolled in a 16-17 credit load which will include the 1-credit First Year Seminar (FYS 100), and five 3-4 credit courses that will go towards several general education categories and sub-categories and/or their major of interest. We try our best NOT to register them for 17 credits. However, this can be difficult if there aren’t enough 1-credit course options to choose when the student needs to take a 4-credit science or math course towards their major of interest.

Explorations (Pre-Engineering): 15-16 credit load which will include the 1-credit First Year Seminar (FYS 100), 1-credit Introduction to Pre-Engineering (GEE 103), two to three 3-credit courses that will go towards several general education categories and sub-categories, AND one to two 4-credit STEM coursework (MAT 126 and CHY 121/123 OR PHY 121).

The only other recommended courses would be 1-credit based elective course that will help round their schedule to 15 as oppose to 17 credits.

3. Why is this the required/recommended first-year curriculum?

a. What are the expected student-learning outcomes?

b. How successful is this curriculum at producing expected outcomes?

Students are required to take these recommended curriculums (based on their interest) as it helps them discover a major of interest and/or discuss an alternative major with their academic advisor. The specific learning outcomes that we have are more directly related to FYS 100:

Course Description:

FYS 100 is a one-credit graded seminar designed to introduce students to the University of Maine’s resources, strategies for achieving academic success, and career exploration. Activities designed to foster exploration and evaluation of interests, goals, and abilities and their relationship to potential majors and careers are a major component of the course.

Learning Outcomes:

- Each student will have a basic understanding of themselves, academic options, career options, and decision-making.
- Each student will have analyzed his or her interests and skills and will have formed a tentative academic/career plan.
- Each student will learn how to set, modify, and achieve goals to accurately reflect his or her academic progress.

- Each student will understand how to navigate the University in order to achieve his or her career goals and what to do when roadblocks are encountered.

We have not conducted an official assessment or evaluation of our learning outcomes for FYS 100 nor the advising/program structure of Explorations. However, there has been a larger population of students entering into their second, and even third year, as an Explorations student than we would like. This generally includes students who have a major in mind but lack the GPA minimum or course pre-req to declare (i.e. Education and Human Development, STEM majors, Engineering majors).

4. What are the risks associated with this curriculum (e.g. multiple high DFW rate courses in the same semester; excessive option for fulfilling General Education requirements without guidance)?

The more severe risks we see is when students elect not to take our advice of limiting their registration in STEM based coursework. This is a general problem for students who are in Pre-Engineering or are attempting to declare a NSFA major. Since most of these majors have a sequential curriculum that require multiple STEM base courses, these students want to stay close to the published course of study. There is a population of students who go against our advice and will change their schedule during the beginning of the fall or spring semesters and register for courses that have high DFW rates. Because of concerns of time and costs, students sometimes think it is worth the risk to take these courses despite their previous performance in STEM coursework.

There is less of a concern for excessive options for fulfilling general education requirements since Exploration students meet with their academic advisors on a weekly basis. Ongoing conversations and discussions take place in order to help student feel supported and guided to make strategic decisions on general education options.

5. In light of risk assessment, what are the alternative first-year curricula?

I am unsure if it is pedagogically possible, but if many of the STEM based majors required fewer “DFW” courses during the first semester, it would better support Explorations students striving towards those majors. Because of the pressure many Exploration students place on themselves for staying on the timeline of their major, they feel forced to take difficult coursework that they may not be academically ready for.

Other suggestions could be increased summer prep-programs for Exploration students so they can become more prepared for the demanding coursework for certain major. Block scheduling based on major of interests could also provide further peer-support so cohorts of first year students are taking similar courses other than only FYS 100.

6. What practices, resources, and/or tactic are in place to mitigate risks?

We closely evaluate the high school performance of students while registering them for classes for their first semester. These conversations continue during the academic year, both during the first-year seminar (FYS 100) and one-on-one advising meetings. We also work closely with academic support services, which include the Tutor Program, Math Lab, and Writing Center. Speakers from these departments will attend FYS 100 and/or the class will visit the department. However, problems continue if students refuse to utilize the services and/or choose to utilize them too late in the semester.

7. What additional steps can be taken to mitigate risk?

- Collaborating more with various departments on campus, especially STEM, to discuss best avenues for Exploration students to be successful in their majors.
 - Register students, with common interests of major, in the same FYS 100 sections while having clearly undecided student in the same sections (semi-cohort).
 - Explorations students being allowed to take a 1-credit specific first year seminar offered by the major they are considering. This would be in addition to their FYS 100.
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History:

1. What is the required first-year curriculum?

The History Department's only requirement for first-year majors is to take HTY 130.

2. What is the recommended first-year curriculum?

Depending upon a student's test scores or transfer credits, the department recommends taking one or more of the introductory survey courses, including HTY 103-104 for U.S. history; HTY 105-106 for European history; HTY 107-108 for Asian history. We also recommend ENG 101 and progress towards Gen eds and selection of a minor.

3. Why is this the required/recommended first-year curriculum?

HTY 130 is designed to introduce students to basic historical methods and to achieve basic reading and writing skills. 1/3 of the course is dedicated to retention issues. The survey courses also serve to introduce students to basic reading and writing skills in history, to broad knowledge in the history of the respective areas, and to prepare students for more advanced level courses in history.

