**Scientific Analysis Course Designation Proposal Form**

Amanda Udis-Kessler, Director of Assessment and Program Review, May 5, 2022

Only courses that have already been approved by the COI will normally be reviewed for a general education designation; please contact Amanda Udis-Kessler ([audiskessler@coloradocollege.edu](mailto:audiskessler@coloradocollege.edu)) for information about exceptions.

Once you have completed this form, please email it to Amanda Udis-Kessler ([audiskessler@coloracocollege.edu](mailto:audiskessler@coloracocollege.edu)), who will share it with the General Education Assessment and Review Committee via a Canvas page.

Please type in your answers; the document will expand as necessary.

Contact and Course Information

Instructor name:

Instructor email address:

Instructor department/program:

Course title:

Course number:

Year and block this course was most recently offered:

Year and block when you plan to offer this course with a Scientific Analysis designation:

Please check one of the following. One option must be checked for committee review.

\_\_\_\_ This course is NOT a topics course, and it is NOT a course with multiple sections taught by different faculty members.

\_\_\_\_ This course IS a topics course. This proposal does not cover all versions of the topics course designation (the course number), only the designation with the course title above. (Topics course numbers cannot receive general education designations, only specific versions of topics courses by title.)

\_\_\_\_ This course IS NOT a topics course, but it has multiple sections taught by different faculty members. If you check this option, the General Education Assessment and Review Committee will review the proposal with the assumption that ALL faculty members teaching any section of this course will include a Scientific Analysis assessment assignment as described below. Please DO NOT submit this proposal until this agreement is in place.

Decision Outcomes (please review this section before completing the below form)

Courses are accepted when (1) the course rationale clearly explains how the course content aligns with the Scientific Analysis learning outcome and (2) the proposal includes an assignment prompt that is well-aligned with the learning outcome *and* that will assure student work that is assessable by the committee. Reviewers will not address other aspects of course content or teaching methodology. (More guidance is provided later in this document on making sure an assignment is assessable.)

All courses submitted will be evaluated by the committee and classified as one of the following:

*Accepted*: The proposal clearly demonstrates an alignment between the course and the Scientific Analysis learning outcome as shown in the rationale and assignment prompt. The assignment prompt is well-positioned to lead to student work that the committee will be able to assess, both in its alignment with the learning outcome and in the format of student work expected.

Accepted proposals will be included in the General Education Assessment and Review Committee consent agenda of the first faculty meeting following the decision outcome.

*Accepted with minor revisions*: The proposal demonstrates an alignment between the course and the Scientific Analysis learning outcome, but the committee requires further information or additional clarity about the assignment, either because the assignment itself is not well-aligned with the learning outcome or because the committee has concerns that the student work will not be readily assessable.

Proposals accepted with minor revisions will be included in the General Education Assessment and Review Committee consent agenda of the first faculty meeting following the decision outcome and will be labeled as “accepted with minor revisions.”

If the faculty member proposing a course with this decision outcome provides the requested information to the committee by the time the course is taught, the decision outcome will be revised to “accepted.”

If the faculty member proposing a course with this decision outcome does not provide the requested information to the committee by the time the course is taught, the committee reserves the right to remove the general education designation for future iterations of the course and require the faculty member to resubmit the proposal.

*Revise and resubmit*: The proposal meets the spirit of Scientific Analysis but does not adequately demonstrate how the course will meet the learning outcome. The proposal may include an incomplete rationale or may be missing a rationale entirely. The proposal may describe student assignments that are not clearly aligned with the learning outcome or may not include an assignment at all. The assignment may be in a format that the committee cannot assess readily, such as in-class activities or certain kinds of group assignments.

Faculty members whose proposals were designated “revise and resubmit” will receive an email with comments shortly after the meeting. The sooner the faculty member revises and resubmits the proposal, the more likely it is that the committee will be able to re-review the proposal (and hopefully accept it) on a timely basis. Proposals designated “revise and resubmit” are not included in the faculty meeting consent agenda.

Proposal for Scientific Analysis Designation

Please answer all questions completely. Incomplete answers may lead to a “revise and resubmit” outcome.

**Learning outcome: As a result of completing a course with the Scientific Analysis designation, students will be able to use data to answer an empirical question.**

1. Course Number and Title

2. Please provide a brief course description (100 words maximum).

3. Please provide a brief rationale (150 words maximum) addressing how the proposed course aligns with the Scientific Analysis learning outcome. Proposals that do not show clearly in this answer how the course aligns with the Scientific Analysis learning outcome will be returned for revision and resubmission.

4. Scientific Analysis courses need to include an assignment aligned to the learning outcome. This should be a brief (maximum two pages) stand-alone assignment focused specifically on the general education learning outcome, and the outcome should be stated directly in the assignment prompt. You are welcome to modify the below template to fit the specific context of your course:

*Use [the following data/information] to answer [the following empirical question], [basing your process on appropriate disciplinary/interdisciplinary methods].*

Because this assignment should be a stand-alone assignment, the committee expects you to be able to provide draft language independently (and well ahead) of detailed course planning. Further guidance on developing an assignment prompt is provided below, including a rubric that the committee will use to carry out the assessment.

