

Math Major Panel

Course Approval Criteria

Course Information

Required Submission Materials:

- A representative instructor syllabus of a recent semester which includes all of the following items (note: if a syllabus does not include one of these items, please be sure the panel receives the requested information in another file, preferably labeled to reflect that material):
 - Course details including department coding, course title, and credit hours
 - Course description
 - Prerequisites – full listing including course number and title
 - Textbook(s)/Learning Resources - see information below
 - **Detailed topical outline with time allocations or a detailed weekly calendar to include the topics listed by name – this should go beyond chapter number and titles from the textbook**
 - Additional student learning outcomes as appropriate, i.e., proofs, use of technologies, etc.
 - Methods of evaluation, e.g., homework, quizzes, class tests, projects, final exams
 - Weighting of grading categories and grading scale
 - **All materials submitted for panel review must be recent and representative.**

Course Description

- Please provide complete catalog copy for this course.

Prerequisites

- Prerequisite information is required; prerequisite(s) must be of appropriate level. When listed, more than just a course number should be listed - a full course title should be listed so the panel can understand specifically what the prerequisite is.

Textbooks/Learning Resources

- The choice of required text must provide evidence of course content and focus. Texts reflect and support writing, speaking or content outcomes and requirements. As institutions pursue the opportunity to expand into online/open resource electronic text material, the panel has sought to provide some necessary guidance on citing these learning resources in submitted syllabi and documents. If any online reading or resource materials are used, provide accessible evidence which may be a complete working url or bibliographic citation. This site/resource must be active, working, and viewable by the panel. Active hyperlinks are acceptable but cannot be embedded in an online learning system.

Detailed Topical Outline with time allocations

- **The committee will review the schedule for evidence of the content focus of the course. Detailed topical weekly schedule should include more detail than chapter numbers (Chapter 1.1, 2.1, etc. is not appropriate). Specific topics being discussed in class should be listed within the outline/schedule (e.g. limits and continuity; definition of derivative: rate of change, slope; derivatives of polynomial and rational functions, the chain rule, etc.) The weekly schedule should clearly indicate all IAI required topics from the appropriate IAI descriptor.**

Additional Student Outcomes

- Provide additional evidence that the course focus is aligned with the IAI course descriptor. (i.e., evidence of student-written proofs in Linear Algebra).

Weighting of Grading Categories and Grading Scale

- Course objectives and student outcomes are to be evaluated appropriately
- To ensure appropriate rigor in overall course evaluation practices, the panel will consider all the following items:
 - the proportion of the final grade determined by cumulative knowledge assessment(s), such as a final exam; this should be a significant portion of the grade, that is at least 11%, but preferably 15% or more. If using alternative grading schemes, the representative instructor syllabus must show how cumulative knowledge will be assessed and the impact on the final grade.
 - the proportion of the final grade earned through extra credit; extra credit should not replace or add to a significant portion of the grade
 - the proportion of grade determined by proctored work
 - the proportion of dropped scores

Evidence of Proctored work/Exams

- It should be clear within the syllabus how proctored work is administered if in-person assessments are not utilized. Proctored work is required by the panel and therefore needs details of what percentage of the work is proctored.

The panel considers the following items when evaluating courses. This is consistent with other IAI panel review processes including but not limited to:

- Does the syllabus have Course Prefix, Title, Credit Hours (lecture and lab if a lab course), Course Catalog Description?
- Do the Defined measurable student learning outcomes for this course (not institutional educational goals) reflect IAI prescribed outcomes for the proposed IAI identifier?
- Does the syllabus provided contain a detailed outline of topics (not just a list such as text table of contents) and percent of time/number of days spent on each topic?
- Are weighting and grading categories (with weighted percent for each category), and teaching material (texts or required reading) appropriate for the course?
- Does the content of the course match the IAI description and provide evidence of the required topics based on the IAI description?
- Does the course have appropriate prerequisites (see IAI course descriptions for prerequisite information)? Prerequisites are identified in submitted documentation with IAI code and title as well and institutional number and course title.
- Does the submission have all necessary documentation submitted? See the above list of necessary items.
- Does the submission include Detailed topical outline with time allocations or a detailed weekly calendar to include the topics listed by name

(Representative Syllabus which includes catalog description, Topic Outline, Assignment information, outcomes and goals, grading and assignment weighting information, etc.)

Common Concerns & Reasons Courses Are Not Approved

- Course does not match description for IAI designation
- Outline fails to include evidence of required topics in the course. Detailed topical weekly schedule should include more detail than chapter numbers (Chapter 1.1, 2.1, etc. is not appropriate). Specific topics being discussed in class should be listed within the outline/schedule (e.g., limits and continuity; definition of derivative: rate of change, slope; derivatives of polynomial and rational functions; the chain rule, etc.)
- Course has inappropriate prerequisites
 - Please see section on prerequisites above.
- When the panel evaluates Calculus courses, the entire sequence is reviewed. As such, when submitting an ongoing review course or any new Calculus course, please submit all courses/syllabi in the sequence at same time (Calculus I, Calculus II, and Calculus III). This step will allow the panel to accurately evaluate that all necessary topics are covered through the sequence rather than course by course as topics may vary between courses but cannot vary for the sequence.
- For Linear Algebra:
 - A course will be returned if the prerequisites do not match the panel's descriptor: Prerequisite: MTH 902, Calculus II.
 - A course will be returned if it does not provide evidence of student-written proofs in the course outcomes.
- Differential Equations must include at least two additional topics. See the description at: <http://www.itransfer.org/IAI/faculty/Course/ListCoursesMajor.aspx?section=faculty&subsection=course&topic=desc&desc=MTH912> for possible additional topics.
- Evaluative practices do not show appropriate rigor. This can include an issue with proctored versus non-proctored work, excessive extra credit, inadequate weighting on cumulative assessments, or dropping too large a proportion of the overall grade.