4. What are the risks associated with this curriculum?

The larger survey classes pose risks for students who do not yet have the discipline to keep pace with the weekly lectures, readings, and occasional writing assignments. As a result, HTY always tries to offer smaller sections of our introductory courses as well.

5. In light of risk assessment, what are the alternative first-year curricula?

The department sought to address some of the risks by creating the HTY 130 class.

6. What practices, resources, and/or tactics are in place to mitigate risks?

Once again, HTY 130 has been one response. Many of the survey classes have small TA-led discussion groups where instructors have more direct contact with students and can monitor problematic students earlier in the semester. History has also created a history lab in which a grad student serves students looking for help with research, writing, and other needs.

7. What additional steps can be taken to mitigate risk?

Instructors can give greater attention to struggling students earlier in the semester.

International Affairs:

1. The IA major is an interdisciplinary program that requires five core courses which students are encouraged to begin taking during their first year. However, it is not strictly required that they do so in order to progress toward degree completion. In other words, students may declare the IA major in their second year and complete the degree on time. The core courses are listed below.

ANT 102 Intro to Anthropology – Diversity of Cultures

ECO 121 Principles of Macroeconomics

HTY 241 History of Globalization

INA 101 Intro to International Affairs

POS 120 Intro to World Politics

Students who have not yet declared a one of the eight interdisciplinary concentrations are advised by the CLAS Advising & Academic Services staff. They are advised to begin with ECO 121, INA 101, and POS 120 in the fall and ANT 102 and HTY 241 in the spring, since those courses are offered only in the spring. Beyond the core courses, IA majors are advised to focus on General Education requirements.

It is also strongly recommended that students continue their foreign language study from high school study. If they prefer to pursue a different to meet the IA foreign language experience requirement of Intermediate on the ACTFL Oral Proficiency Interview or Oral Proficiency Interview by Computer, they are advised to begin study of that language right away. All IA students are encouraged to study abroad.

2. The recommended first-year curriculum is the same as in Number 1, above.
3. The core courses are recommended for the first year of a student's program of study because they provide a foundation in international affairs and serve as prerequisites for courses in the various concentrations.

Learning outcomes for all but INA 101 are determined by the respective departments offering those courses. In the case of INA 101, the outcomes are below.

Students will have familiarity with the major contemporary and historical issues in global politics, major scholarly works related to IA and relevant disciplines. They will be able to analytically examine ideas, arguments, and different points of view in global politics. They will understand the dynamics at play within the different interactions between nations and other social and political actors. In addition, they will have a clear grasp of the concept and contending definitions of globalization and its implications for the global system and the ability to independently research and write on major political and social issues.

4. and 5. A high D, F, W, L risk does not appear to be a problem with POS 120 and INA 101. ECO 121 has a slightly higher risk, but having students take it in the spring would not make

sense because the two core courses offered only in spring have an equally high risk of D, F, W, L.

Letting students loose among the plethora of Gen. Ed. options might be risky; however, the Advising Center take student interests into account in order to guide them toward areas of interest that coincide with Gen. Ed. options. We can make a concerted effort to be sure faculty advisors within the concentration are also taking student strengths and interests into account when advising for Gen. Ed. courses. That said, it seems wise to also advise them to explore new areas with which they may have no familiarity whatsoever and which could complement the major and become a minor.

6. If the IA budget allows, we could look into the possibility of hiring junior or senior students with concentrations in Economics, Anthropology, and History to tutor students in ECO 121, ANT 102 and HTY 241 who are having difficulty.
7. We can revise the advising process and web site to make the pathway in IA clearer to students. One area that has been revised and could perhaps be made even clearer, is the foreign language experience in order to make it abundantly clear that study abroad in the target language is almost an absolute if they choose to use a language other than French or Spanish to meet that requirement.

Mathematics and Statistics:

1. Required first-year curriculum.

We do not have specific required courses for mathematics students in the first year. Our B.A. degree program requires 13 mathematics & statistics (MAT/STS) classes, while our B.S. degree program requires 17. Neither the B.A. nor the B.S. program has any course requirements outside of MAT/STS courses, other than standard General Education requirements, the requirement for a minor or second major for those in the B.A. program, and other requirements from beyond our program.

Time to complete the B.A.:

It is possible to complete the MAT/STS requirements for the B.A. in as few as seven semesters if a student typically takes three MAT/STS courses per semester, or seven semesters if a student typically takes two such courses per semester.

Time to complete the B.S.:

Completing the B.S. can be done within six semesters if the student typically takes three MAT/STS courses per semester; to complete it within eight semesters requires taking two MAT/STS courses per semester during seven semesters, and three in one semester.

