College of Science Curriculum Committee
Agenda
September 14, 2017
Hickory 254-H

Voting:

☒ Krista Hines ☒ David Hoeinghaus ☒ Amy Petros

☐ Yuri Rostovtsev ☐ Rudi Thompson

Non-Voting:

☒ Julie Kirkland ☒ Pamela Padilla ☒ John Quintanilla

Visiting:

☒ Art Goven ☒ Marijn Kaplan ☒ Jianguo Liu

☒ Samuel Manickam ☒ Jennifer McDonald

1. Welcome and Introductions

2. Rules for Future Voting / Technical Abstentions. **The committee decided not to employ technical abstentions when voting.**

3. Update on the Core: Component Area Options

4. Discussion of Possible Changes to COS Undergraduate Degree Requirements

    a. Procedure for Soliciting Faculty Input on Possible Changes. **Faculty input will be solicited before voting on the proposed changes.**

    b. Possible Changes to Requirements

        i. Reduction from 42 required advanced hours to 36 advanced hours. **Recommended to the faculty with a 3-0 vote**.
        ii. Bachelor of Arts: Elimination of COS science requirement. **Recommended to the faculty with a 3-0 vote**.
        iii. Bachelor of Arts: Modification of foreign language requirement**.** **Recommended to the faculty with a 3-0 vote**.

    c. Possible New Requirements

        i. Proficiency in algebra prior to admission into the College of Science. **Recommended to the faculty with a 3-0 vote.**
        ii. Other suggestions? **No other suggestions were made**.

5. Undergraduate Program (for 2019-20 catalog)

    a. Change to Existing Course (Not in Core Curriculum)

i. **BIOC 3621: Elementary Biochemistry Approved 3-0.**

Proposal: Change Title to "Principles of Biochemistry" and change short title to "PRINCIPLES BIOCHEM"
Justification: Some professional schools have a problem with the word "Elementary" and have indicated that a course with that title will not be accepted in the future.

ii. **MATH 3610: Real Analysis II Approved 3-0.**

Proposal: Change Description to "Continuation of MATH 3000. Topics include derivatives, integrals, and limits of sequences of functions."
Justification: The portions "fourier series" and "multivariable analysis" in the course description do not get discussed in the course in practice.

6. Graduate Program (for 2018-19 catalog)

a. New Course

i. **BIOL 5057: Mammalian Ecology & Evolution (3;1) Approved 3-0.**
Mammalogy course with hands-on, laboratory-style format. Emphasis on diveristy, morophology, ecological roles and contemporary field and analytical techniques. Identification of mammals to family level using skulls, tracks, scats, pictures, and identification of live individuals to species. Interpret and estimate diet of representative Texas mammals through a diversity of techniques. Requested for 2017-18 catalog.
Justification: Lecture and lab course sequence in mammalian biology that contributes to the Biology and Environmental Science graduate degrees (and is taught with 4057 that contributes to the growing Ecology degree and provides additional course options for students in other BIO majors).

b. Change to Existing Course (Not in Core Curriculum)

i. **BIOL 5503: Plant Physiology Approved 3-0.**

Proposal: Change Title to "Plant Physiology and Development" and change short title to "PLANT PHYS & DEVLPMNT". Requested for 2017-18 catalog.
Justification: A course title change is requested to reflect the evolving nature of the course and associated textbook.

ii. **BIOL 6390: Techniques in Environmental Analysis Approved 3-0.**

Proposal: Change Prerequisite to "BIOL 5120, Environmental Chemistry, or consent of department."
Justification: The prerequisite for BIOL 6390, Techniques in Environmenal Analysis is missing from the course description in the catalog. The purpose of this proposal is to add BIOL 5120, Environmental Chemistry - or consent of department - as the prerequisite for the course. This will help ensure that students have the necessary background before enrolling in this advanced course.

7. Announcements

a. Next meeting date: October 12

b. Changes to departmental undergraduate programs, courses, etc. for the 2019-20 catalog will be considered after college requirements are discussed and voted upon.

c. Please encourage your departments to:

   i. Begin to think about how your department's degree requirements might change if/when changes to the COS degree requirements are finalized. Students will not see any practical change in their requirements until both the college's requirements and the department's requirements are both changed.
   ii. Submit course changes to enforce a C or higher prerequisite for your 1000- and 2000-level classes for your majors.
   iii. Consider developing a Grad Track program to encourage top undergraduates (and TAMS students) to stick around for graduate study: http://vpaa.unt.edu/sites/default/files/UNT-grad-track-pathways.pdf and https://vpaa.unt.edu/sites/default/files/New_UG_MA_Program_Proposals_08212017_FINAL.pdf. As part of this work, please develop a semester-by-semester plan for incoming TAMS students to finish all TAMS, undergraduate, and graduate requirements within 5 years (if possible).

At the initial meeting of the COS Curriculum Committee on September 14, the committee deliberated and then unanimously recommended four proposed changes to the undergraduate degree requirements imposed by the college. Below is a description of these four recommended changes; a justification for each change may be found later in this e-mail.

1. Reducing the college minimum of 42 required advanced hours to 36 advanced hours.
2. Eliminating the redundant COS science requirement from the Bachelor of Arts degree.
3. Modifying the foreign language requirement for the Bachelor of Arts degree.
4. Creating a new requirement of proficiency in algebra prior to admission into the College of Science.

While individual departments may choose to have higher requirements than those imposed by COS, changing the college's degree requirements remains a momentous decision which should be carefully studied from as many angles as possible. Before it votes on these four recommended changes, the committee seeks faculty input. **Your feedback on these four recommended changes is important to the committee and to our students. Please reply to this e-mail or else directly e-mail COS-Undergrad-Dean@unt.edu by October 4** to share your opinions with the committee. There are places below to indicate support or non-support of each change and to provide any written feedback that you'd like to share with the committee.

