

CCC Meeting Agenda
April 17th, Founder's Dining Room
2:30–3:00pm

1. Informational Items, Not for discussion

- (a) Upcoming Meetings
May 1st, Filippi Conference
May 15th, Filippi Conference.
Year-end dinner. 5/15?? Invite new committee members?
- (b) Year End Report: Provided to Senate 4/18
- (c) SHCU Assessment Report: Provided to Senate 4/18
- (d) CCC & Working Groups Chairs 2013-14: Zach Flanagan, Wayne Harter, Michael Nathanson in. CG, RJ, ET out :)
- (e) Meeting Times for 2013-14 Tuesdays 3:00 – 4:30. Dates determined very soon.
- (f) Working Group 2013–14 Construction. Goal – two new, two returners.
- (g) Fall 2013 Advising: Please make your colleagues aware of your willingness to offer advising support.
- (h) Integral and the Core: The Integral Program proposal is now complete but arrived too late for consideration at this meeting. We will take it up on May 1st. Documents attached below.

2. Jan Term 2014 applications.

Plan is that CG, JS & PZ will meet very soon after the Jan Term Committee makes its decisions (May 1st -ish) to bin the proposals into (tentative) Yes, No and Maybe's, which will help us determine who needs to be contacted and what the likely workload is next fall.

3. Pre-requisites and C- grades.

On 4/3 the CCC agreed that, given the developmental nature of the revised Collegiate Seminar sequence, each Seminar course should be considered pre-requisite to those that follow. In particular, a student should need a minimal grade of C- in order to go on. Jim will at the Collegiate Seminar Governing Board Meeting on 4/24 to discuss this.

Such a pre-req has long been required between English 4 & 5. What about between English 5 and the new Writing in the Discipline (WID) course/courses?

4. Languages and the Core

Neither the CCTF and nor the CCIC explained why the three semester language competency was part of the Core, setting for simply continuing it from the Gen Ed

requirements. This has become awkward, as we have no agreed upon way of explaining the point of this requirement. Jim asked Modern Languages to propose some language which could be used at least on the external website and they suggested:

Studying languages and cultures helps us recognize the universal aspects of the human condition and embrace the diverse backgrounds of people at home and around the world.

Thoughts??

For comparisons:

Critical Thinking: *Recognizing, formulating and pursuing meaningful questions about one's own and others' ideas.*

Scientific Understanding: *Learning about the natural/physical world by gathering data and formulating hypotheses about how the world works based on that data.*

Community Engagement: *An application of intellectual experiences to the community beyond the academy.*

5. 3&2 Engineering and the Core

Please see the attached documents. Note that by our announced procedures, the consideration of a program is done directly by the CCC, and does not necessitate Working Group involvement.

Proposal to Adjust the Core Curriculum for 3+2 Engineering Students

The 3+2 Engineering program currently requires one less religious studies course, one less Collegiate Seminar course and has no language requirement. As it stands there are 27 required courses in the major, the maximum possible in three years. These accommodations were made in order to make the program possible. The program is vitally important to the Mathematics and Physics departments. I propose to keep the above three accommodations under the new core requirements, in order to keep the program viable.

A further beneficial accommodation can be anticipated. In light of the fact that there is no room for extra classes in an engineering students schedule, the four courses in area A and C will also need to fulfill any *Engaging the World* requirement. As fulfilling all four *Engaging the World* requirements will likely prove excessively restrictive on the students choice of area A and C, I propose that the engineering students be required to experience three of the four categories of engagement.

In summation, I propose four adjustments to the standard core curriculum.

- 3 *Seminar* instead of 4.
- 1 *Theological Understanding* instead of 2.
- No Language Requirement
- 3 categories of *Engaging the World* instead of 4.

Thank you for your consideration of this important issue.

Chris Ray
Professor of Physics

Curriculum 3+2 Engineering Program

3+2 ENGINEERING PROGRAM

Through the 3 + 2 Engineering Program, Saint Mary's offers students the benefits of a liberal arts education while allowing them to pursue an engineering degree. Students spend their first three years at Saint Mary's taking physical science, mathematics, humanities, and social science courses. The final two years are completed at an engineering school approved by the program's director. Saint Mary's has transfer agreements with two engineering schools: University of Southern California in Los Angeles and Washington University in Saint Louis. These agreements assure that, once you have completed the required courses at Saint Mary's, you will be able to complete the course work at those schools in two years. In addition Washington University guarantees admission to our students who have a grade point average of 3.25 or above. Upon completion of all academic requirements students are granted two degrees: a bachelor of arts from Saint Mary's College and a bachelor of science in engineering from the university they have chosen for completing the final two years of the program.

FACULTY

Chris Ray, Ph.D., *Director; Associate Professor of Physics and Astronomy*

LEARNING OUTCOMES

After completing the Engineering Program at Saint Mary's, students will have a working knowledge of the physical world and mathematics and a developed ability to reason and communicate. These gains will allow the students to succeed in the specialized engineering courses taken after transferring and to work effectively as an engineer upon graduation.

REQUIREMENTS

Students must satisfy the following requirements at Saint Mary's: Three years of study with the completion of 27 transferable course credits and a cumulative grade point average of 3.0 or better.

Completion of the following courses:

Mathematics 27, 28, 29, 134

Computer Science 21

Physics 1, 2 (lab), 3, 4 (lab), 60

Chemistry 8, 9 (lab), 10, 11 (lab)

English 4, 5

Collegiate Seminar 20, 21, 131

Religious Studies (one course)

Area A, Humanities (two courses)

Area C, Social Sciences (two courses)

Math/Science electives (four courses)

Other courses may be required or recommended for entrance into particular engineering majors. The student must consult with the 3 + 2 Engineering Program director regarding his/her course of study.

The Integral Curriculum and the Revised Undergraduate Core

Part One: Introduction

With the present document, the Integral Curriculum Instruction Committee undertakes the latest in the series of periodic reconsiderations of how the Integral Curriculum's articulations correspond to the re-shaped undergraduate core curriculum at Saint Mary's College. This, like prior reconsiderations (see II. below), focuses principally upon equivalences for students who (1) leave the program prior to having worked through its full articulation and (2) wish to continue studies at SMC, within the framework of Core–Major–Elective curricula prescribed for the College at large.

I. Preliminaries: Articulation of the Integral Curriculum

While the Integral Curriculum of Liberal Arts is *divided* into semester courses, in keeping with the organization and administration of Saint Mary's College, the Curriculum is not *articulated* in course-units or course-sequences. Rather, the Curriculum is articulated as an intersecting set of universes of discourse, under horizons drawn by architectonic texts, the great books. The “technical languages of the natural sciences, mathematics, literary criticism, social sciences, philosophy and theology” inform these universes; the Curriculum aims that its students learn to move—confidently and sure-footedly and gracefully—in and among them (*Undergraduate Course Catalog, 2011–12*, 132). Just as every human mind is, in principle, capable of grasping everything intelligible, that is all things visible and invisible, so every great book—every boldly drawn, singular horizon—is capable of re-ordering students' judgments under any other horizon, or under all together.

Thus, within and among the conventional divisions of the Integral Curriculum there obtain sustained, articulate occasions to revisit and to re-order architectonic judgments framed in the languages of mathematics and natural science, of social science and of the literature that informs practical or moral imagination, and of speculative and practical philosophy and moral and foundational theology.

The Integral Curriculum has not been historically, and is not currently, organized according to the General Education/Area Requirement system or its Major–Elective complement, effective in the general College since 1984. (Nor, it may be noted, did the Curriculum—which is today little changed from the shape achieved at the promulgation of its constitution [1956–64]—operate on the previous “open” Seminar–Major–Elective system [adopted with the 4-1-4 calendar in 1969] or on that system's predecessor.) Instead, over the 50+ years of its existence as a college within the College, the tutors of the Integral Curriculum have, periodically with our faculty and administrative colleagues, reconsidered and reinterpreted how the Curriculum's steady articulations comport with

the divisions of changing College curricula, in light of our shared purposes. These considerations have borne principally upon students who elect to leave the Integral Curriculum in order to pursue a degree constructed according to the general College requirements. It remains the case that “As a separate curriculum, the [Integral] program offers a bachelor’s degree proper to it” (*Undergraduate Catalog of Courses, 2011–12*, 132).

II. Past and Present Practice

The EPB/UEPC, following its predecessor, the College Curriculum Committee, confirmed a set of equivalences that “convert” the articulations of the Integral Curriculum into the course requirements laid down in the present *Undergraduate Catalog* and those of 1984ff. (attached is the present system of conversions to equivalent College general education—*viz.*, Collegiate Seminar, English Composition, Theology and Religious Studies, Diversity—and required Area courses, covering the first two years of the Integral Curriculum). This latter iteration, like all prior iterations, estimates equivalences by relation to the whole Integral system, rather than by discrete, course-by-course comparisons.