2. Recommended first-year curriculum.

The undergraduate mathematics curriculum (both the B.A. and B.S. degrees) begins with the calculus sequence. A “typical” student begins by taking Calculus 1 (MAT 126) and Calculus 2 (MAT 127) in their first year. Students must complete those two courses before moving on within the major, as all non-calculus MAT/STS classes required for the major have at least Calculus 2 as a prerequisite. In particular, the next steps beyond the calculus sequence are:

- Introduction to Abstract Mathematics (MAT 261): requires Calculus 2
- Linear Algebra (MAT 262): requires Calculus 2
- Differential Equations (MAT 259): requires Calculus 3. Note that this course is only required for the B.S., though it can be counted toward the B.A. as well.
- Introduction to Statistics (STS 434) requires Calculus 3

Once they have completed Calculus 2, they may begin taking more than one MAT/STS course within a single semester, as they have sufficient prerequisites for many courses. It is difficult to define a “typical” student entering our program, as many students come in with AP test credit or transferred credit allowing them to skip over taking Calculus 1 here; occasionally, a student enters the program needing a semester of Pre-Calculus before enrolling in Calculus 1. Among 74 students who graduated with B.A. degrees in mathematics in recent years, the following table shows the first MAT class they enrolled in at UMaine:

Course, # enrolling, Percentage:

- MAT 122, 2/74, 3%
- MAT 126, 23/74, 31%
- MAT 127, 35/74, 47%
- MAT 228, 8/74, 11%
- Other MAT, 6/74, 8%

“Other MAT” above includes Algebra for College Mathematics (MAT 111, x1), Introduction to Differential Equations with Linear Algebra (MAT 258, x1), Differential Equations (MAT 259, x3), and Introduction to Abstract Mathematics (MAT 261, x1).

In addition to recommending that students begin at the appropriate place in the calculus sequence, we also advise them to begin working on their General Education requirements. Our general strategy during these advising sessions includes:

- Urging them to look over the very large number of courses satisfying GenEd requirements, noting that the list is probably much larger than they may have expected and that they do not need to follow what their friends or classmates are doing.
- Pointing out that they may select courses in a field they are generally/personally interested in or have thought about exploring, or which may begin developing skills they think might be relevant in a future career.
- Reminding students in the B.A. program that they must choose a minor or second major, and that they may wish to choose classes within a discipline they are considering as such. The early exposure to that second field leaves them sufficient time to change their mind about a minor or second major.

3. Why this is the recommended first-year curriculum?

Students must complete the foundational calculus courses needed for all higher-level MAT/STS courses. Because of prerequisites, they can only take one calculus course at a time. They should do this while balancing the calculus courses with selections in other disciplines, both to begin satisfying other UMaine requirements (such as GenEd), and to give them breadth in their first-year experiences.

4/5. What are the risks associated with this curriculum, and in light of these risks, what are the alternative first-year curricula?

Courses in the calculus sequence are well-known to have high DFW rates. However, the only real alternative to the sequence is to give students the option to back up and take Pre-Calculus (which does not count toward the math major) if they are not ready for Calculus I.

6/7. What practices, resources, and/or tactics are in place to mitigate risks? What additional steps can be taken to mitigate risk?

The best way to mitigate risks for students entering the calculus sequence is to ensure that they enter it in the right place. We currently use the results of a math placement exam (MPE) to determine the which course is most appropriate for students taking their first math course at UMaine. However, the existing MPE is known to be a poor assessment tool for determining which course students should enroll in; alternative placement mechanisms are being investigated.

Once students are actually enrolled in math courses, a number of additional resources and efforts are in place to increase their chances of success:

- Our Calculus I sequence is highly coordinated among the 5-10 sections being taught in a given semester. Faculty teaching the course meet biweekly to discuss ideas for presenting the content in class, ways of keeping the students engaged (use of clickers, group work in recitation, etc.), the pace of the course, and other strategies for helping students succeed in the course.
- The department runs a Math Lab, staffed by faculty and graduate students (on rare occasions, undergraduate students are used as well). Anyone can drop in the Math Lab and ask questions about any MAT/STS course, or any other topic in mathematics & statistics. Teaching assistants for the Calculus courses are among the staff working in the math lab, and we publicize times in the schedule when the staff in the Lab are more familiar with particular courses

Students are also reminded of the availability of the Tutor Program on campus, and encouraged to go to faculty and/or TA office hours.

An additional step that may help mitigate risk would be to further increase coordination and oversight of our Calculus II course as well.

Because the calculus sequence is so heavily populated by students who are in fact not mathematics majors, the above resources are not particularly directed at students within the major, but rather the large population from across the university who enroll in our calculus courses.

Modern Languages and Classics:

1. The majors in French and Spanish require 36 credits, 30 of which must be above the intermediate (FRE 201/202, SPA 203/204) level. Credits for the Romance Languages major are counted starting at the 300 level. There is no required first-year curriculum for the B.A. in French, Spanish, or Romance Languages. Most language majors begin their coursework at the 300 level, though some in French and Spanish may start at the intermediate (200) or even elementary (100) level.
2. There is no official recommended curriculum. However, students who begin their major at the 200-level must take courses in sequence (FRE 201-202, SPA 203-204).

If a student begins French at the 300 level, they are encouraged to take either FRE 309 or 310 (Readings in French/Francophone Literature) and FRE 305 and/or 306 (depending on previous credits and placement). In the case of a Spanish major, they are similarly encouraged to take SPA 305 and/or 306 and SPA 307 or 308, depending on which of the courses are being offered.

Students are otherwise encouraged to fill their other credits with courses that satisfy the various General Education requirements based on their areas of interest and curiosity, or with respect to fields that complement the major language. We point out to them that it is a good idea to complete the Gen. Ed. requirements so as not to be held back by those requirements when it comes time to study abroad.

3. Expected student learning outcomes for FRE 202 and SPA 304 are Intermediate Mid to Intermediate High ACTFL Proficiency in speaking, reading, writing, and listening. For FRE 305, the outcome is Advanced Low in all four linguistic skills; for FRE 306, Advanced Mid for listening and reading and Advanced Low for speaking and writing. For SPA 305, the desired outcome is Advanced Mid for listening and reading, and Advanced Low for speaking and writing. For SPA 306, the outcome is Advanced Low in all four linguistic areas.

