Guide to Proposing an INQ 250

**Overview**  
INQ 250 introduces students to the types of questions that scientists ask, how they go about answering those questions, and the types of reasoning they find compelling. The course should build on skills of critical reading and writing that were introduced in other INQ courses. In addition, each section must provide work in either oral communication or quantitative reasoning skills. All INQ 250 courses include laboratory.

**Topic Selection**  
The topic should be

* Engaging for 18 to 21-year-olds.
* Amenable to the development of critical reading and thinking skills. Appropriate readings (books, articles, etc.) need to be accessible and interesting for the students.
* Amenable to laboratory assignments that introduce methodologies and allow students to practice their application.
* Not overly content/fact heavy. Of course, we must have content, but its role is largely to engage students and support the skill development. As a rule of thumb, the instructor should cut 25% of the content volume for an INQ 250 when compared to the content volume for an introductory course that is primarily content focused.

**Requirement Highlights**

Each INQ 250 course will:

1. Have a topic chosen from the instructor’s field of expertise. This topic should be engaging to students and provide a vehicle to explore broader course objectives through specific disciplinary application and laboratory investigation. The course content should be discipline specific while remaining accessible to students from any major.
2. Use at least one book specifically linking the course content to the perspectives theme or question.
3. Ensure that a large portion of course assignments and/or tests require critical reasoning and promote the development of students' critical reasoning skills.
4. Provide work in at least two of three critical thinking skills: writing, oral presentation, and quantitative reasoning
5. Require at least one paper or series of papers that requires significant depth of understanding of content, cultivates complex ideas, and adopts the appropriate tone and style for science.
6. Require Lunsford’s *Easy Writer*

***Laboratory Requirements***

The laboratory program must require students to

1. Collect data, represent it in a meaningful way, and use it to draw conclusions.
2. Identify and avoid bias in data. Understand the limitations of their data.
3. Design one or more experiments to explore an open-ended question.
4. Understand the importance of working carefully and safely in the laboratory.
5. Experience a variety of laboratory-based activities and experiments.
6. Communicate laboratory-based conclusions in oral and/or written form.

**Learning Outcomes**  
All INQ 250 sections share these learning outcomes. You must put them in your syllabus. You may supplement these with additional LOs specific to your content or goals. You may rephrase the common LOs if you ensure that you do not lose their essence.

1. Students will be able to describe and apply scientific methodologies appropriate for the course’s discipline and topic, including the ability to design and conduct simple experiments and to draw conclusions based upon data.
2. Students will be able to write about course topics clearly and effectively.
3. If the course is emphasizing oral communication:

Students will be able to communicate effectively about the course topic in an oral format.

If the course is emphasizing quantitative reasoning:

Students will be able to interpret quantitative information related to the course topic.

For Global Perspective courses:

1. One or both of these outcomes
   1. Analyze selected issues or events by applying cultural frames of reference or perspectives.
   2. Analyze selected issues or events in terms of global interconnections and interdependencies

**Critical Reading & Critical Thinking**  
High school students generally have much less experience with these skills than college professors would like. For this reason, INQ 250 must teach these skills rather than assume them.

* Teach students how to read the materials you are requiring them to read. Lacking your guidance, students approach all written material as if it were a blog post because that is what they have the most experience reading. Students should know how to read scholarly articles, secondary sources, popular press, novels, etc. Teach them to read the materials you require.
* If your readings include data, statistics, graphs, maps, charts and similar representations, teach students how to read and interpret this material. Don’t assume it is obvious.

**Writing**  
INQ 250, like all other courses at the college, should build on the foundation of writing instruction begun in INQ 110.

* INQ 250 sections must require at least one paper that requires critical thinking. Instructors may determine the length, focus, and whether or not research is required.
* If you require students to incorporate source material, require them to cite it properly and teach them how to cite it properly. Do not assume that INQ 110 did all the work in this area.
* Emphasize the writing process. Instructors are urged to use drafts. Even if drafts are not graded in detail, final products will be far stronger if a draft is required.
* If students must locate, evaluate, and incorporate source materials into assignments, consider scheduling a library instruction day or requesting a LibGuide from your library liaison.

**Oral Communication and Quantitative Reasoning**  
Each 200-level INQ course must address either oral communication skills or quantitative reasoning skills as a second emphasis.