An extended example may be of use. Currently, the *Undergraduate Catalog* prescribes a two-course sequence in Theology and Religious Studies: TRS 97 (The Bible and Its Interpretation) followed by any upper-division elective in theology or religious studies. Students who complete the entire Integral Curriculum meet this requirement prescriptively by completing the Bachelor of Arts in Integral Liberal Arts, granted by the College. Students in good standing who leave the Integral curriculum for major studies at Saint Mary’s after the fourth semester are credited with meeting the requirement in virtue of multiple undertakings, proper to various parts of the Curriculum:

As to Christian theology—

- reading, translation (from *koinē* Greek to English), and comparative exegesis of New Testament Scripture in the course of the Freshman and Sophomore Language tutorials;
- reading (in translation) and discussion of Old and New Testament books—Genesis, Exodus, Psalms, Kings, Isaiah, Job, *et al.*; the Gospels, Acts, Romans, *et al.*—in the course of the Sophomore Seminar;
- reading (in translation) and discussion of theological works—*Confessions*, *Proslogium*, *Compendium of Theology* (Aquinas), *On Christian Liberty*, *The Divine Comedy*, *Institutes of the Christian Religion*, *et al.*—in the course of the Sophomore seminar;

As to religious studies—

- close analysis of Plato’s, Ptolemy’s and Kepler’s mathematical compositions, compositions the authors relate explicitly to—and even within—theological systems, in the course of the Freshman Laboratory and the Freshman and Sophomore Mathematics tutorials;

- experimental investigation of Aristotle’s account of the soul (inseparable both from Christian and non-Christian natural theology, in antiquity and modern times) in the course of the Freshman Laboratory;
- reading (in translation) and discussion of the Platonic and Aristotelian natural theology—*Timaeus*, *Metaphysics*, Enneads V 1–2, VI 9 (Plotinus)—in the Freshman and Sophomore seminars.

Students of the Integral Curriculum encounter theology and religious studies systematically, in the precise sense of that term: diverse elements are rendered intelligibly whole or one, through multivalent relationships. Presently, those who have completed the Sophomore year are deemed (with reason) to have completed the equivalent of the College’s requirement. But students who continue through the Junior and Senior years will go on to consider, for example: Locke’s arguments, and Kant’s and Hume’s, on the rationality of theism and of religious belief; Kierkegaard on the Knight of Faith; Blake’s *Marriage of Heaven and Hell . . . et alia*. Each of the Curriculum’s articulations is likewise continuously augmented and enriched by predecessors, correspondents and successors.

Currently, in like fashion and for like reasons, students who complete the Integral Curriculum meet the Seminar, English Composition, Diversity, Language, and all Area Requirements prescriptively, in virtue of moving through the fully articulated requirements for the baccalaureate in Integral Liberal Arts. Students who leave the Curriculum after the Freshman or Sophomore year (in the latter case, completing the “two-year Program”) are currently credited with completing College requirements according to the attached schedule. All Integral students are subject to the January Term requirement; all must present four January courses for graduation with the baccalaureate in Integral Liberal Arts. All Integral students must present, in addition to the required Integral and January courses, three elective course credits, to reach the College’s 36-course requirement.

III. Proposal from Instruction Committee

The Instruction Committee proposes that detailed analyses of the relations among the Integral Curriculum’s parts and the revised undergraduate Learning Goals and constitutive Learning Outcomes (which follow as Part Two through Four of this report) warrant:

- 1) students who complete the requirements for the degree Bachelor of Arts in Integral Liberal Arts should be deemed to have fulfilled the language requirement and all Learning Goals, except for Engaging the World, prescriptively;
 - (1a) since no articulation of the Curriculum envisions service learning/engaged learning, the instruction committee judge that the Engaging the World Learning Goal should be satisfied by students’ semester electives (three) or the January Term, and that Curriculum advising be up-dated to account for these additions;

- 2) students who complete **four** semesters of the Integral Curriculum should be deemed to have fulfilled the language requirement, Habits of Mind, Mathematical and Scientific Understanding, Artistic Understanding, and Theological Understanding. In view of the development of Integral Preceptorials, students should be permitted to petition for equivalency in Social, Historical, and Cultural Understanding, The Common Good, American Diversity, and Global Perspectives as their actual experience may warrant;
- 3) students who complete **three** semesters of the Integral Curriculum¹ should be credited with fulfilling the language requirement, Mathematical and Scientific Understanding, Artistic Understanding, Christian Foundations, the equivalent of the learning outcomes assigned to Seminars 1-3, English 4;
- 4) students who complete **two** semesters of the Integral Curriculum² should be credited with the equivalent of Mathematical and Scientific Understanding, and the equivalent of the learning outcomes assigned to Seminar 1-2, and English 4;
- 5) students who complete **one** semester of the Integral Curriculum should be credited with the equivalent of Mathematical Understanding. They should not (in view of the “scaffolding” and “developmental” character of the Habits of Mind Learning Goals) be credited with completing any goal among the Habits of Mind, but (again in view of integral character of the Freshman year curriculum and its stress on ordered exposition, encountered throughout the year in undertakings from translation to geometric proof) should be credited with the equivalent of the learning outcomes assigned to Seminar 1, and English 4.

¹ Freshman Seminar (11-12), Fall Sophomore Seminar (113); Freshman Mathematics (31-32), Fall Sophomore Mathematics (133); Freshman Language (51-52), Fall Sophomore Language (53); Freshman Laboratory (71-72), Music (74).

² Freshman Seminar (11-12), Freshman Mathematics (31-32), Freshman Language (51-52), Freshman Laboratory (71-72). Again, since among them, Freshman Mathematics (31-32), Freshman Seminar (11-12), and Freshman Language (51-52) constitute a clinic in formal validity and material correctness (Euclidean demonstration), *extempore* rhetoric and argument (the seminar), and the nature and limits of linguistic precision (Greek grammar and translation), they should be accounted to fulfill the Shared Inquiry and Critical Thinking Learning Goals *tout court*; the fulfillment of the Written and Oral Communication Learning Goal would await the upper-division intensive writing course of the student’s new major.

Part Two: Habits of Mind

Critical Thinking

Learning Outcomes

Students will:

1. Identify and understand assumptions and theses that exist in the work of others.
2. Ask meaningful questions, originate plausible theses, and identify their own underlying assumptions.
3. Seek and identify confirming and opposing evidence relevant to original and existing theses.
4. Evaluate and synthesize evidence for the purpose of drawing valid conclusions.

Shared Inquiry

Learning Outcomes

Students will:

1. Advance probing questions about a common text or other object of study.
2. Collaborate in sustained lines of inquiry.
3. Reexamine judgments in light of evidence and collaborative discussion.
4. Engage in inclusive, respectful conversation with others.

Written and Oral Communication

Learning Outcomes

Students will:

1. Recognize and compose readable prose, as characterized by clear and careful organization, coherent paragraphs and well-constructed sentences that employ the conventions of Standard Written English and appropriate diction.
2. Recognize and formulate effective written and oral communication, giving appropriate consideration to audience, context and format.
3. Analyze arguments so as to construct ones that are well supported, are well reasoned, and are controlled by a thesis or exploratory question.
4. Use the process of writing to enhance intellectual discovery and unravel complexities of thought.

Information Evaluation and Research

Learning Outcomes

Students will:

1. Develop search strategies and use library catalogs and databases to find relevant material; and
2. Critically evaluate sources; and
3. Integrate and cite evidence appropriately; and
4. Understand the concept of intellectual property and practice academic honesty.

Articulation Guidelines:

Since all courses in the Integral Program are discussion based with writing requirements, Integral students learn to think critically, partake in shared inquiry, and advance oral and written communication skills in all Integral courses. Additionally, students learn to conduct research and evaluate information in the Freshman and Sophomore Language Tutorials. The description that follows demonstrates how Integral students meet all of the Habits of Mind learning goals in the Freshman and Sophomore Seminars and Language Tutorials.

Description of the Integral Seminar:

All Freshman Integral students take a common curriculum consisting of three Tutorials (mathematics, laboratory, and language) and one Seminar.³ The Integral Seminar follows the current historical time line for texts that guides the reading list for Collegiate Seminar which all other Saint Mary's students take in their freshman year i.e. Seminar 020, "Greek Thought". The reading lists are similar in their emphasis on "Greek Thought" but are different in the following ways: (1) Freshman Seminar (11-12) is akin to a capstone course where the students are expected to engage the seminar texts with inspiration and insight gained from the tutorials that reinforce the unity of knowledge; (2) each Integral seminar meets for four hours per week as compared to the three hours per week for "Greek Thought"; (3) Freshman Seminar (11-12) is a yearlong sequence under the supervision of the same tutor and with the same cohort of students; (4) at least two original essays are produced each semester following a long standing model of a tutor guided process that involves writing conferences and redrafting; (5) Integral has adapted the Collegiate Seminar Writing Rubric to guide assessment of essays (see Integralprogram.org for the adapted rubrics); (6) Integral has mandated at least one essay each semester will be placed in the student's permanent don rag file, (7) student led seminars are expected with preparation conferences with the tutor as a formal part of the process; (8) each student meets collectively with their tutors in a formal formative evaluation session every semester called don rags. The student's overall academic progress in the Integral Program is discussed openly and includes assessment of oral and written performance. The seminar tutor summarizes the meeting and places a report in the student's don rag file. Occasionally, a student is advised to find another course of study at the College; (9) Integral students participate in an Intramural Seminar each semester. This seminar reading is a text not on the regular reading list, for example in AY 2011-12 fall the text is *The Bhagavad-Gita*. Students from each year in the Program are assigned to a seminar group so that the freshman are not only exposed to the increased level of oral participation expected as they move through the Program but also are challenged to reach that level during that meeting; (10) Integral freshmen are also assigned to participate in the Senior Essay seminars. At least one freshman will be assigned as an official reader for the essay. Participation in the Senior Essay seminars gives freshmen experience with the Program expectations for both oral participation and writing.