We are currently working on determining how successful the curriculum is at this level in producing the expected outcomes.

4. A review of the DFWL courses in French and Spanish indicates that upper level courses (300 and 400) do not have high DFWL rates. Courses with somewhat elevated DFWL rates are intermediate courses, generally speaking, and those who do poorly are not dedicated to learning the language and could often do better than the grade they receive were they to apply themselves. In a few instances, the students may have been placed in a course that does not correspond to their real proficiency level.
5. N/A.

6. The department provides free tutoring in French and Spanish to students at the 100 and 200-levels.
 7. We plan to re-evaluate the placement test, which focuses on reading comprehension and grammar. We will review other placement instruments on the market and may decide to use one that includes a speaking component if departmental resources allow us to do so.
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Music:

The Music division has an extensive first-year curriculum devoted to acquiring musical skills and vocabulary as part of its NASM accreditation. The coursework includes 2 courses in music theory (for all music majors) and ear-training (for the BM students), along with a basic introduction to music history (MUL 202 and MUL 200, for all music majors). Other first-year music courses are dependent on the performance medium of each student, and include applied lessons, work on piano proficiency, and ensemble rehearsal and performance. The details of the performance requirements shift depending on the student's previous background and skill level, but a shared aspect for all music majors is the one-on-one applied lessons, giving all majors some individual attention. The division also offers a college success course for music majors each fall, taught by Elizabeth Downing.

The biggest barrier to student success for music majors has tended to be the music theory curriculum. This is typical across the country for schools offering professional music degrees. Out of our first-year admits over the last two years (generally a class of 25 music majors), 3-4 students have serious trouble with the music theory coursework, and an additional 3-4 need extra help to do well with the material. Some of this is attributable to students not having music theory work available to them before entering college, while for other students it's the result of focusing on performance without developing notation-reading skills in their high school years. Failing a first-year course in music theory does place a student in a precarious position, as repeating the course has to wait until the following academic year.

One recent non-traditional student has set up a gift account at the Foundation to pay for music tutoring for UMaine students. He decided on this donation after having the experience of receiving extra help in theory from an advanced music major that the Division was able to pay via work-study funding. His gift will make it possible for the Division to hire appropriate advanced students to tutor whether or not those tutors would qualify for work-study funds. We anticipate having the first such tutor start in February 2019.

We are also looking into the idea of having a "makeup 1st semester theory" offering during Winter Term, so that students that did poorly in the fall would have an opportunity to get back on track by the spring semester. This may involve the students taking an online course, either UMaine-built or offered by another School of Music (there is such a course offered by Indiana University for \$97 for a 4-6 week run), and re-taking a representative final exam during the first week of the spring semester.

The music faculty will also pursue meeting about the first-year music majors prior to midterm exams in each semester, with particular attention to potential advising issues. For example, with the relatively full first-year curriculum in music, it can be daunting for our majors to try to take their lab science required course within the first year at UMaine. Other tutoring ideas are being discussed by the faculty, and we hope to get more information from Student Records about the 3-4 students each semester that run into difficulty, in order to spot any issues in common.

Philosophy:

1. What is the required first year curriculum?

There is no required first year curriculum.

As confirmed by a recent (January 2019) review, virtually no students who end up becoming majors have declared prior to arriving at the University of Maine. The vast majority declare a philosophy major after classes have begun in the spring of their freshman year at UMaine, and a solid majority of philosophy majors wait until their sophomore year.

Three of the several interrelated factors that contribute to this situation are: (1) students have not taken a philosophy class prior to coming to UMaine, (2) most philosophy majors have a second major, and (3) philosophy is a relatively flat major with few prerequisites and only 30 credits – fairly easy to add on later in a student’s career.

2. What is the recommended first year curriculum?

- a. Philosophy: Two 100 or 200-level philosophy courses
- b. General Education: Two to four courses that meet general education requirements
- c. Other: None

3. Why is this the required/recommended first-year curriculum?

This curriculum gives students a foundation in the major while working through general education requirements in such a way that neither is too burdensome.

a. Expected student outcomes: (1) begin to develop an ability to construct and evaluate arguments and explanations, (2) begin to develop an ability to understand and interpret philosophical texts

b. How successful is this curriculum at producing expected outcomes? : Unknown

4. What are the risks associated with this curriculum?

There are no known risks. We have very low DFW rates in 100 and 200 level philosophy courses, and every major at the university recommends completing some general education requirements in the first year. If the students have declared a major, or if they approach any philosophy instructor with questions about picking courses, we diligently advise them. We take care to assess students’ strengths and academic weaknesses, and advise them to spread the most challenging classes so that they do not have an unsuccessful semester.

