

INTEGRATIVE LEARNING CORE COURSE PROPOSAL QUANTITATIVE AND FORMAL REASONING

If preferred, you may download the [live Adobe version](#) of the signature page.

Primary Course:

Instructor/Course Coordinator proposing the course for ILC:

Signature:

Date:

Name:

Chair of the proposing unit/affirming approval by its instructor or appropriate faculty committee:

Signature:

Date:

Name:

Dean (Associate Dean) of College or School, affirming support of the proposal:

Signature:

Date:

Name:

Cross-Listed Course (if applicable):

Instructor/Course Coordinator proposing the course for ILC:

Signature:

Date:

Name:

Chair of the proposing unit/affirming approval by its instructor or appropriate faculty committee:

Signature:

Date:

Name:

Dean (Associate Dean) of College or School, affirming support of the proposal:

Signature:

Date:

Name:

To be completed by Faculty Senate Integrative Learning Core Committee

- Approve as is
- Approve with modification
- Table for Discussion or Modification
- Deny

Chair, Faculty Senate Integrative Learning Core Committee (affirming approval by the Committee):

Signature:

Date:

Name:

Academic Affairs Approval

Signature:

Date:

Name:

Preamble

In an integrative learning (IL) approach, students gain higher level thinking skills across the curriculum. They start with making connections among ideas and experiences from one course to another, and they end up synthesizing and transferring learning from the classroom to new, complex situations within and beyond the campus. (For a full history of how LSU decided to adopt an IL approach, see [the ILC History website](#).)

It may help to think of the IL approach in the following way: how can we enable our students to have fruitful collaborations with students and faculty members in disciplines other than their majors? Examples of such collaborations might be study groups and group projects, and / or supervised research with faculty members.

The first step towards a fully developed IL approach at LSU is to enhance General Education by linking it to the Integrated Learning Core (ILC). This is what the course proposal form is doing by identifying “proficiencies” (skills or capacities) of higher-level thinking leading to productive interdisciplinary collaborations that our courses allow students to develop.

The motivation to change Gen Ed to ILC came out in the Strategic Plan process based on the realization that [many universities were stressing common learning outcomes for all graduates](#). There was also evidence that [employers were dissatisfied with higher level thinking skills of college graduates](#) (see also [this study](#)). The Strategic Planning General Education subcommittee judged the student experience at LSU to be both fragmented and isolated. It was fragmented in the sense that Gen Ed courses seemed too disconnected from each other, a sort of smorgasbord approach that didn’t allow connections among the Board of Regents areas (English Composition, Mathematics/Analytical Reasoning, Natural Sciences, Humanities, Social/Behavioral Sciences, and Fine Arts). And it was isolated in the sense that students seemed to be compartmentalized into majors, offering them little opportunity to combine skills they learned in Gen Ed with the skills they learned in their major(s) or to apply their skillsets to real world problems both on and off campus.

In the current plan, we will assess student learning in ILC courses to meet SACS requirements. To allow for assessment, we have operationalized IL in terms of a necessarily limited list of proficiencies. We expect the implementation of ILC will require continuous feedback from instructors and we plan to conduct a campus-wide discussion about proficiencies and integrative learning as we progress with the move from Gen Ed to ILC in the coming years. We invite you to [communicate](#) with the committee so we might consider further refinement and development of a global IL approach for the undergraduate student learning experience at LSU.

Section One: Course Information

1. Select the course type.
 - A *new course listing* is a proposal for a course that is new to the ILC and has never been approved for general education.
 - A *course renewal* is an approved general education course proposing to be certified as an ILC course.

2. Course Information (*e.g.: PHIL/1000/ Introduction to Philosophy, 3cr*).
 - Designation
 - Number
 - Title
 - Semester credits

3. Course Coordinator (or Instructor) Information.
 - First Name
 - Last Name
 - Email Address

4. Delivery mode (mark all that apply). If additional explanation is needed, attach any supporting documents prior to submission.

<ul style="list-style-type: none"> • Face to Face (Traditional) 	<ul style="list-style-type: none"> • Hybrid (Traditional) • Online (Traditional) 	<ul style="list-style-type: none"> • LSU Online • Dual Enrollment
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5. Louisiana BOR area (mark only one*).