In the sophomore year all Integral students enroll in three tutorials (Mathematics, Language, and Music) plus the seminar in the fall term and two tutorials (Mathematics

³ See the Saint Mary's College of California Undergraduate Catalog of Courses 2011-2012 for a brief description of all Integral seminars and tutorials.

and Language) plus the seminar in the spring term. They also take an elective course. Sophomore Seminar 113-114 covers the same period as Collegiate Seminar 021, “Roman, Early Christian, and Medieval Thought”, but the readings are more extensive. The Integral seminars continue to meet for four hours a week versus the regular three hours a week for Seminar 021. As the third seminar for Integral students both the oral and writing expectations are more advanced than for Seminar 021. The Integral Writing Rubric outlines the increased expectations. As in the first year, all Integral students participate in the Intramural Seminar and the Senior Essay.

Description of the Integral Language Tutorials:

In the Freshman Language Tutorial students begin their study of Attic Greek, with an emphasis on learning to read Attic Greek and translate it into English. Students have two translation/research projects in their freshman year: Sappho and the Gospel of John. In the Sophomore Language Tutorial, Integral students continue to learn and study Greek, by closely reading and translating from several works of Aristotle and Plato. Each student writes two essays per semester in the Sophomore Language Tutorial, where they continue to develop their writing, research, and translation skills. The Freshman and Sophomore Language Tutorials meet three times a week, for a total of 4.5 hours of class time a week.

Coverage of the Habits of Mind Learning Goals:

Integral students learn to think critically by learning to ask meaningful questions of a reading, to utilize the text to support ideas, and to construct logical arguments. Shared inquiry is particularly emphasized in the Integral Seminars (11-12 and 113-114), where students have the benefit of working together with the same cohort of students over the four years, and of having one tutor for each class over the course of a year. Consequently, the relationships that students build with each other and their tutors facilitate collaboration and inclusive discussions. Furthermore, effectively examining a text or concept as a group allows students to recognize and identify their own underlying assumptions and reexamine judgments.

Students in the Integral Program learn to communicate ideas clearly in writing, particularly in the Freshman Seminar (11-12), Sophomore Seminar (113-114), and the Sophomore Language Tutorial (53-54). In the Seminars and the Sophomore Language Tutorial, students writes two essays each per semester where they learn to critically assess readings, integrate evidence, write clearly and effectively, cite sources using MLA or Chicago style citations, and exercise academic honesty. Integral students are required to meet with their tutors individually to discuss essay drafts and consequently these skills and concepts are carefully explained and reinforced in the one-on-one meetings. Writing conferences continue throughout the sophomore year and tutors are able to work with each student individually in developing his or her ability to communicate ideas clearly in writing. Essays are assessed according to the Integral Writing Rubrics.

In the Freshman Language Tutorial (51-52) students learn library and database research strategies. Using their knowledge of Greek acquired through the Freshman Language Tutorial, students are required to produce an English translation of passage from the Gospel of John. In addition, students must compare and contrast their translation with at

least three other published translations. They must assess and evaluate the other translations and properly integrate and reference these translations. In order to complete this assignment, students are required to use library catalogues and/or databases to find the relevant information. A library workshop is set up for freshmen Integral students prior to the assignment, so that students can gain the necessary research skills to complete this project. Students are required to complete a second translation and research assignment where they continue to develop their research and translation skills. In the second assignment, students must translate and compare a selection of Sappho's poetry. There are fewer published translations of Sappho's poetry than the Gospel of John, so the research skills that the students acquired when finding translations of the Bible will help them when researching translations of Sappho's poetry. In the Sophomore Seminar (113-114) and Sophomore Language Tutorial (53-54), students build on the evaluation and research skills gained from their freshman year. The Sophomore Language Tutorial introduces students to important research databases, specifically "Perseus". This database is imperative for a student of Ancient Greek, since it provides both the background and etymology of a word. Students are required to utilize it when conducting research for their essays.

Evidence/Artifacts:

Achievement of the Habits of Mind learning goals is measured using coursework from the Freshman Seminar (11-12), Freshman Language Tutorial (51-52), Sophomore Seminar (113-114), and Sophomore Language Tutorial (53-54). Each Integral student meets collectively with all of his or her tutors in a formal evaluation session called a don rag. Don rags take place once per semester. The student's academic progress is discussed openly and includes assessment of the student's oral and written performance. Tutors compile a written report of each student's performance and progress and these reports are collected and filed in the student's permanent don rag file. Essays written in the Freshman and Sophomore Seminars and Language Tutorials are assessed and deposited in the student's don rag file so that a student's progress in achieving these learning outcomes can be carefully measured and tracked over the course of their freshman and sophomore years.

Equivalence:

Currently, completion of first semester Freshman Seminar (11) will give a student credit for Collegiate Seminar 20 to students who choose to leave the Integral Program at the end of the first semester. Combined with the writing required for the Tutorials, a student will also receive credit for English 4. In the new Core Curriculum, first semester Freshman Seminar 11 meets the learning goals assigned under the first Collegiate Seminar and at least half of the new Second Collegiate Seminar, which is a modified combination of the old Seminar 20-21 sequence. The student should also receive credit for the content assigned under English 4, or Composition 1.

After completing the full first year curriculum (two semesters), students who choose to leave the Integral Program have covered the content assigned under English 4, the new First Collegiate Seminar, and at least half of the new Second Collegiate Seminar. Since the student has more contact hours in Seminar after a full year than a regular Saint

Mary's student experiences, a departing Integral student should be permitted to move into the Third Collegiate Seminar in the new College curriculum. In addition, the student may have enough portfolio evidence from Integral writing and from the elective January Term course selected to demonstrate English 5 competency to the Director of Composition.

Students who choose to leave the Program after three semesters will have completed three Integral seminars, which exceed the contact time and reading and writing requirements associated with three Collegiate Seminar courses. The writing in the discipline expectations will have to be met by students in whatever major into which they choose to move.

Because all entering freshmen are placed into Composition based on an assessment of their high school record, two special cases for Integral should be identified: (1) Students who are placed in English 3 and (2) Students who are placed in English 5. The first case will require Integral students who leave after the first semester to present a portfolio of writing to the Director of Composition to waive the English 4 requirement and move into English 005. In the second case qualified students will enroll in English 5 without additional evidence from their fall term at the College.

See Integralprogram.org for the following syllabi: Freshman Seminar Syllabi (11-12), Sophomore Seminar Syllabi (51-52), Freshman Language Tutorial Syllabi (113-114), Sophomore Language Tutorial Syllabi (53-54), and Integral Writing Rubric.

Part Three: Pathways to Knowledge

Mathematical Understanding

Learning Outcomes

Students will:

1. Apply abstract and logical reasoning to identify patterns and solve mathematical problems; and
2. Communicate mathematical ideas and concepts accurately and clearly using mathematical symbols, language, and formulas.

Coverage:

Over the course of the freshman year, Integral students in the Mathematics Tutorial (31) work through Euclid's *Elements*, demonstrating proofs to their classmates at the board. In order to accomplish this, students must identify the objective of the problem, the structure of the proof, the development of the argument, and the knowledge gained from the proof. This exercise teaches students to apply logical reasoning and to communicate mathematical concepts accurately and clearly. Students evaluate the types of information gained from different kinds of proofs, such as indirect proofs and reductions to the impossible. In the Freshman Mathematics and Freshman Laboratory (71), Students are required to use appropriate mathematical symbols, language, and formulas in order to express their ideas effectively. In addition to communicating ideas orally, students are required to write essays in the Mathematics Tutorial where they analyze mathematical ideas and concepts.

Evidence/Artifacts:

Students in the Freshman Mathematics Tutorial and Freshman Laboratory are required to write a total of four essays (two in the fall semester and two in the spring semester). This written work is copied and filed so that tutors can carefully track and evaluate the student's progress in meeting the learning outcomes. Finally, Integral students meet collectively with all of their tutors in a formal evaluation session called a don rag. Don rags take place once a semester and the student's academic progress is discussed openly and includes assessment of the student's oral and written performance. Each tutor compiles a written report of the student's performance and progress and these reports are collected and filed in the student's permanent don rag file.

Disciplinary Expertise Required to Teach this Course:

Integral tutors have the required the expertise to teach Integral 31 and 71.

See Integralprogram.org for the following syllabi:

Fall Freshman Mathematics Syllabi (31) and Fall Freshman Laboratory Syllabi (71).

Scientific Understanding

Learning Outcomes

Students will:

1. Demonstrate an understanding of scientific concepts, principles, and theories that explain the natural and physical world; and
2. Collect, analyze, and interpret empirical data in a laboratory or field setting; and
3. Examine social and ethical issues that arise in the process of scientific inquiry or out of scientific and technological developments.