5. *In light of risk assessment, what are the alternative first-year curricula?* N/a

6. *What practices, resources and/or tactics are in place to mitigate risks?* N/a

7. *What additional steps can be taken to minimize risk?* N/a

Physics and Astronomy:

The Undergraduate Curriculum Committee in the Department of Physics and Astronomy is comprised of Rob Meulenberg (chair), Michael Wittmann, Dave Clark, and David Batuski. The chair of Physics and Astronomy, John Thompson, has charged this committee to investigate the Department's role in contributing towards "First Year Success," an initiative Provost Jeff Hecker has been extremely passionate about. The full committee met on January 22, 2019 with Chair Thompson to discuss this initiative. The Department of Physics and Astronomy has effectively two undergraduate degree paths: the B.S. (in Physics and Engineering Physics) and the B.A. (in Physics). The committee discussed the existing curriculum and rationales on why certain courses are currently required in our First Year curriculum. Examples of the First Year curriculum plans for a B.S. in Physics and Engineering Physics are shown below:

B.S. in Physics First Year suggested curriculum

B.S. in Engineering Physics First Year suggested curriculum

Both PHY 121/122 and MAT 126/127 are critical for our students to take and pass their first year, as they are all pre-requisites for our advanced courses in Physics. We acknowledge that the First Year offers little flexibility to the student and consists of several high DFW courses, including Calculus (MAT 126/127) and Computer Programming (COS 220). COS 220 is a recommended course, and has traditionally suffered from high DFW rates, so this may be an area for the committee to evaluate a potential change to the recommend First Year curriculum. Another issue the committee has observed is that a large number of students take the required Chemistry course (CHY 121) in the First Year, which also suffers from extremely large DFW rates. The committee will evaluate optimal ways to include CHY 121 into the Physics curriculum, as we do not wish to abandon the Chemistry requirement. The committee did note that the B.A. degree offers a slightly easier path towards a degree (see below), as the student can take PHY 111/112 instead of PHY 121/122 (Sample #1), but the physics and mathematics courses are still required for the First Year to ensure successful navigation through the program. We also currently offer an alternate First Year curriculum plan for those students who desire a degree in Physics but wish greater breadth in background in other areas of science - such as biological, geological, chemical, or environmental sciences (Sample #2). The program outlined in Sample #2 enables a student to effectively begin a major in Physics during the sophomore year.

B.A. in Physics First Year suggested curricula

The committee will continue to meet during the Spring 2019 semester in an effort to formulate a rational plan towards addressing Provost Hecker's concerns to ensure the "First Year" for our students is set up in a way to facilitate student success.

Political Science:

1. **Required First Year Curriculum:** The Political Science department has no required first year curriculum.
2. **Recommended First Year Curriculum:** We recommend that students begin their studies in Political Science with introductory courses such as POS 100 (Introduction to American Government, the only required course in the major), POS 120 (Introduction to World Politics), POS 241 (Introduction to Comparative Politics) and POS 201 (Introduction to Political Theory). Each of these courses serves as a prerequisite for other Political Science courses. Some first year students might take POS 282 (Introduction to American Law); note, however, that data indicate that more students in the course are sophomores and these students have a higher success rate than freshmen.

As for other courses, there is a wide variety of potential courses first year students might take, depending on their particular interests. Generally students complete their requirement in English Composition and take several General Education courses. Quantitative methods courses should be appropriate to the student, per their score on the math placement test and taking into account the student's potential interest in learning statistical methods or formal logic. As for science courses with a lab, we do not recommend that students take the introductory courses in biology, chemistry and physics that are intended for science and pre-health majors unless the student has a strong interest and facility in sciences and is considering a scientific or health career. Rather, we often recommend introductory courses in astronomy (AST 109/110), geology (ERS 101) and environmental geology (ERS 102). There is a wide array of applied science courses student might take; these often include ERS 108 (Beaches and Coasts) FSN 101 (Introduction to Food Science and Nutrition) and KPE 253 (Lifetime Fitness for Health) but varies according to student interest in the topic and in completing this requirement in the first year. For example, some students have been attracted to FSN 121 (Brewing with Food Science) and PSE 110 (Introduction to Horticulture and Green Design). As for other general education courses and other courses, there are quite a lot of good options. Upon exploration with students, these often involve introductory courses in anthropology, art history, business, economics, English, history, international affairs, languages, leadership studies, philosophy, psychology, sociology or women's studies.

3. **Rationale for Required and Recommended First Year Curriculum.** Recommended courses in political science enable students to take higher level courses, filling prerequisites and providing a foundation for that course of study. Recommended science courses are those that contribute to the overall education of the student while avoiding courses intended for majors where a large percentage of students do not succeed. Likewise, students should avoid quantitative courses for which they are not adequately prepared. Students taking courses in language, as well as math/statistics are best served by building on their high school preparation before those skills fade. English Composition is a good foundational course for our first year students, as they are expected to write a good deal in the major. Other general

education courses and other courses are recommended according to student interest in the field. Intellectual exploration is important in college and doing so in the first year helps students discover additional interests; this may lead to the student adopting a second major or minor, switching his or her course of study or influencing career choice.

4. **Risks for this curriculum:** Risk varies by student and her or his level of preparation, focus and discipline. Risk is mitigated by avoiding courses that have low levels of success, particularly in the sciences, and by matching students to appropriate courses in mathematics and languages.
5. **Alternatives for this curriculum:** There are many alternatives in this curriculum, particularly with regard to general education course outside of the sciences.
6. **Practices, resources and tactics to mitigate risk:** Initial placement into first semester courses should take account of student ability and interest. Department faculty have very high advising loads and a strong interest in getting to know our students and providing them with high quality advising.
7. **Potential additional steps to mitigate risk:** New student orientation could have more focus on academics within the major and more robust materials on course selection could be provided before orientation. Programs for arriving students should also further stress academics, the necessity of going to class, and the amount of time needed to study in order to do well in courses. Students should be further encouraged to learn about general education requirements and courses. Information about tutoring and other support services should be widely distributed. For students encountering academic difficulty, students should receive information about academic recovery or the possibility of dropping classes. First generation students may require particular support.