<ul style="list-style-type: none"> • English Composition • Fine Arts • Humanities • Mathematics /Analytical Reasoning** 	<ul style="list-style-type: none"> • Natural Sciences (Physical) • Natural Sciences (Life) • Social / Behavioral Sciences
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**Honors (HNRS) courses housed in the Honors College will have the option to mark all that apply.*

***Math, Statistics, and Logic Courses Only*

6. Provide a brief explanation of why the course should be listed in the chosen Board of Regents Area.

Section Two: Primary Proficiency and Assignments

Integrative learning is an understanding that a student builds across the curriculum, from making simple connections among ideas and experiences to synthesizing and transferring learning to new, complex situations within and beyond the campus.

Quantitative and Formal Reasoning is a "habit of mind" proficiency, focused on competence and comfort in working with numerical data and formal systems. It includes using mathematical skills and concepts, analytical reasoning, and problem-solving for application in higher-level mathematics and logic courses and in everyday work and life situations. Individuals with strong Quantitative Reasoning skills possess the ability to reason and solve quantitative problems from a wide array of authentic contexts and everyday life situations. They understand and can create sophisticated arguments supported by quantitative evidence and they can clearly communicate those arguments in a variety of formats (using words, tables, graphs, mathematical equations, etc., as appropriate). Individuals with strong Formal Reasoning skills possess the ability to reason in and about formal systems and structures (mathematical, logical, linguistic, and computational) using formal mathematical and logical methods. They understand and appreciate the universal applicability of these formal methods. **Quantitative and Formal Reasoning Dimensions:** 1) interpretation, 2) representation, 3) calculation, 4) application/analysis 5) assumptions, 6) communication.

In *Section Two*, the course coordinator/instructor will demonstrate how the course contributes to the Integrative Learning Core by choosing a primary ILC proficiency and describing the sorts of assignments, across all course sections, that may be used to evaluate student achievement of that primary proficiency. Please note: at least 20% of the course content and at least 20% of the course grade must address the proficiency.

7. Provide a brief explanation of how this course aligns to **Quantitative and Formal Reasoning**.
8. Describe what percent of the course content (e.g., lectures, discussions, course topics and objectives, readings, textbook coverage, etc.) will link to the Quantitative and Formal Reasoning primary proficiency. The minimum allowed for an ILC course is 20%. *NOTE: This question is not asking about your student's course grade calculation or your ILC assessment plan.*
9. Describe what percent of the student's course grade (e.g., homework, quizzes, tests, essays, reports, research papers, presentations, portfolios, performances, etc.) will link to the Quantitative and Formal Reasoning primary proficiency. The minimum allowed for an ILC course is 20%. *NOTE: This question is not asking about your course content or your ILC assessment plan.*
10. Describe how the pedagogies and assignments utilized to develop proficiency in Quantitative and Formal Reasoning primary encourage development of higher-level thinking skills (i.e. apply, analyze, evaluate, create).

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Section Three: Assessment Process

Each ILC course will include a course-specific assessment plan. This plan details how each instructor for a given ILC course will collect and analyze data that assesses the primary proficiency and corresponding dimension(s) that are addressed in the course. Assessment data are collected by section and aggregated to the course-level according to the assessment criteria you describe below.

Instructors have two choices as they develop this plan.

Option A: Instructors may select one or more of the default *Quantitative and Formal Reasoning* dimensions to be addressed in the course: *1) interpretation, 2) representation, 3) calculation, 4) application/analysis, 5) assumptions, 6) communication.*

Option B: Alternatively, if the instructor prefers not to assess at least one of the default dimensions, the instructor(s) have the discretion to identify at least one alternative dimension to assess the proficiency, and present a rubric for determining the level of achievement (not approaching, approaching, meeting, exceeding) attained by students in the class. These alternative dimensions and assessment protocols must be approved at the department level, either by the department head, an assessment committee, or an individual designated as assessment coordinator. The assessment plan will then be submitted to the ILC committee for approval, with departmental approval indicated as usual by the department head signature.