Coverage:

Integral students in the Freshman Laboratory (71-72) examine the appearance of the natural and physical world through readings, discourse, hands-on observations, and experimentation. Students explore the concept of measurement, perform dissections, examine classification and naming systems, study the relationship of music and mathematics, and make observations of natural phenomena. They learn to carefully make observations and to record the information in charts, drawings, and graphs. For instance, students collect astronomical data, including plinth readings, gnomon observations, stellar observations, and observations of the sun. Students analyze and interpret this data looking for patterns. Additionally, they begin to examine explanatory models in relation to their observations, such as Aristotelian and Ptolemaic theories of astronomical motion.

In the second semester of the Freshman Mathematics Tutorial (32), Integral students investigate the process of constructing a complex theory from collected data. Relying on observations and empirical data collected in the Freshman Laboratory, students interpret and analyze that data in relation to Ptolemy's astronomical theories presented in the *Almagest*. Students gain an understanding of the complexities involved with outlying data, rounding values, and choosing between two models or theories that both accurately account for the data. Consequently in the Freshman Mathematics Tutorial and the Freshman Laboratory, students examine important scientific concepts and principles and gain an understanding of the history and practice of science.

In the Freshman Laboratory, Integral students discuss social and ethical issues that affect the practice of medicine by examining the Hippocratic Oath. Students scrutinize what is meant by the oath, and the role of the physician according to the oath. Several interesting topics arise out of this text, in particular how the meaning and understanding of this oath has changed over time.

Evidence:

Students in the Freshman Laboratory are required to hand in several reflection assignments and evidence of data collected. The writing assignments are copied and saved so that the Laboratory tutor can evaluate and determine the student's progress. Writing assignments are copied and filed so that tutors can track the progress that students make in meeting these learning outcomes over the course of an academic year. Finally, an Integral student meets collectively with all of his or her tutors in a formal

evaluation session called a don rag. Don rags take place once a semester and the student's academic progress is discussed openly and includes assessment of the student's oral and written performance. Each tutor compiles a written report of the student's performance and progress and these reports are collected and filed in the student's permanent don rag file.

Disciplinary Expertise Required to Teach this Course:

Integral tutors have the required the expertise to teach Integral 71-72 and Integral 31-32.

See Integralprogram.org for the following syllabi:

Freshman Laboratory Syllabi (71-72), and Freshman Mathematics Syllabi (31-32).

Artistic Understanding

Learning Outcomes

Students will:

1. Analyze and interpret the form and meaning of works of art by applying discipline-based critical vocabulary and theory to explore the work's significance within appropriate contexts (e.g. historical, cultural, and aesthetic); and
2. Participate actively in a creative process using practices and materials specific to an artistic medium in order to produce an object or event appropriate to the discipline.

Coverage:

Integral students spend a semester studying and making music in the Music Tutorial (Integral 74). Music by composers such as Bach, Beethoven, Mozart, Palestrina, Stravinsky, and Schoenberg, are analyzed and interpreted. By introducing students to appropriate vocabulary and theories, the Music Tutorial gives students the basic tools needed to analyze and discuss a piece of music. Students examine melody, counterpoint, harmony, rhythm, and questions about the nature of music. The question of what constitutes music is also discussed in detail. Additionally, students compose short musical pieces and learn to sing. At the end of the semester the sophomore Integral students organize and produce a concert consisting of both vocal and instrumental pieces and all students in the music tutorial participate.

Evidence:

Students in the Music Tutorial are required to write an essay on Gregorian chant, in which they examine musical patterns and as well as the significance of meaning and aesthetics in that particular form of music. Over the course of the semester students are required to listen to, reflect on, and write about numerous pieces of music. These reflection pieces and the Gregorian chant essay are evaluated and filed, so that the student's progress in meeting the learning outcomes can be assessed. Additionally, students must compose short pieces of music that demonstrate melody and polyphony. All students participate in the Integral Christmas Concert held at the end of the semester. Finally, Integral students meet collectively with all of their tutors in a formal evaluation session called a don rag. Don rags take place once a semester and the student's academic progress is discussed openly and includes assessment of the student's oral and written performance. Each tutor compiles a written report of the student's performance and progress and these reports are collected and filed in the student's permanent don rag file.

Disciplinary Expertise Required to Teach this Course:

Integral tutors have the required the expertise to teach Integral 74.

See Integralprogram.org for the following syllabi:

Sophomore Music Syllabus (74)

Christian Foundations

Learning outcomes

Students will:

- 1.) Demonstrate knowledge of major texts and themes of the Bible, including major theological and interpretive principles central to the Catholic tradition with attention to their social, cultural, ethical and/or theological implications;
- 2.) Demonstrate an understanding of basic methods and tools used in scholarly interpretation of biblical texts;
- 3.) Demonstrate an ability to read biblical texts in light of relevant contextual factors (e.g., historical, cultural, literary, theological)

Coverage:

In the Freshman Language Tutorial 51 students are required to use their Greek language skills to produce an English translation of the Prologue to Saint John's Gospel. In addition to their own translations, students must compare and contrast their translations with at least three other published translations. They must assess and evaluate their own and the other translations in an essay on the Prologue. In Sophomore Seminar 113 the students read and discuss numerous biblical texts: from the *Old Testament*, the Books of *Genesis*, *Exodus*, *Samuel*, *Kings*, *Job*, and *Psalms* (selected); from the *New Testament* the four Gospels, *Acts*, and *Romans*. The students thus use more direct scripture as a primary source than almost any other department. The emphasis is on the developmental cast of scholarly interpretations. Accordingly the students read St. Augustine on the four ways of interpreting scripture (historical, literal, analogical, anagogical). In fact they read the entire *Confessions* as well as St. Anselm's *Proslogium*, *Gaunilon*, and *Reply* for the ontological argument based on scripture. For mystical interpretive texts the students read Hildegard's *Scivias*. In Sophomore Seminar 114 following developing interpretations of scripture they read St. Thomas Aquinas *On Being and Essence* and *The Compendium of Theology*. They also read Dante's entire *Divine Comedy*. Historical, cultural, literary, and theological contextual factors enter into these discussions because the students have read contemporaneous Greek authors in their two Freshman Seminars, and read contemporaneous Roman (Vergil, Tacitus), African (Apuleius) and Medieval (Dante) authors in the same two courses with the biblical and religious literature and philosophy.

Evidence/Artifacts:

Student learning of this outcome will be measured using the coursework from the Freshman Language Tutorial and Sophomore Seminars. The John translation and essay is copied and filed so the students' progress in achieving these learning outcomes can be carefully measured and tracked. An Integral student meets collectively with all of his or her tutors in a formal evaluation session called a don rag. Don rags take place once a semester and the student academic progress is discussed openly and includes assessment of the student's oral and written performance. Each tutor compiles a written report of the student's performance and progress and these reports are collected and filed in the student's permanent don rag file.

Disciplinary Expertise required to teach this course: Integral tutors have the required expertise to teach Integral 51-52, 71-72, and 113-114.

See Integralprogram.org for the following syllabi:

Freshman Language Syllabi (51-52), Freshman Laboratory Syllabi (71-72), Sophomore Seminar Syllabi (113-114).

Theological Explorations

Learning outcomes

Students will:

- 1.) Demonstrate an understanding of one or more aspects of Christian tradition and/or another religious tradition or traditions, acquired through focused study in a sub-field of theology or religious studies;
- 2.) Demonstrate an ability to explore religious questions from a believer's point of reference and from the critical perspective of the academy.

Coverage:

In the Freshman Seminars students closely examine natural theology in a connected sequence. This includes, for instance, close work on Plato's proofs of the immortality of the soul from the *Phaedo* and *Phaedrus* (both of which dialogues they study again in the Sophomore Language Tutorials), and Platonic and Aristotelian natural theology from the *Timaeus* and *Metaphysics* (studied again in the Freshman Laboratory). In the first Sophomore Seminar they study Plotinus' sixth *Ennead* on the three primary hypostases of neo-platonic Trinitarian theology. In the second they study the Muslim theologian Ibn Rushd *On Faith and Reason* before they read Aquinas, Dante, and Calvin's *Institutes of Christian Religion*. In the Freshman Laboratory students partake in an experimental investigation of Aristotle's account of the soul (inseparable both from Christian and non-Christian natural theology, in antiquity and modern times). The Freshman Laboratory and the Freshman and Sophomore Mathematics tutorials closely analyze of Plato's, Ptolemy's, and Kepler's mathematical compositions, which relate explicitly to—and even within—theological systems.

Evidence/Artifacts:

Student learning of this outcome will be measured using the coursework from the Freshman and Sophomore Seminars and the Sophomore Language Tutorials. Students in the first semester of the Sophomore Language Tutorial write a paper on Plato's *Phaedo* and in the second semester translate Plato's proof of the immortality of the soul in the *Phaedrus* from the original Greek. Finally, Integral students meet collectively with all of their tutors in a formal evaluation session called a don rag. Don rags take place once a semester and the student academic progress is discussed openly and includes assessment of the student's oral and written performance. Each tutor compiles a written report of the student's performance and progress and these reports are collected and filed in the student's permanent don rag file.

Disciplinary Expertise required to teach this course: Integral tutors have the required expertise to teach Integral 11-12, 31-32, 71-72, 133-134, and 113-114.

See Integralprogram.org for the following syllabi: Freshman Seminar Syllabi (11-12), Freshman Mathematics Syllabi (31-32), Freshman Laboratory Syllabi (71-72), Sophomore Mathematics Syllabi (133-134), Sophomore Seminar Syllabi (113- 114).