Psychology:

The Psychology Department has begun the process of reviewing our first year curriculum.

We do not have any required first-year curriculum.

Traditionally we have recommended/advised our majors to take PSY 100 during the first semester and to take BIO 100 or 122 during the first or second semester. In addition, we advise our majors to take a couple of 200 level PSY class during the second semester. Often we suggest that one of those 200 level courses be PSY 241 (Stats).

Our understanding is that BIO 100 and 122 are considered high DFW courses. In thinking about why we require BIO 100 /122 for the major, we realized that taking BIO 100 /122 in the first year is not critical to our goals for that requirement. As a result, we believe that for many of our majors waiting until the second year to take BIO 100 /122 would make sense. We believe it

would be helpful to have additional information about our majors to help guide when they take BIO 100 /122. For example, it might be helpful to have a flag that is set on or off in Mainstreet that allows the advisor to get a sense of if a student is ready to take BIO 100/122 during the first year first. While we don't know the exact rules for that flag, something like a B or higher in high school biology and/or an average GPA of at least 3.0 in high school science courses.

PSY 241 (Stats) is another potential risk for first year students. PSY 241 is a prereq for PSY 245 (Research Methods) which is a prereq for most 300 level or higher classes. As a result, we traditionally have recommend that PSY 241 be taken during the second semester of the first year or first semester of the second year. As was the case for BIO 100/122, we think it would be helpful to have additional information about our majors to help guide when they take PSY 241. For example, it might be helpful to have a flag that is set on or off in Mainstreet based on a student's performance in math in high school and their score on the math placement exam. Currently, we have no recommendations for our majors in regard to fulfilling the General Education requirements. While that can be good for students, allowing for a lot of flexibility in what courses they can take, it also can be overwhelming for some students to have so many course to pick from.

We are currently working on some example first and second year schedules based on different long-term goals a student might have. In short, a student interested in becoming a counselor or social worker would typically take different electives/gen eds than would a student interested in going to medical school etc. In addition we have formed a small committee to explore the possibility of developing a 1 credit course or an on-line module (or both) that would help students understand the different types of career paths the psych major might lead to and what classes and minors would typically be compatible with those various career paths.

Sociology:

1. Executive Summary

The Department of Sociology's selection of required and elective courses for the major aims to develop students' appreciation of the sociological perspective for understanding human behavior and attitudes and of the sources, extent, and impact of social inequality in the United States and elsewhere. As an undergraduate department, we have always been deeply committed to the welfare of our students and to excellence in undergraduate teaching and learning. We are decidedly student-centered and believe we are known among students and on campus for our caring approach to our students' learning and welfare.

As a liberal-arts social science, our first-year curriculum is rather non-prescriptive because our major is not overly structured. In addition to the nature of our major, a primary reason for the flexibility of our first-year curriculum is the fact that many of our student majors declare their interest in sociology *after* their first year on campus. According to data from Student Records, of the 196 new majors we have had since 2013 (through most of Fall 2018), 115, or 58.7%, declared their major in sociology during or after their sophomore year, including 46, or 25.5%, who declared their major during or after their junior year. For the majority of our

majors, then, our first-year curriculum is not pertinent. Partly for this reason, the structure of our curriculum is fairly flexible, including the first-year curriculum.

This context informs our responses to the seven guiding questions. Beyond this context, our inspection of the grades achieved in SOC 101—Introduction to Sociology by the several hundred students who take this course every year leads us to conclude that the range of these grades is about normal for the College of Liberal Arts and Sciences and thus that this range inevitably reflects the wide range of the academic abilities of the students in this course. This conclusion, along with high student evaluation scores for SOC 101, including the item on grading procedures, further leads us to believe that SOC 101 is currently properly structured and taught. To improve student success in this course beyond what faculty already do in their instruction, it would probably be desirable to be able to offer much smaller sections of SOC 101, but this is not feasible. Absent this possibility, student success in this course is about as maximal as can be expected.

2. Responses to the seven guiding questions

1. What is the required first-year curriculum?

- a. Courses in the discipline. None. Sociology does not have a required first-year curriculum because the curriculum for the major is not highly structured. This circumstance reflects the nature of sociology as a liberal-arts social science, as well as the fact that the majority of our majors, 58.7%, declare their major after their first year on campus.
- b. General Education courses that meet major requirements. None. Beyond not actually requiring SOC 101—Introduction to Sociology during the first year, we also do not require any specific General Education courses during the first year.
- c. Other courses that meet major requirements. None.

2. What is the recommended first-year curriculum?

- a. Courses in major. We recommend that students who already have an interest in sociology take SOC 101—Introduction to Sociology during fall or spring of their first year; if they take SOC 101 during the fall, an additional sociology course in the spring is then recommended. But we have many majors who first take SOC 101 during their sophomore year or even later.
- b. General Education. We recommend that students take a range of General Education courses, nine credits during each semester of the first year.
- c. Other recommended courses. None

3. Why is this the required/recommended first-year curriculum?

- a. What are expected student-learning outcomes? Expected student-learning outcomes in SOC 101 include a deeper appreciation and understanding of the sociological perspective and of social inequality. After taking SOC 101, students are expected to have become more familiar with the social, structural, and cultural influences on people's behavior, attitudes, and life outcomes; the sources, dynamics, and consequences of social inequality and the major social institutions; and the implications of sociological insights for social policy and social change.

