**ASCC Natural and Mathematical Sciences Panel**

Approved Minutes

Wednesday, January 25th, 2023 12:30-2:00 PM

CarmenZoom

**Attendees**: Barker, Cole, Dinan, Hamilton, Kaizar, Ottesen, Steele, Vankeerbergen

1. Approval of 12-8-22 minutes
   1. Hamilton, Barker; unanimously approved
2. Computational Physics Certificate (new)
   1. The Panel asks that the department include with the proposal a cover letter on departmental letterhead that is signed by the department chair and/or the Vice-Chair for Undergraduate Studies.
   2. The Panel requests that the department submit with the proposal the concurrence from the Department of Electrical and Computer Engineering that is mentioned on pg. 3 (item #3, Relationship to Other Programs/Benchmarking).
   3. The Panel notes that one of the required courses for the certificate, Physics 5810, is not yet a fully approved course. Currently, the course still exists as Physics 6810; a course change request to change the course number and the pre-requisites was reviewed by this Panel on Sept. 8th, 2022, and revisions were requested on September 20th, 2022. As of Feb. 1st, 2023, a revised Course Change Request has not yet been received by ASC Curriculum and Assessment Services. The Panel asks that the department revise that Course Change Request and re-submit it for review, as the Computational Physics Certificate cannot be approved until Physics 5810 is a fully approved course.
   4. The Panel asks that the department address the following issues having to do with the assessment of the certificate.
      1. The Panel requests that the department provide information on how the first two learning outcomes for the certificate (proposal pg. 2) will be assessed. For example, will the department use pre- and post-tests or embedded questions in certain courses or certain specific questions that will clearly indicate that the learning outcomes have been achieved? For the first two learning outcomes, the Panel asks that the department present sample examples of direct assessment methods (e.g., specific classroom assignments). The Panel recommends that the department consult with the College’s Assessment Coordinator, Dan Seward.65, to create a more comprehensive assessment plan for the certificate.
      2. The Panel notes that some of the measures earmarked for assessment (number of applications for the program, quality of the acceptant pool, and acceptance rate etc.) seem to indicate that students will have to apply to the certificate. The proposal, however, does not include any information about an application process. If the program requires an application, the Panel asks that the department provide more details about the application and the application process. If there is not an application, the Panel asks that the department remove these items from the assessment plan (proposal, pg.3).
   5. The Panel asks that the department provide more information about the administrative structure that will govern the certificate so that there is a clear path for assessing the certificate, making changes to the certificate, or managing other administrative issues that may arise.
   6. The Panel asks that the department amend the “Certificate approval” section of the advising sheet (found in the right-hand column toward the bottom). Specifically, they ask that the unit give students and academic advisors (both ASC and non-ASC) a contact within the Physics Department who can be consulted if the certificate coursework is not confirmed via the Degree Audit Report. The current wording refers students to any advisor in the College of Arts and Sciences; not all ASC advisors would have the expertise to review this. The Panel asks that the department replace the more general “*a College of Arts and Sciences advisor”* (in the phrase “the student must consult with a college of Arts and Sciences advisor”) with a specific name or names of advisors in the department who will be able to assist students.
   7. The Panel asks that the department add to the description of the certificate on the advising sheet some information that communicates to students that there are significant pre-requisites for all required and elective courses, and that students who are outside of the physics, engineering physics, and astronomy majors should speak with an academic advisor before attempting to pursue the certificate. For example, Physics 5500, which is a pre-requisite for 5810/6810, has a number of pre-requisites itself, including a specific combination of math and physics courses that are rarely taken by students outside of the targeted majors.
   8. The Panel asks that the department address the following issues having to do with pre-requisites for the certificate’s required courses (Physics 5680 and Physics 5810):
      1. The Panel notes that one of the required courses for the certificate, Physics 5680, has a pre-requisite of enrollment in the Physics, Engineering Physics, or Astronomy majors. If the department wishes for the certificate to be open to students in other majors, the department may want to adjust this pre-requisite so that permission does not have to be obtained by outside students, especially since the department plans to market the certificate to Electrical and Computer Engineering majors as well.
      2. The certificate proposal (pg. 5) lists the pre-requisites for Physics 5810 as “CSE 1222, CSE 1223, CSE 1224, Astronomy 1221, Engineering 1221, or Engineering 1281H; and Physics 5500, or instructor permission”. The course change request for Physics 5810 (currently in progress, please see item 2c above,) does not list instructor permission as a possibility for fulfilling the course pre-requisites, which could keep students from outside these majors from enrolling in the course. The Panel asks that this discrepancy be rectified.