Social, Historical, and Cultural Understanding

Learning outcomes

Students will:

- 1.) Examine human activity in particular periods or places from a social, cultural or historical perspective; and
- 2.) Demonstrate an understanding of theories of human behavior, relations, culture, or institutions; or interpretations of historical causation and change
- 3.) Employ social science or historical methodology to collect and interpret evidence about the social world.

Coverage:

For Outcome 1) In the Freshman and Sophomore years students gain an understanding of human activity within the Greco-Roman world from a historical perspective by reading substantial portions of historical works including Herodotus's *Histories*, Thucydides's *Peloponnesian Wars*, Tacitus's *The Annals of Imperial Rome*, and Plutarch's *Lives*. Questions such as what is the purpose of writing history and what should the historian strive to achieve are discussed. These historical texts coupled with a close study of Hellenistic philosophy (Aristotle, Plato, Lucretius), drama and poetry (Euripides, Sophocles, Aeschylus, Homer, Sappho), mathematics and science (Aristotle, Euclid, Ptolemy, Apollonius), and an undertaking of the Ancient Greek language, enable Integral students to closely examine social, political, and intellectual human activity in the Greco-Roman world.

For Outcome 2) in three years of Laboratory and four years of Mathematics students demonstrate an understanding of the history of science and mathematics by examining fundamental documents within that field. Freshman read large portions of Aristotle's *Metaphysics* and *Physics*, and Archimedes's *On Floating Bodies*. These texts, along with Euclid's *Elements*, lay the foundation for Ptolemy's account of the cosmos as presented in the *Almagest*. Ptolemy's important astronomical theory shaped the history of astronomy for 1500 years. Students read portions of Copernicus's *De Revolutionibus* and Galileo's *Two New Sciences*. By examining these texts, students gain an understanding of the crisis within physics and astronomy, which is central to the so-called Scientific Revolution. This detailed study of the history of science continues throughout the four years with the examination of works by Kepler, Descartes, Newton, Vico, Lavoisier, Einstein, Mendel, and Darwin. By gaining an understanding of the history of science, students are well positioned to examine changes to scientific theories, the causes for these changes, and ultimately discuss ideas about the nature and practice of science through an historical lens.

For Outcome 3) Integral students employ historical methodology by learning to collect and examine primary sources. In the Freshman and Sophomore Language Tutorials Integral students learn to collect sources using the library and research databases, such as "Perseus". Throughout the Integral Program students learn to interpret evidence about the social world by undertaking a close reading of primary sources. In doing so, they gain an understanding of historical cause and effect and they learn to analyze historical processes.

For instance, in the Sophomore Mathematics Tutorial, where a close study of Ptolemy's *Almagest* takes place over the course of the fall semester, students examine the language that Ptolemy uses and they are able to observe the ways that Ptolemy's ideas incorporate, and react to, the philosophical ideas of his predecessors, such as Plato and Aristotle. Ptolemy's rhetoric is analyzed, which reveals Ptolemy's intended audience, his aim, and his skeptics. In turn, students examine the rhetoric and theory in Copernicus's *De Revolutionibus*, where Copernicus simultaneously disputes and incorporates Ptolemy's astronomical theory. Interpreting this one text using these methods allows students to gain a much deeper understanding of the environment in which Ptolemy was working.

Evidence/Artifacts: Student learning of this outcome will be measured using the coursework from the Tutorials, Seminars and laboratories. Papers, including the Sappho translation and essay, Seminar papers, Mathematics papers, and laboratory reports, are copied and filed so the students' progress in achieving these learning outcomes can be carefully measured and tracked. Finally, Integral students meet collectively with all of their tutors in a formal evaluation session called a don rag. Don rags take place once a semester and the student academic progress is discussed openly and includes assessment of the student's oral and written performance. Each tutor compiles a written report of the student's performance and progress and these reports are collected and filed in the student's permanent don rag file.

Disciplinary Expertise required to teach this course: Integral tutors have the required expertise to teach Integral 11-12, 31-32, 52-53, 54-55, 71-72, 115-116, 133-134, 135-136, 137-138, and 178-179.

See Integralprogram.org for the following syllabi: Freshman Seminar Syllabi (11-12), Freshman Mathematics Syllabi (31-32), Freshman Language Syllabi (52-53), Freshman Laboratory Syllabi (71-72), Sophomore Mathematics Syllabi (133-134), Sophomore Language Syllabi (54-55), Junior Mathematics Syllabi (135-136), Junior Laboratory Syllabus (178), Senior Laboratory Syllabus (179), Senior Mathematics Syllabi (137-138)

Part Four: Engaging the World

The Common Good

Learning outcomes

Students will:

- 1.) Reflect and write substantively on ways in which human beings find fulfillment in community; or
- 2.) Articulate, in prose or through another communicative medium, a critical account of just social order; or
- 3.) Demonstrate a capacity for coherent, principled analysis of concrete social problems.

Coverage:

The 4-year Integral Seminar reading list highlights authors on the Common Good and stresses as paramount throughout the common good of inquiry. The structure of the Integral Program's pedagogy, depending as it does on the formation of a group of students who work together, is unrealizable except by common action for the good of the group. In the Freshman Seminars the students read among other texts Aeschylus's *Oresteia* dramatizing requirements and means to a common good, i.e., the origin of trial by jury and consent of the governed, Plato's *Republic* on the theory of the good and the corresponding practice of the common good, and Aristotle's *Ethics* and *Politics* also on the theory of the good and the corresponding practice of the common good, but also providing the principles of natural law theory. The preference for Aristotle's natural law theory shows up in the theologians like Aquinas and social critics like Dante in the Sophomore Seminars. In the Junior Seminars the students read several social thinkers, many of them critics of natural law theory, including Hobbes, Locke, Rousseau and Smith. In addition in the Senior Seminar the students work on Marx for his account of the common good and criticism of other thinkers.

Evidence/Artifacts:

Student learning of this outcome will be measured using the coursework from the Seminars. Papers from all Seminars are kept as part of each student's permanent file. An Integral student meets collectively with all of their tutors in a formal evaluation session called a don rag. Don rags take place once a semester and the student academic progress is discussed openly and includes assessment of the student's oral and written performance. Each tutor compiles a written report of the student's performance and progress and these reports are collected and filed in the student's permanent don rag file.

Disciplinary Expertise required to teach this course: Integral tutors have the required expertise to teach Integral 11-12, 113-114, 115-116, 117-118.

Attachments: Freshman Seminar Syllabi (11-12), Sophomore Seminar Syllabi (113-114), Junior Seminar Syllabi (115-116), Senior Seminar Syllabi (117-118).

American Diversity

Learning Outcomes

Students will:

1. Analyze aspects of social diversity (e.g., ethnicity, race, socio-economic status, gender, sexual orientation, religion, age, ability, and political identity) and how they affect society in the United States of America; and
2. Explain how social categories and structures of power may affect the human person.

Coverage:

In the Senior Seminar (117–118) students read texts—fiction, essays, and poems—concerned with class and race in the United States, including: *Huckleberry Finn*, *The Fire Next Time*, “Everything that Rises Must Converge,” “Revelation” (all following upon the consideration of *Democracy in America* read in the Junior Seminar). Students read texts concerned with class, race, and gender generally in the West, including: *Madame Bovary*, *Mrs. Dalloway*, *A Room of One’s Own*. Additionally, they consider the principles of Marx’s account of capital and its class consequences in *Capital* and *Wage Labour and Capital*.

The Junior Language Tutorial (156) considers the rhetoric of (race, class, and religious) prejudice in works of Melville, Hawthorne, Douglass, and O’Connor.

Evidence/Artifacts:

Student attainment of these outcomes will be measured using the coursework from the implicated Seminars and Language Tutorial. Papers from all Seminars and the Tutorial are kept as part of each student’s permanent file. Each Integral student undergoes formal evaluation by the assembled, concerned tutors, each semester, in the “Don Rag”: tutors discuss the student’s progress in each aspect of the Program and in the Curriculum overall, with special reference to oral and written performance. Each tutor compiles a written summary of the student’s performance and progress, which is retained in the student’s permanent Don Rag file.

Disciplinary Expertise required to teach the implicated courses: Integral Tutors have the expertise required to lead 115-116, 117-118, 155-156, and 157-158.

Attachments: Junior Seminar Syllabi (115-116), Senior Seminar Syllabi (117-118), Junior Language Syllabi (155-156), and Senior Language Syllabi (157-158).

Global Perspectives

Learning Outcomes

Students will:

1. Analyze the process of globalization by using different theoretical perspectives and debates on a broad range of issues (including issues of dependence and interdependence); or
2. Demonstrate an understanding of the world from a specific non-U.S. and non-Western European viewpoint.

Coverage:

Regarding Outcome 1), in the upper-division Integral Seminars and in the Senior Language Tutorial, students read original attempts at theorizing global order, that is, at raising the sources of socio-political order to global scope. Students read Plato's *Republic*, Aristotle's *Politics*, Giambattista Vico's *The New Science*, Karl Marx's *Capital*, Georg Wilhelm Friedrich Hegel's *Philosophy of History*, and Immanuel Kant's *To Eternal Peace*. In doing so, students examine the theoretical foundations of the political models for governance that are currently widespread.