- b. How successful is this curriculum at producing expected outcomes? The department's learning assessment evaluation, developed in conjunction with the Office of Assessment, concerns three upper-level required courses for the major. We thus have no formal process for evaluating learning assessment in SOC 101. However, our consideration of student evaluation scores and comments, SOC 101 grades, and the content of our SOC 101 sections leads us to conclude that SOC 101 adequately produces its expected learning outcomes.

4. *What are the risks associated with this curriculum (e.g. multiple high DFW rate courses in the same semester; excessive options for fulfilling General Education requirements without guidance)?*

We do not perceive any risks. The range of grades in SOC 101 is about normal for the College of Liberal Arts and Sciences. In addition, we do not prescribe any particular General Education courses because our students' interests vary widely and because so many of our students declare the sociology major after their first year. We carefully help our advisees to monitor their General Education courses, and we do not perceive that our students find it difficult to complete their General Education requirements.

2. *In light of risk assessment, what are the alternative first-year curricula?*

Because our assessment is that risk is low, we do not perceive the need for any alternative first-year curricula.

3. *What practices, resources, and/or tactics are in place to mitigate risks?*

Sociology faculty make it very clear to SOC 101 students that we are ready and very willing to help any student having trouble in the course. We respond positively to reasonable requests for extensions of required work and hold office hours for students to come by to receive help in the course, and we follow up with students as appropriate. Several faculty post grades on Blackboard and use mid- semester evaluations to identify possible areas for instructional improvement.

4. *What additional steps can be taken to mitigate risk?*

Beyond what the Department already does, and because smaller sections of SOC 101 are not feasible, we do not believe that additional steps can be taken to mitigate risk.

Theater:

1. What is the required first-year curriculum?
 - a. Courses in the discipline
 - THE 117 Fundamentals of Acting
 - THE 120 Introduction to Stagecraft
 - THE 121/122 Stagecraft Lab
 - b. General Education courses that meet major requirements
 - c. Other courses that meet major requirements
2. What is the Recommended first-year curriculum
 - a. Courses in major

Fall Semester

THE 117 Fundamentals of Acting

THE 120 Introduction to Stagecraft

THE 121/122 Stagecraft Lab

b. General Education

c. Other recommended courses

Any 100 level dance class

We also advise students to take part in our production program as either an actor, or technician.

3. Why is this the required/recommended first-year curriculum?

a. What are the expected student-learning outcomes?

Basic performance proficiency in acting and theatre technology

Basic knowledge of the field

Ability to participate in a theatre production

b. How successful is this curriculum at producing expected outcomes?

This curriculum is successful at producing the expected outcomes

4. What are the risks associated with this curriculum?

The current curriculum is thread-bare. If the student doesn't take initiative and voluntarily participate in a play, they are not likely to stay engaged in the program past their first year.

There are also excessive options for fulfilling gen ed requirements without guidance.

5. In light of risk assessment, what are the alternative first-year curricula?

Fall Semester

THE 117 Fundamentals of Acting

THE 120 Introduction to Stagecraft

THE 121/122 Stagecraft Lab

Spring Semester

THE 1XX Beginner Movement (currently does not exist)

THE 112 Survey of Dramatic Literature

6. What practices, resources, and/or tactics are in place to mitigate risks?

Division resources are currently not sufficient to mitigate these risks

7. What additional steps can be taken to mitigate risk?

The current curriculum is a holdover from when we brought in most of our students as major changes in their sophomore year. Recently, we have recruiting first year students directly into the major.

The division will need to overhaul all four years of the curriculum once our faculty situation has become stable.

Women’s, Gender, and Sexuality Studies

1. What is the required first-year curriculum?

Historically, WGS has been a major that students declare after they have been here at the University of Maine (UMaine) for at least one semester. In the past five years, 21 students declared their WGS major in their junior year, followed by 15 in their first year, 14 in their sophomore year, and 13 in their senior year. Among first-year students who do declare WGS as a major, only one student did so prior to arriving. Nevertheless, we are increasingly seeing more students declaring WGS upon admission. A review of the last five years of data shows that 9 students declared upon admission.

In fact, the vast majority of our majors come to us after taking WGS 101 – the Introduction to WGS course – as a General Education elective. Among first-year students who declared the major in the past five years, 73% were taking WGS 101 when they decided to do so.