   9. The Panel asks that the department remove all references to courses from the quarters system (indicated by three-digit course numbers) on pgs. 5 and 6 of the proposal.
   10. No Vote
3. Microbiology 4010 (new course)
   1. **Contingency:** The Panel asks that the department include weekly readings on the course schedule (syllabus pg. 2-3) so that students will have some idea of the expected workload. Currently, required chapters are only listed in Weeks 12-14.
   2. **Contingency:** The Panel notes that the cover letter for the course describes Microbiology 4010 as covering many of the same topics as Microbiology 4000, and as such, they request that the department include a statement such as “not open to students with credit for Microbiology 4000” in the exclusions for this course (Course Request Form under “Prerequisites and Exclusions; Exclusions).
   3. **Contingency:** The Panel asks that the department re-visit and correct the listing of quizzes in the course schedule (syllabus pg. 2-3) and the description of the quizzes (syllabus pg. 5). Currently, there are several quizzes out of order (quiz 7 falls in week 7 between quizzes 3 and 4; quiz 11 falls in week 11 between quizzes 5 and 6, etc.) and there are at least 9 quizzes instead of the 7 that are noted in the table on pg. 3 of the syllabus. Additionally, the description of the quizzes on pg. 5 of the syllabus mentions a total of 15 quizzes rather than 7.
   4. *Recommendation*: The Panel recommends that the department include in the course description (Course Request form under “General Information”) a note about the target student population for the course. Specifically, the Panel is concerned that students in majors other than nursing, for whom the course might not be appropriate, might enroll in this course rather than in Microbiology 4000.
   5. *Recommendation*: The Panel recommends that the department include in the syllabus a statement about the target student population for the course. Specifically, the Panel is concerned that this course title might attract pre-health students who are majoring in the biological sciences and would like those students to know early in the semester that they might be better served in Microbiology 4000.
   6. *Recommendation*: The Panel recommends that the department include a description of the group project as well as how in-class participation will be assessed along with the descriptions of the other assignments on pg. 4-5 of the syllabus. While both assignments constitute a small portion of the overall grade, the lack of a description will be confusing for students.
   7. *Recommendation*: The Panel recommends that the department include in the syllabus a section that specifies what technology students will need to be successful in the course. It is especially important that students understand what types of devices (phones, tablets, laptops, etc.) they can and/or should use to take the in-class exams. Should the course require particular technologies to validate in-class participation (such as Top Hat), students should also be made aware of the needed equipment for this requirement.
   8. *Recommendation*: The Panel recommends that the department consider assigning due dates for homework throughout the semester, even if there is no penalty for turning in homework late. While they understand and appreciate that a program like nursing (with a large population of non-traditional students) may benefit from the flexibility that the current structure offers, they note that more structure may also be beneficial.
   9. *Recommendation:* The Panel recommends that the course number be corrected on the course schedule (syllabus pg. 2), as it currently reads “Microbiology 4000.02”.
   10. *Recommendation:* The Panel recommends that the department update the Diversity, Equity and Inclusion statement (syllabus pg. 7) as the BART office no longer exists. More information about the resources from the Office of Institutional Equity can be found here: <https://equity.osu.edu/> .
   11. *Recommendation*: The Panel recommends that the department use the most up-to-date version of the Mental Health statement (syllabus pg. 8 under “Student Wellness and Counseling Services”), as the phone number and name of the suicide prevention hotline have changed. An up-to-date statement can be found here: <https://asccas.osu.edu/curriculum/syllabus-elements>.
   12. Kaizar, Barker; unanimously approved with **three contingencies** (in bold above) and *eight recommendations* (in italics above).
4. Statistics 6111 (new course)
   1. **Contingency** – The Panel asks that the department alter the “General Information: Level/Career” section of the Course Request in curriculum.osu.edu to remove the “undergraduate” designation, since 6000 level courses are not open to undergraduates.
   2. *Recommendation* – The Panel recommends that the department provide more information in the syllabus (pg. 3) regarding how participation will be assessed.
   3. Hamilton, Barker; approved with **one contingency** (in bold above) and *one recommendation* (in italics above).
5. Statistics 6112 (new course)
   1. **Contingency** – The Panel asks that the department alter the “General Information: Level/Career” section of the Course Request in curriculum.osu.edu to remove the “undergraduate” designation, since 6000 level courses are not open to undergraduates.
   2. *Recommendation* – The Panel recommends that the department provide more information in the syllabus (pg. 3) regarding how participation will be assessed.
   3. Hamilton, Barker; approved with **one contingency** (in bold above) and *one recommendation* (in italics above).
6. Entomology 1350 (existing course with GEL Natural Science—Biological Science) and 1351 (new lab; taken together the courses will fulfill the 4 credit GEN Foundation Natural Science requirement) (return)
   1. Tabled for time