11. Identify which of the following dimension(s) of *Quantitative and Formal Reasoning* you will use for ILC Course Assessment. A minimum of one dimension is required, additional dimensions are encouraged.
 - Interpretation
 - Representation
 - Calculation
 - Application/analysis
 - Assumptions
 - Communication
 - Other: The above default dimensions will not work for my course, I am choosing alternative dimension(s) and will attach a completed department-approved [ILC Course Assessment Plan](#) based on non-default rubric dimension(s) for the course. [Skip to Section Four.](#)

12. Clearly identify the instrument(s) that will be used and how they will be used to assess the dimension(s) chosen. Courses with multiple sections/instructors may opt to use different assessment instruments but all will assess the same proficiency and dimension(s). Review the [ILC Instrument\(s\) Choices and Assessment Guidance.](#)

13. The ***Quantitative and Formal Reasoning Rubric*** includes four achievement levels: not approaching, approaching, meeting, and exceeding. Please describe the criteria that will define these levels in your assessment for each dimension chosen in Question 11. Review the below example for guidance.

The assessment criteria for assessing interpretation is:

- *Exceeding: Students receiving a score of 90 or above (out of 100).*
- *Meeting: Students receiving a score of 80-89.9*
- *Approaching: Students receiving a score of 70-79.9*
- *Not Approaching: Students receiving a score of 69.9 and below*

The assessment criteria for assessing calculation is:

- *Exceeding: Student answers 10-11 questions correctly*
- *Meeting: Student answers 7-9 questions correctly*
- *Approaching: Student answers 5-6 questions correctly*
- *Not approaching: Student answers below 1-4 questions correctly*

14. Departments must sample no fewer than a majority of sections annually for each course. At least one of those sections must come from each semester the course is taught, including summer and intersession (***with the exception of sections taught as part of a Study Abroad program***). In addition, at least one section must come from each modality (in-person, hybrid, remote, asynchronous) by which the course is taught. A common standard for sampling is work from 10% of the students, or 10 students, whichever is greater, but this may be problematic for large classes, depending on the assessment instrument chosen. You do not need to sample; if you prefer to submit data from your entire class (the entire population), you are free to do so.

Section Four: Secondary and Tertiary Proficiencies

OPTIONAL: Although not required, the Faculty Senate ILC Committee encourages instructors to consider a Secondary and Tertiary proficiencies; **however**, these proficiencies will not be assessed at the ILC level. We would like this information for future years when the OIE looks at proficiencies that LSU students are being exposed to.

Secondary Proficiency (mark only one):

- | | |
|----------------------|--|
| • Civic Engagement | • Inquiry and Analysis |
| • Ethical Reasoning | • Intercultural Knowledge and Competence |
| • Global Learning | • Quantitative and Formal Reasoning |
| • Oral Communication | • Written Communication |
| • Problem Solving | |

Tertiary Proficiency (mark only one):

- | | |
|----------------------|--|
| • Civic Engagement | • Inquiry and Analysis |
| • Ethical Reasoning | • Intercultural Knowledge and Competence |
| • Global Learning | • Quantitative and Formal Reasoning |
| • Oral Communication | • Written Communication |
| • Problem Solving | |

Section Five: Syllabus

Please **attach** your syllabus to this proposal. At a minimum the **sample syllabus** must include the required ILC components; they are marked with ‘*required’.

Grading Scheme:

- A description of all course activities from which the student grades will be determined; clearly showing how 20% of the course content and 20% of the course grade are aligned to the primary proficiency (*required).
- Include the following statement: (*required).

Integrative learning allows students to make simple connections among ideas and experiences and across disciplines and perspectives. The LSU Integrative Learning Core (ILC) curriculum is designed to develop student abilities to transfer their learning to new situations, and demonstrate a sense of self as a learner. A fundamental goal of the ILC is to foster students’ practical and intellectual capacities associated with integrative learning in preparation for high competence and functionality in their post-baccalaureate careers. This course fulfills the BOR Area of _____ and provides students experience with the ILC proficiency of _____.

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Checklist

Before submitting an Integrative Learning Core (ILC) course proposal, please ensure all components in the checklist are complete.

- Signature page is signed by all parties.
- All sections and questions of the ILC course proposal are completed.
- If other was indicated for Question 11, the department-approved ILC Course Assessment Plan is attached.
- A sample syllabus with the ILC language is attached.
- If the course is an approved general education course wanting to transition to ILC but has not been taught within two academic years, review the [ILC Frequency Policy and Justification Procedure](#).

If you have Integrative Learning Core (ILC) questions or are ready to submit your completed proposal, please email gened@lsu.edu.