With that context, while there isn’t a required first-year curriculum, we do recommend that first-year students take WGS 101 and WGS 103.

a. Courses in the Discipline

We have a total of 33 credits in the major, including 15 required credits with a variable credit internship, and an additional 18 credits of electives from an approved list (see Item 1c).

b. General Education Courses

We are unique in that we are only one of only two majors on campus that meet nearly all General Education requirements through our major. Students are able to meet all of the following General Education requirements in our major:

Course	Ethics	Social Context & Institutions	Cultural Diversity & International Perspectives	Population & Environment	Artistic & Creative Expression	Writing Intensive
WGS 101 Intro to WGS	✓	✓	✓			
WGS 103 Intro to LGBTQ Studies		✓	✓			
WGS 203 Men & Masculinities		✓	✓			
WGS 230 Women, Health & the Enviro	✓			✓		

WGS 235 Franco American Women			✓			
WGS 250 Women & Music			✓		✓	
WGS 270 Native American Women		✓	✓			
WGS 303 Social Movements, Media		✓	✓			
WGS 340 Transnational Feminisms			✓			
WGS 360 Feminism & Cinema			✓		✓	
WGS 371 Immigration, Women & Society			✓	✓		
WGS 410 Feminist & Queer Theory	✓					
WGS 451 Women's Sexuality		✓				
WGS 480 Senior Seminar in WGS		✓	✓			✓

c. Other Courses Meeting Major Requirements

As an interdisciplinary program we are very flexible and encourage our students to take courses from as many other departments and programs as possible. As stated previously, students must take 18 credits of electives to graduate with a WGS major. While we offer many electives within the program, the majority of courses on our list of approved electives (see below) come from other units on campus. We are also open to reviewing alternative electives as long as have they have a focus on women, gender, sexuality, or other intersectional foci.

Currently pre-approved electives include:

- WGS 201 Topics in Women's, Gender, and Sexuality Studies
- WGS 203 Men and Masculinities
- WGS 230 Women, Health, and the Environment
- WGS 235 Franco American Women's Experience
- WGS 250 Women and Music
- WGS 270 Native American Women
- WGS 301 Intermediate Topics in Women's, Gender, and Sexuality Studies
- WGS 303 SL: Social Movements, Media, & Change
- WGS 360 Feminism and Cinema
- WGS 371 Immigration, Women and Society
- WGS 401 Advanced Topics in Women's, Gender, and Sexuality Studies

WGS 451	Women's Sexuality
ANT 245	Sex and Gender in Cross Cultural Perspective
CHF 351	Human Sexuality
CHF 451	Family Relationships
CHF 452	Violence in the Family
CLA 201	Women in the Ancient World
CLA 401	Amazons: Myth and Reality
ENG 246	American Women's Literature
ENG 256	British Women's Literature
ENG 471	Literature, Gender, and Gender Theory
HTY 332	Womanhood in America
HTY 494	Women, History and American Society: Selected Topics
MES 350	Maine Women
PAX 401	Women Activists: Warriors for Peace and Justice
POS 385	Women and Politics
PSY 465	Hormones, Brain and Behavior
PSY 491	Prejudice & Discrimination
SOC 329	Sociology of Gender
SWK 330	Contemporary Issues in Diversity and Pluralism

2. Recommended First-Year Curriculum

a. Courses in Major

We have created an advising form that provides new majors with a suggested progression through the program, including:

Semester	Course	Title
First Fall	WGS 101	Introduction to WGS
First Fall	WGS 103	Introduction to LGBTQ Studies
First Spring	WGS 340	Transnational Feminisms
First Spring	Elective	Elective of choice from list
Second Fall	WGS 410	Feminist, Gender & Queer Theory
Second Fall	Elective	Elective of choice from list
Second Spring	Elective	Elective of choice from list
Second Spring	Elective	Elective of choice from list

Third Fall	WGS 395	Internship (1-6 credits)
Third Fall	Elective	Elective of choice from list
Third Spring	WGS 480	Capstone in WGS
Third Spring	Elective	Elective of choice from list

b. General Education (see Item 1b above)

c. Other Recommended Courses (see Item 1c above)

3. Rationale for First-Year Curriculum

Both introductory courses (WGS 101 & WGS 103) provide foundational information that is needed for all advanced courses in the major. While students are not required to take these first we do recommend them.

a. Expected Student Learning Outcomes

WGS 101

- *Analyze the workings of sex, gender, and sexuality using a variety of disciplinary approaches.*
- *Demonstrate an understanding of the commonalities and differences among feminist theory, gender theory, and queer theory.*
- *Critique social institutions, organizations, and practices using feminist, gender, and queer theories.*
- *Recognize women's contributions and struggles in a transnational and historical context.*
- *Articulate the ways in which gender and sexuality intersect with other sites of social inequality, such as race, ethnicity, class, nationality, and dis/ability.*

WGS 103

- *Summarize the concepts of sexual identity and gender identity*
- *Recognize the impact of place and time on LGBT identity categories*
- *Identify the political implications of same-sex desire, non-monosexuality, and non-normative gender representation*
- *Distinguish differences that exist within these identity categories*
- *Deconstruct intersectionalities in sexual and gender identity formations*
- *Analyze cultural representation of non-normative expressions of gender and Sexuality*

b. Success in Producing Expected Outcomes

We have not had formal key assessments in these two courses due to the fact that so many of our majors come to the major after having taken this course as a General Education elective. Nevertheless, should one also understand success through an analysis of grades earned, our students do well in these courses. The average grade in

WGS 101 from the past five years is B+ while in WGS 103 the average grade has been B.

4. Risks Associated with the Curriculum

We have not been able to identify any risks in our current curriculum. Our students are doing well in their introductory courses and we feel these two courses provide a solid foundation to the major.

5. Alternative First-Year Curriculum

Given these points above, we do not see the need for an alternative first-year curriculum.

6. Practices in Place to Mitigate Risks

N/A

7. Additional Steps to Mitigate Risks

N/A