* To qualify for quantitative reasoning secondary skills, the course must include instruction and assignments in at least three of the five QR skills:
  + gathering or selecting data
  + representing data
  + interpreting data
  + using data in decision-making
  + addressing uncertainty or significance of data
* To qualify for oral communication secondary skills, the course must include a formal oral presentation or equivalent such as a debate
* Rubrics for QR and Oral Communication can be found at <https://www.roanoke.edu/inside/a-z_index/intellectual_inquiry/inq_faculty_resources>

**Tests and quizzes**  
A final exam IS REQUIRED for INQ 250. Other tests and quizzes at the instructor’s discretion. Remember that many first-year students take this course and will benefit from structure and feedback.

**Does your course meet the Global Requirement?**

You can request that GEC designate your course as meeting the Global requirement at the time you propose it or at a later date.

Each Global Perspective course must

1. Address at least one of the global learning outcomes:
   1. Analyze selected issues or events by applying cultural frames of reference or perspectives.
   2. Analyze selected issues or events in terms of global interconnections and interdependencies
2. Include global content from at least one country outside the United States, and
3. Devote at least 50% of course time or assignments to topics supporting the global focus. Global interconnections and interdependencies assume an anthropocentric context, i.e., focus on ways humans affect or are affected by such global interconnections and interdependencies.

Note that the 50% rule is in support of the global focus. This includes content needed to prepare students for the analyses we are asking them to apply. GEC does not expect courses to spend 50% of their time directly on one of the learning outcomes. Laboratory or similar course may count time or assignments from both lecture and lab. Laboratory courses that want to make a case based in course time rather than assignments need only reference 3 hrs/week. In other words, they don’t need twice as much global content to make up for the extra lab hours. Student time spent working outside of class, in service-learning, or other activities may also be cited in support of a global focus.

**Summary of items to include in your syllabus**

* Your section description
* The common learning outcomes for INQ 250 (earlier in this document)
* All of the stuff required in any syllabus, see <https://www.roanoke.edu/inside/a-z_index/academic_affairs/faculty_information/course_proposals_and_syllabi>
* A detailed daily schedule that includes
  + Readings with some indication of length
  + Due dates for major assignments, drafts, etc.
  + Indications of how you are teaching methods and providing students with assignments to practice their application.
  + Instruction and assignments supporting either QR or Oral selection.
  + Laboratory schedule indicating the types of experiments and how they address the specific laboratory requirements (see above).

**INQ 250 Course Proposal Form** rev July 2018

Please delete any Guidelines pages and save just the Proposal pages as a separate document. This proposal form and the course syllabus are then uploaded at <https://www.roanoke.edu/inside/a-z_index/academic_affairs/faculty_information/course_proposals_and_syllabi>

1. **Name of person completing this form**: Click here to enter text.
2. **Section Title:** Click here to enter text.
3. **Section description for the COL including a central question or questions to be addressed in the course. Students are the primary audience for this description. Do not include details so specific that they are likely to change from year to year.** **Maximum length = 150 words.**  
   Click here to enter text.
4. **Does this topic have a Global perspective?** Choose an item.
5. **Critical Skills: All INQ sections emphasize Writing. Which of the other critical skills will also be emphasized?** Choose an item.
6. **Anticipated instructor(s):** Click here to enter text.

**Specific requirements of INQ 250**

1. **Describe the methodologies that students will learn. How will you teach these? What assignments will allow students to practice application of these methods?**

Click here to enter text.

1. **What assignment(s) will you use to assess how well students understand and can apply the methods that you have taught?**

Click or tap here to enter text.

1. **Describe the amount and type of writing students will do as well as the instruction in or support for writing process you will provide.**

Click here to enter text.

1. **Describe the number and types of assignments that justify the selection of this course’s second critical skill. Courses emphasizing Oral Communication should include at least one formal oral presentation. Please describe format and length expected. Courses emphasizing Quantitative Reasoning should include at least three of the five QR Skills. Please describe which this course will include. See guidelines for more information on this.**

Click here to enter text.

1. **Describe instruction in or support for Quantitative Reasoning or Oral Communication you will provide.**   
   Click here to enter text.

1. **INQ 250 classes must ask students to design experiments, collect and represent data, draw conclusions, and work in teams. Describe how you will incorporate these activities into your course.**  
   Click here to enter text.

1. **Feel free to add any additional information or comments you would like to share with GEC.**  
   Click here to enter text.

**Global requirement—complete this section only if you are requesting Global Designation**

1. **Which Global Perspective learning outcome will this course address?**

Choose an item.

1. **Describe assignments and pedagogies that help students develop the analysis skills needed for the specific the learning outcome you chose. Be specific in your description and the placement of these assignments in the course schedule. BE SURE THAT THESE ASSIGNMENTS SHOW IN YOUR SYLLABUS.**

Click here to enter text.

1. **Describe the assignment that will be used in this course that will allow the faculty member to assess this learning outcome.**

Click here to enter text.