In addition to the draft assignment prompt, please indicate the form that the student response will take, for example, an excerpt from a scientific paper or poster, or a recording of a presentation.

Please provide your draft assignment prompt here, along with a description of the nature of student work the committee can expect to see. Proposals that do not provide a clear assignment prompt that is well-aligned with the learning outcome will be returned for revision and resubmission, as will prompts and information about student responses that lead the committee to believe that the student work may not be assessable.

Appendix: General Guidelines for Assessment Assignments

In thinking about your assessment assignment, it is important to remember why the General Education Assessment and Review (GEAR) Committee was created in the first place. At Colorado College, faculty are deeply committed to reflective teaching practices and to learning about how well their students are learning when it comes to their disciplinary and interdisciplinary areas. GEAR exists to make sure that faculty members are bringing the same reflectiveness and commitment to teaching to the general education program. We carry out assessment in the general education program to learn what works well and celebrate our successes and to further improve general education, benefiting students and faculty alike. Assessment is a way the faculty can hold itself accountable for its collective responsibility to provide an excellent general education program.

Successful general education assessment assignments follow certain guidelines to enable students to demonstrate that they met the expectations of the assessment learning outcome while enabling the General Education Assessment and Review Committee to evaluate a substantial amount of student work sustainably. *It is important to remember that GEAR committee members carry out the assessment and that such faculty will not be experts in your academic field. Your assignment should, therefore, focus only on the general education assessment learning outcome, not on the substantive material of the course.* *It is also important to keep your assessment assignment short so that the work of the committee is manageable and sustainable.*

Please refer to these guidelines when developing your assignment prompt for this form.

* Require the assignment rather than making it optional, so that students may not opt out of addressing the outcome.
* Focus the assignment only on the general education learning outcome.
* Include the learning outcome language in the assignment prompt, as in the template above.
* Make sure the assignment prompt addresses the learning outcome directly and is well-aligned with it, so evidence of relevant student learning is clear and obvious to the committee.
* Focus the assignment on the primary verb central to the learning outcome, which for Scientific Analysis is “use” (or an appropriate equivalent).
* Make the assignment short (two pages maximum).
* If it is not possible to use a stand-alone assignment, break out the assessment-related material at the beginning or the end of the assignment so the committee can review this material without having to read the entire assignment and search for relevant information, and make this breakout clear in the assignment prompt.
* Clarify that the assignment will receive credit as part of the course learning assessment system, whether for written feedback, a letter grade, and/or points, to ensure student motivation. However, the assignment can receive credit without being graded if that makes your planning or course preparation easier.
* Base the assignment on individual rather than group work so the committee can understand student learning at the individual level.
* If individual assignments are not possible, have everyone in the class complete the assignment in groups of equal size so the committee is not comparing individual student work with group student work or groups of different sizes.
* Require students to provide their work as electronic documents (PDFs or Word documents) or as legible scans of handwritten materials.
* Pitch assignments at a level that will not require committee faculty members to meet with teaching faculty separately to discuss technical aspects of the assignment for which they do not have specialized training in the discipline of the course.

Appendix: Additional Guidelines for Highlighting the General Education Component of the Course

Students may have signed up for your course in part to meet the Scientific Analysis requirement but may not remember this by the time the course is offered. To help orient students to the general education expectations of the course, consider taking the following steps:

* State clearly your course’s Scientific Analysis designation on the course syllabus
* Include the Scientific Analysis assessment learning outcome on the syllabus
* Include other Scientific Analysis learning outcomes and/or curricular goals on the syllabus
* When you are going over the syllabus on the first day of class, explain that the course has a Scientific Analysis designation. Explain why the course has this designation and why the College sees this requirement as an important part of the broader student learning experience. Finally, explain what that designation means for students, including the fact that they will complete an assessment assignment related to the Scientific Analysis learning outcome.

Appendix: Additional Assignment-Related Logistical Guidelines

* Have students complete the assignment in English since there is no guarantee that GEAR faculty will be fluent in other languages.
* Avoid requiring committee members to review materials that were collected and are housed in online systems, as this is more difficult and makes it harder to archive the materials in Canvas for future reference.
* Provide student work without grades, comments, or other faculty writing on them; turn off “markup” and deactivate “track changes” if relevant.
* Replace student names with “Student 1,” “Student 2,” etc. before the material is sent if possible. (If not possible, this issue will be addressed before committee faculty see materials.)

Appendix: Assessment Rubric for the Scientific Analysis Learning Outcome

The General Education Assessment and Review Committee will use the following rubric to determine whether each student meets expectations for the Scientific Analysis learning outcome.

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| --- | --- | --- |
| Learning Outcome | Below Expectations | Meets Expectations |
| Use data to answer an empirical question | Unable to successfully use data to answer an empirical question based on the methods of the course’s discipline or interdisciplinary area | Successfully uses data to answer an empirical question based on the methods of the course’s discipline or interdisciplinary area |