Evidence/Artifacts:

Student attainment of these outcomes will be measured using the coursework from the implicated Seminars and Tutorials. Papers from all Seminars and Tutorials are kept as part of each student's permanent file. Each Integral student undergoes formal evaluation by the assembled, concerned tutors, each semester, in the "Don Rag": tutors discuss the student's progress in each aspect of the Program and in the Curriculum overall, with special reference to oral and written performance. Each tutor compiles a written summary of the student's performance and progress, which is retained in the student's permanent Don Rag file.

Disciplinary Expertise required to teach the implicated courses: Integral Tutors have the expertise required to lead 115-116, 117-118, 157-158.

See Integralprogram.org for the following syllabi: Junior Seminar Syllabi (115-116), Senior Seminar Syllabi (117-118), Senior Language Syllabi (157-158).

Community Engagement

Learning Outcomes

Students will:

1. Apply academic methods and/or theories in a community setting in a way that promotes collaboration and mutual benefit; and
2. Demonstrate critical reflection throughout their experience; and
3. Express their understanding of the interconnections between their experience and their responsibilities as members of social or professional communities.

Integral Courses that address this learning goal:

There are no Program undertakings that address this learning goal or aim at its outcomes; nor are there any Program undertakings that could pass as evidence for such address or aims. Integral Students are encouraged to meet this goal through elective courses, January Term courses, quarter credit courses, etc.

Course syllabi with writing assignments

1) Freshman Integral seminar, Fall 2012: Essay-Writing Due Dates, Guidelines and Learning Outcomes:

Student writing is as important to the Seminar as is participation in the ongoing conversation.

Each semester **twelve pages** of formal writing are required. By the end of this course, you are expected to compose readable prose, as characterized by clear and careful organization, coherent paragraphs and well-constructed sentences that employ the conventions of Standard Written English and appropriate diction. All essays and commentaries will have a title, MLA citations, and a bibliography if necessary.

Throughout the semester, the seminar tutor is expected to meet with you to discuss their work during office hours or by appointment; and to respond promptly to your writing with a written evaluation based on the 'Integral Program Freshman Writing Standards Rubric'.

<http://www.integralprogram.org/images/stories/documents/IntFreshman%20writing%20standards.pdf>

Five of the pages **must** be in the form of one, cohesive essay. One page is a self-evaluation about your don rag. The remaining six pages may be in the form of six separate commentaries on the readings you found most worthy of further exploration. Or, there may be any variation in the number of pages as long as the total is twelve. The following due dates are to prevent procrastination and to ensure that you write throughout the semester. These due dates are final. Late papers will not be accepted unless there is proof of extenuating circumstances such as an illness or genuine emergency.

Oct 1 M **Due:** two-pages of formal writing with title, MLA citations and bibliography.

Oct 8 M **Due:** paper topic for (minimum) five-page essay.

Please state your topic in the form of a complex question or thesis with textual citations. Aim to ask questions **of** the text rather than **about** the text and have a **clear sense of purpose**. For example, focus on a character, passage or related passages that perplex, intrigue, challenge and/or frustrate you. Why?

Oct 9-11 Paper Topic Conferences (bring your book(s) and notes!)

Be prepared to discuss the following: Set the context of your question or thesis. Under what circumstances or stage of the epic, play or poem does your question arise? Then, explain how your question relates or appears in another section of the text. How does the text advance the question? How can you further your textual interpretation? Speculate on the deeper meaning and significance of your question in relation to the text.

Oct 25 Th **Due:** (minimum) five-page essay with title, MLA citations and bibliography

Nov 15Th **Due:** nine pages TOTAL of formal writing

Dec 10 M **Due:** twelve pages TOTAL of formal writing. Late papers will not be accepted. Failure to complete your writing assignments will adversely impact your final grade.

2) Freshman Integral seminar, Spring 2013: Essay-Writing Guidelines and Learning Outcomes:

Writing Requirements: 40% of your grade

- A. For the 2 seminars that you lead:
 1. An outline with questions/ideas about the reading, due the night of the seminar.
 2. 3-pg. essay on the seminar reading, due 1-week from the seminar. Late essays will not be accepted unless there is written verification of a medical or personal emergency.
 3. **MANDATORY** meeting with Tutor Cobeen immediately after the seminar that you lead.
 4. 3rd Option: If a seminar reading grabs your imagination and intellect that you are NOT assigned to lead, you may write a 3-pg. essay on it rather than on the 2nd assigned seminar.
- B. A 6-pg final essay. Please state your paper topic in the form of a complex question, or thesis with textual citations and also submit an outline. Ask questions **of** the text rather than **about** the text and have a **clear sense of purpose**. The text—its complexities, challenges, seeming contradictions--is your central focus. In your writing, avoid the temptation to go off on tangents about overly-broad topics such as 'religion', 'morality', 'politics', 'love'. Go to the 'Writing Center a MINIMUM of 3 times during the semester to get feedback and assistance with your essays.

TOTAL: 12 pages of formal writing that meet the minimum standards according to the 'Freshman Integral Program's Writing Standards.'

Keep in mind the following guidelines, which I use to evaluate your seminar participation and preparation: 60% of your grade.

1. Read the assignment thoroughly and carefully before coming to class. Take notes of patterns and connections between characters and ideas, noting unfamiliar words or names and seeming or real inconsistencies. Mark passages in the texts that seem significant or that you wish to discuss or ask questions about
2. Note down your ideas, questions, and opinions as you go and bring notes to class. Develop at least one question of interpretation or evaluation and bring it for discussion in class.
3. Focus on the text assigned, although feel free to refer to other texts assigned earlier. Support your ideas and opinions with references to the reading

4. If you don't understand something, ask a question about it. This can be as mundane as a place name or character's background or as interpretive or evaluative as you want it to be. But tie the question to a specific text, whenever possible. If someone, a fellow student or the seminar tutor or leader, says something you don't understand or don't agree with, speak up: Ask them to explain or quote them a passage from the text that contradicts and/or clarifies what you are saying.
5. Listen carefully. Be courteous of others' opinion and ideas. Be confident of your own abilities and opinions and don't be bashful about putting them forth.
6. And above all: **Read all the assignments carefully and thoughtfully.** The success of the class depends on you and your engagement with the texts. Don't become dead weight by not reading: you can be called on at any time to provide questions and interpretation of passages from anywhere in the assigned text.
7. Attendance is essential; more than 2 absences will adversely impact your final grade.

3) Freshman Mathematics Tutorial Fall INT 031-01

Required Texts and Materials:

Euclid. *Euclid's Elements*. Translated by T.L Heath and edited by Dana Densmore. Santa Fe: Green Lion Press, 2002.

Course Notebook, Compass, and Straight edge.

Learning Outcomes:

This tutorial is the first half of a yearlong encounter with a classic mathematics text. At the end of this course, you are expected to be able to demonstrate that you can:

1. Apply abstract and logical reasoning to identify patterns and solve mathematical problems; and
2. Communicate mathematical ideas and concepts accurately and clearly using mathematical symbols, language, and formulas.
3. Compose readable prose, as characterized by clear and careful organization, coherent paragraphs and well-constructed sentences that employ the conventions of Standard Written English and appropriate diction. (See Integral Program Freshman Writing Standards Rubric.)
4. Use the process of writing to enhance intellectual discovery and unravel complexities of thought.

Each student will write two essays for this course: an essay due mid-semester on Book I and an essay due at the end of the semester on Book V. The due dates are:

Essay on Book I (Draft) – *Due October 8, 2012*

Essay on Book I (Final) – *Due October 15, 2012*

Essay on Book V (Final) – *Due December 3, 2012*

Each essay should be three to five pages in length. All students are required to go through the draft process for their first essay. The draft process is optional for the second essay, although it may be required for some students.

Online Resources:

Euclid's *Elements* Animated (Clark University)

<http://www.integralprogram.org/index.php/animated-euclid>

Euclid's *Elements* (Greek text edited by Heiberg with English Translation by Fitzpatrick)

<http://www.integralprogram.org/index.php/euclid-text>

Integral Program – Freshman Writing Standards Rubric

<http://www.integralprogram.org/images/stories/documents/IntFreshman%20writing%20standards.pdf>

Freshmen Mathematics: Possible Essay Topics for Book I

The best essay topics or questions are usually those that arise spontaneously in your own consideration of Euclid's *Elements*. However, should you need some inspiration, here are some suggestions for possible essay topics from Book I. This list is only a sampling of feasible topics or areas of exploration. They are certainly open to modifications and alterations.