The anonymous results of this survey will be shared with the committee before its October 12 meeting, which is the earliest that the committee would vote on these recommended changes.

---

1. Reducing the college minimum of 42 required advanced hours to 36 advanced hours.

The Curriculum Committee unanimously recommends matching the COS advanced-hours requirement with the university's advanced-hours requirement.

At present, to meet the current requirement of 42 advanced hours, every semester hundreds of COS students take upper-level classes outside of COS that do not fulfill a specific requirement in their degree plans. There are at least 550 such students this semester. COS students typically enroll in these elective non-COS courses solely to take enough upper-level classes to reach 42 hours.

The current advanced-hours requirement partially explains why the median number of hours taken by recent COS graduates is approximately 145 hours (not counting duplicated courses), well above the minimum of 120 hours. This change should reduce the number of needless classes taken by our students and also reduce the time-to-graduation for our students.

While the college minimum for advanced hours would be reduced to 36 under this proposal, each department would have the option of setting its own minimum above 36 hours for its students if so desired.

To give your opinion about this recommended change to the COS Curriculum Committee, please place an X next to one of the options below:

____ Yes, I support reducing the minimum number of advanced hours to 36 hours.

____ No, I do not support reducing the minimum number of advanced hours to 36 hours.

If you would like to share your thoughts on this recommended change with the committee, please do so in the space below.

---

2. Eliminate the redundant COS science requirement from the Bachelor of Arts degree.

The Curriculum Committee unanimously recommends eliminating the mostly redundant requirement dictating that all Bachelor of Arts students take three science classes, with at least one from the natural and life sciences and one from the physical sciences. This requirement was inherited from the previous College of Arts and Science and was primarily intended for non-science majors. However, since our science departments require far more than three science classes, this previous requirement is no longer needed in COS. Eliminating this requirement only affects the Department of Mathematics, which would be allowed to decide if more than two science classes should be required for their majors.

To give your opinion about this recommended change to the COS Curriculum Committee, please place an X next to one of the options below:

____ Yes, I support eliminating the COS science requirement.
____ No, I do not support eliminating the COS science requirement.

If you would like to share your thoughts on this recommended change with the committee, please do so in the space below.

---

3. Modify the foreign language requirement for the Bachelor of Arts degree.

The Curriculum Committee unanimously recommends modifying the current foreign language requirement to give Bachelor of Arts students the option of either taking four 3-hour courses from outside COS or else fulfilling the current requirement of attaining Intermediate II (that is, fourth-semester) level proficiency in a foreign language. COS advisors would encourage students choosing the four-course option to apply these 12 hours to a certificate, minor, or second major that will add value to their degree and support their goals.

This change is recommended because avoiding a foreign language should never be a student's sole reason for choosing the Bachelor of Science degree, which is an unfortunate effect of the current requirement. Instead, with this recommended change, the Bachelor of Science degree will offer candidates the opportunity for greater depth in their field of study, while the Bachelor of Arts degree will give candidates greater opportunity to take classes from a wider range of classes from across the university (which could be studying a foreign language).

Furthermore, the current foreign language requirement greatly reduces (or, in some cases, completely eliminates) the number of lower-level electives available to Bachelor of Arts students, which tends to increase their time to graduation. The recommended change to the foreign language requirement partially answers the President's and Provost's calls to look at every program and ask if we have created unnecessary barriers which impede students' progress toward graduation.

Each department could still establish its own foreign language requirement for its students if so desired.

To give your opinion about this recommended change to the COS Curriculum Committee, please place an X next to one of the options below:

____ Yes, I support modifying the foreign language requirement to give Bachelor of Arts students the option of either taking four 3-hour courses from outside the College of Science or else attaining Intermediate II (2050) level proficiency in a foreign language.
____ No, I do not support modifying the foreign language requirement to give Bachelor of Arts students the option of either taking four 3-hour courses from outside the College of Science or else attaining Intermediate II (2050) level proficiency in a foreign language.

If you would like to share your thoughts on this recommended change with the committee, please do so in the space below.

---

4. Create a new requirement of proficiency in algebra prior to admission into the College of Science.

The Curriculum Committee unanimously recommends this admission requirement because every COS student must take at least four semesters of chemistry/biochemistry and/or at least two semesters of physics and/or at least two semesters of calculus, and all of these courses have proficiency in algebra in their prerequisite chains. Therefore, it is reasonable to expect incoming COS students to be proficient in algebra so that they are prepared for these courses.

Students may demonstrate proficiency in algebra with either Advanced Placement credit, eligibility for placement into MATH 1650 (Precalculus) or a higher-level mathematics class using procedures set by the Department of Mathematics, or completion of MATH 1100 (Algebra) with a grade of C or higher. For students whose degree plan does not require MATH 1710 (Calculus I), earning a C or higher in Math 1180 (College Math for Business, Economics, and Related Fields) will be sufficient for admission into COS.

Incoming students who do not meet the above requirements will be provisionally admitted as pre-COS and would be welcome to visit the COS Office for Student Advising for assistance.

To give your opinion about this recommended change to the COS Curriculum Committee, please place an X next to one of the options below:

____ Yes, I support requiring undergraduates to show proficiency in algebra prior to admission into the College of Science.
____ No, I do not support requiring undergraduates to show proficiency in algebra prior to admission into the College of Science.

If you would like to share your thoughts on this recommended change with the committee, please do so in the space below.