1. Why are some figures described in detail in the definitions and postulates (e.g. circle, triangle, etc.) and others (e.g. parallelogram, compliment, etc.) appear suddenly in the text? Additionally, why are some figures both defined (e.g. equilateral triangle and square) and subject of Q.E.F. proofs?
2. Reflect on the issue of order. Do the definitions follow a specific arrangement? Is there an order to the postulates or the common notions? Explain.
3. Are the requirements for a Q.E.D. proposition different from those for a Q.E.F. proposition? For example, why is it permissible to use superposition (placing a line on top of another line so that they coincide) in I.4 but not in I.3?
4. Is there a pattern of language in propositions that correspond to an underlying structure, allowing the reader to understand the movement from enunciation to conclusion? Do the structure and/or language differ in Q.E.F. and Q.E.D. propositions? Additionally, in starting with the enunciation are we really starting with the conclusion? Explain.
5. Should Euclid justify his use of the indirect proof? How does he move from the proof that something is impossible to the assertion that its opposite is therefore true? Are there unspoken or undefined assumptions that are part of an indirect proof?
6. What is the relationship of the geometer (the *I* in the "I say") to the geometric work? How far is geometry discovery and how far is it creation?
7. What is meant by "let be"? Is the geometer calling such items into being and in doing so is he or she creating the item? Or is the geometer simply naming items that are already there? If it is the former and the geometer is creating items, then why is it necessary to have Q.E.D. propositions? If it is the latter and the geometer is naming items that are already there, then why is it necessary to have Q.E.F. propositions?
8. The meaning of equality, a term that is undefined, seems to shift suddenly in I.35. How does this term change in meaning? Can you justify the new application of the term equality?

9. Are there unspoken assumptions (definitions, postulates, common notions) that underlie what Euclid is doing in Book I? For example, in I.37 we find that the halves of equal things are equal to each other. Should this be a common notion? Are there others like this? Explain.
10. Create an alternate proof for a proposition in Book I and discuss it. If a proposition has an alternate proof, can you formulate a reason why Euclid chose the proof presented in the *Elements*?
11. Is there an order to the propositions in Book I? In particular, is there an intentional order to selected groups of propositions (for example, the propositions concerning parallel lines and triangles, I.37 to I.42)?
12. Why are all (except for one) of the demonstrations of converse propositions (for example, proposition I.5 and I.6) argued indirectly, that is, by reductions to the absurd? Why is I.48 the only converse proposition that is argued directly? Explain.

Freshmen Mathematics: Possible Essay Topics for Book V

November 2012

Below are some possible topics or areas of exploration for your essay on Book V. This list is intended to rouse inspiration and it is certainly open to modifications. While your essay should engage with Book V, it may also incorporate material from earlier Books.

Due: Noon on Thursday, December 6, 2012.

1. How are the definitions and propositions related in Book V? What role do the definitions play? Is the relationship of definitions to propositions in Book V different than the relationship of definitions to propositions in other books?
2. Are the definitions in Book V adequately explained? For example, is it clear what a magnitude is from Definition 1 and Definition 2? Does the meaning of magnitude become clearer once one encounters the propositions?
3. Examine converse propositions in Book V. What is the nature and function of a converse proposition? Why are some converses separate propositions and other times pairs of converses are found within a single proposition?
4. Euclid uses the indirect proof only once in Book V, namely in V.18. Could this proposition have been proved directly? Is there a reason why this is the only place an indirect proof is used in Book V?
5. Does Book V build on concepts found in earlier Books? For instance, is there a relationship between the Common Notions in Book I and the Propositions in Book V (e.g. C.N. 1 and V.11)?
6. Explore the relationship between equimultiples and proportions. In the first few propositions Euclid focuses on equimultiples. What do we gain from these propositions? What role do these propositions play in later propositions that examine proportions?

4) Freshman Mathematics Tutorial Spring INTEG 032-02

Required Texts:

Euclid. *Euclid's Elements*. Translated by T.L Heath and edited by Dana Densmore. Santa Fe, New Mexico: Green Lion Press, 2002.

Ptolemy. *Ptolemy's Almagest*. Translated by G.J. Toomer. Princeton, New Jersey: Princeton University Press. 1998.

Course Notebook, Compass, and Straight edge

Online Resources:

Euclid's *Elements* Animated (Clark University)

<http://www.integralprogram.org/index.php/animated-euclid>

Euclid's *Elements* (Greek text edited by Heiberg with English Translation by Fitzpatrick)

<http://www.integralprogram.org/index.php/euclid-text>

Manuscripts of Euclid's *Elements*

<http://www.claymath.org/library/historical/>

Dennis Duke's *Almagest* models

<http://people.sc.fsu.edu/~dduke/models.htm>

Integral Program – Freshman Writing Standards Rubric

<http://www.integralprogram.org/images/stories/documents/IntFreshman%20writing%20standards.pdf>

Learning Outcomes:

This tutorial is the first half of a yearlong encounter with a classic mathematics text. At the end of this course, you are expected to be able to demonstrate that you can:

1. Apply abstract and logical reasoning to identify patterns and solve mathematical problems; and
2. Communicate mathematical ideas and concepts accurately and clearly using mathematical symbols, language, and formulas.
3. Recognize and compose readable prose, as characterized by clear and careful organization, coherent paragraphs and well-constructed sentences that employ the conventions of Standard Written English and appropriate diction.
4. Recognize and formulate effective written and oral communication, giving appropriate consideration to audience, context and format.
5. Analyze arguments so as to construct ones that are well supported, are well reasoned, and are controlled by a thesis or exploratory question.
6. Use the process of writing to enhance intellectual discovery and unravel complexities of thought.

Students will write two essays for this course: an essay due mid-semester on Book VII and an essay due towards the end of the semester on Book XIII.

Essay on Book VII – *Due March 7, 2013*

Essay on Book XIII – *Due April 29, 2013*

The essay on Book VII should be three to five pages in length. All students are required to go through the draft process for this essay.

Final grades will be based on evidence of careful and consistent preparation of the text, active involvement in the conversation, attentive listening, and demonstration of engagement with ideas in written work. Course grades will reflect individual mastery of the material and contributions to the overall learning environment in the tutorial. Both your demonstrations at the board and your continuations to the discussion will be assessed.

Grading Criteria:

70% Tutorial Presentations and Participation

30% Essays

5) Freshman Language Tutorial 051 Fall

Prologue of St. John's Gospel: Project for Integral Frosh Language, Fall Semester Assignment Description

1. A four-line working document including
 - a. hand-written Greek text
 - b. parsing
 - i. for words that do not change form (e.g., conjunctions, just list the part of speech)
 - ii. for nouns and adjectives: gender, case, number
 - iii. for participles: gender, case, number, tense, voice
 - iv. for finite verbs: person, number, tense, voice, mood
 - v. for infinitives: tense and voice (e.g., "present middle/passive infinitive")
 - vi. for prepositions, indicate case it is taking (e.g., "prep. + gen.")
 - c. word definitions
 - d. your translation into actual English sentences
2. A 3-4 page essay on your translation
 - a. Discuss **at least** three particular passages, focusing on the details of the Greek, explaining your options and defending your choices, and comparing/contrasting to other English translations - either the ones provided by the tutor or others that you have found (if you go the latter route, check with me first - there are some completely bogus translations out there that aren't worth discussing).
 - b. You can use the questions on the back of your notes handout to get you started, but that's not an exhaustive list.
 - c. Regarding your defense of your translation choices: You should address, as well as the details of at least three passages, your sense of the Prologue as a whole: how the parts fit together, what is being said in the verse in question and why, etc. In other words, this is not a narrowly "linguistic" paper: the big questions about the meaning and implications of the Prologue are fair game as well.
 - d. Regarding your comparison with other translations: you should think about what a good translation should try to accomplish, and this should play into your discussion of your own translation and your comparisons to other translations.
3. A typed copy of your final translation (should be the same as the final fourth line of your working document).

6) Freshman Language Tutorial 052 Spring

Integral Freshman Language
Spring 2012

How does Sappho *Fragment 1* translate?

Please submit your best translation of Fragment 1. Also include your four-line work on the fragment. In a 4-5 page essay, reflect on how the poem's form and meaning influenced the following

1. Word choice and order
2. Acoustical patterns: e.g., when you recited the poem aloud, what stanza or confluence of vowel and consonant sounds struck you as mellifluous? Jarring? Strange? Difficult to pronounce? Did you try to capture the sounds and/or meter in your translation? Be sure to recite your own translation aloud to a friend.
3. Tone: e.g., how does Sappho distinguish between her character and Aphrodite's by employing vocatives and imperatives? Repetitions of certain words? How do you?
4. Your translation in comparison with other translations
5. Your literary interpretation

Please also submit your best translations and four-line work for Fragments 2 and 31. You may, if you so choose, make reference to these fragments in your essay, so long as the focus on Fragment 1 is not diluted.

7) Freshman Laboratory 071 Fall

Integral Freshman Laboratory
Fall Term
Tree Paper

Each student should choose a single tree, native or non-native, on campus and, after consultation with the tutor (who will ensure that no two students select trees of the same species), study it and record the results in a short paper.

In the paper each student will describe the individual tree and name and describe the species it belongs to. On page one, the student will “key out” the tree, reproducing on a single sheet of paper the steps followed to identify the tree, according to any one of the larger guides to trees. This first page may be handwritten. Include on one page some drawings of parts (needles, leaf, bark, tree shape) important in identification and a map with enough detail that another could find it. On one or two typed pages give a description of the individual tree as it actually appears now. An account of the species follows. In another section, the student may add information available from printed or Internet sources. In addition, the student might provide a photograph. Measurements of the parts are always a good idea. For the account of the species, sources should be cited and a bibliography included.

8) Freshman Laboratory 072 Spring

Bird Project

The paper is to be written on the bird species you have selected. There are two parts to the assignment.

Part I (at least 2 double-spaced pages): The first part is to be a description of the species' characteristics, habits and behavior, based on research in other written sources. Two sources are required: the online Birds of North America resource, to which you have been given a 30-day personal subscription, and a book that is on reserve in the library, *The Sibley Guide to Bird Life and Behavior*. In the latter, consult especially the general treatment of behavior in the first part of the book, then look at the section for the taxonomical group of which your species is a member.

Part II (at least 3 double-spaced pages): The second (and more important) part is to be based on your field notes, and it will only be as good as those notes. In this part you are to describe the behavior of the bird as you have observed it on or near campus. If at all possible you should find a nest so that you can observe behavior connected with nesting and rearing offspring. You will turn in your notes as well as your written summary and reflection thereon. Make sure to indicate time and place of observations in your notes. For the written product, you should first present what you have observed (inclusion of sketches and photographs is highly encouraged), and then offer interpretive or explanatory hypotheses. In the latter discussion you should relate your attempt to make sense of your species' behavior to the way Tinbergen approached gull behavior in the reading from the manual. Incorporating comparison to other authors (Galen, Aristotle, other sources you look up for Part I) is encouraged.

9) Sophomore Mathematics 133 Fall

Required Texts and Materials:

Ptolemy. *Ptolemy's Almagest*. Translated by G.J. Toomer. Princeton, New Jersey: Princeton University Press. 1998.

Course Notebook, Compass, and Straight edge.

Learning Outcomes:

This tutorial is the first half of a yearlong encounter with primary mathematical texts. At the end of this course, you are expected to be able to demonstrate that you can:

1. Apply abstract and logical reasoning to identify patterns and solve mathematical problems; and
2. Communicate mathematical ideas and concepts accurately and clearly using mathematical symbols, language, and formulas.
3. Compose readable prose, as characterized by clear and careful organization, coherent paragraphs and well-constructed sentences that employ the conventions of Standard Written English and appropriate diction. (See Integral Program Sophomore Writing Standards Rubric.)
4. Use the process of writing to enhance intellectual discovery and unravel complexities of thought.

Course Preparation:

This course works on a collaborative learning model and careful preparation of the course material is essential. The better prepared you are for class, the richer the learning environment will be. With that said, if you are called to the board or asked to lead the discussion and you are not prepared for the day, please let the class know and someone else can take your turn.

Evaluation:

Final grades will be based on evidence of careful and consistent preparation of the text, active involvement in the conversation, attentive listening, and demonstration of engagement with ideas in written work. Course grades will reflect individual mastery of the material and contributions to the overall learning environment in the tutorial. Both your demonstrations at the board and your continuations to the discussion will be assessed.

Each student will receive an assessment of their performance during Don Rags (scheduled during the week of November 5). Prior to Don Rags, each student will be asked to write a short self-assessment report. This report will be used to identify areas of accomplishment and future growth.

Each student will write two essays for this course: an essay due mid-semester on Ptolemy's account of the sun (Book III) and an essay due at the end of the semester on Ptolemy or on Ptolemy and Copernicus. The due dates are:

Almagest, Book III Essay (Draft) – Due October 1, 2012

Almagest, Book III Essay (Final) – Due October 8, 2012

Ptolemy Essay (Final) – Due December 10, 2012

The first essay should be two to three pages in length. The second essay should be a more detailed and substantial discussion. All students are required to go through the draft process for their first essay. The draft process is optional for the second essay, although it may be required for some students.

10) Sophomore Mathematics 134 Spring

Required Texts and Materials:

Apollonius of Perga. *Conics: Books I-III*. Translated by Catesby Taliaferro, edited by Dana Densmore. Green Lion Press. 2000.

François Viète. *Introduction to the Analytic Art*. (Handout)

René Descartes. *The Geometry*. Translated by David Eugene Smith and Marcia L. Latham. Dover. 1964.

Course Notebook, Compass, and Straight edge.

Learning Outcomes:

This tutorial is the second half of a yearlong encounter with primary mathematical texts. At the end of this course, you are expected to be able to demonstrate that you can:

1. Apply abstract and logical reasoning to identify patterns and solve mathematical problems; and
2. Communicate mathematical ideas and concepts accurately and clearly using mathematical symbols, language, and formulas.
3. Compose readable prose, as characterized by clear and careful organization, coherent paragraphs and well-constructed sentences that employ the conventions of Standard Written English and appropriate diction. (See Integral Program Sophomore Writing Standards Rubric.)
4. Use the process of writing to enhance intellectual discovery and unravel complexities of thought.

Course Preparation:

This course works on a collaborative learning model and careful preparation of the course material is essential. The better prepared you are for class, the richer the learning environment will be. With that said, if you are called to the board or asked to lead the discussion and you are not prepared for the day, please let the class know and someone else can take your turn.

Evaluation:

Final grades will be based on evidence of careful and consistent preparation of the text, active involvement in the conversation, attentive listening, and demonstration of engagement with ideas in written work. Course grades will reflect individual mastery of the material and contributions to the overall learning environment in the tutorial. Both your demonstrations at the board and your continuations to the discussion will be assessed.

Each student will write two essays for this course: an essay due mid-semester on Book I of Apollonius's *Conics* and an essay due at the end of the semester comparing the

methods that Apollonius and Descartes use in their treatment of conic sections. Each essay should be 3-4 pages in length.

Saint Mary's College Integral Program English 4, Composition Equivalency

The Integral Program introduces students to college-level writing in its First Year Curriculum by requiring college level writing in all tutorials and Seminar. This writing prepares them for writing in Collegiate Seminar, and for the more advanced writing required in English 5, Argument and Research, should they choose to transfer from the Integral Program in their first year.

The Program utilizes a writing rubric developed in conjunction with the Composition and Collegiate Seminar Programs. The Integral rubric establishes minimum writing competence expectation for each year of the curriculum, hence meets the development ethic of the new Core Curriculum. As the new Composition rubric changes so will the Integral program rubric, which predates Composition's, also change. **See below for 4-year rubric website information.**

In order to ensure correspondence with the English Composition Program, Integral students in the First Year will have exceeded the English 4 guidelines of 4 to 5 essays, for a minimum of 5000 words (approx. 20 pages) of graded formal writing, plus an additional 2500 words of writing practice (e.g. freewriting, drafts, written daily assignments). Most essays proceed through a drafting, writing conference, redrafting process. **Syllabi data in separate attachment.**

In addition, the Integral Program uses the common writing guide shared with Composition 4 and the Collegiate Seminar Program. This guide is currently John R. Trimble's *Writing with Style*.

The Integral rubric is designed to help students build their skills in written communication and critical thinking, and to give students repeated practice in developing a sound, complex thesis and supporting it with reasons and evidence. In order to assess student learning, the Integral Program addresses writing development in the scheduled don rag. Also, each tutor is expected to submit examples of evaluated student writing to the Program Director for inclusion in the student's don rag files. Tutors are encouraged to submit these documents electronically.

English Composition lists five skills here italicized which Composition teachers impart and one essay may cover one or more of them

- 1) *Examine assumptions (examples: an evaluation or critique; compare/contrast essay)*
- 2) *Engage in intellectual discovery through the writing process (examples: compare/contrast essay; exploratory essay; freewriting exercises)*
- 3) *Engage in systematic analysis (examples: cause/effect essay; evaluation or critique; compare/contrast essay)*
- 4) *Investigate a topic (example: investigative essay)*
- 5) *Analyze a text through close reading (example: literary essay)*

Attached to this document are examples of Integral writing assignments given as examples of assignments that can fulfill these learning outcomes set by Composition.

Saint Mary's College Integral Program English 5: Argument and Research Equivalency

In addition to introducing students to college-level writing in its First Year Curriculum, the Integral Program builds upon writing skills throughout its eight semester integrated curriculum. Most particularly in the first two years the program is designed to meet, to a large extent, the argument and research oriented learning goals of English 5. Thus, after two years in the program any student who chooses to transfer to another major, will be well prepared for the Writing in the Discipline course of that major.

The writing requirements in the second year of the Integral curriculum extend to *at least 7500 words (approximately 30 pages)*. *At least 5000 words (approximately 20 pages)* require *formal writing* evaluated by the standards of the Integral Writing Rubric for sophomore students; *the balance may be made up of informal writing, such as free-writing, drafts, and written daily assignments*. Each class (seminar, tutorial, and laboratory) will assign at least one formal essay per term.

At the conclusions of the first two semesters of Freshman Language Tutorial, Integral students write essays requiring comparative research. These essays involve a critique of the student's own translation of a passage from ancient Greek--in fall semester a passage from the Gospel of John, in spring a poem of Sappho. In addition students will conduct research to find and select four other "professional" translations of the same passage. Students will analyze the four sources and evaluate evidence for the purposes of arriving at a position relative to them.

The translation essays are each to be 5-8 pages in length. They provide students with the experience of writing a thoughtful response *based on their own independent research*. While working on this essay, students will *develop search strategies and use library catalogs and databases to locate relevant material* (a variety of translations) and gather and evaluate points of view for the purpose of drawing conclusions *in relation to their own interpretations*. Along the way they will learn how to cite sources in accordance with *academic honesty*, clarity, and intellectual respect.

This pair of assignments meets three important learning goals similar to those enunciated for English 5. Students will *develop search strategies and use library catalogs and databases*; students will *critically evaluate sources*; and students will address issues of *academic honesty* in research.

In addition, in these and other assignments, Integral students *will evaluate and synthesize evidence for the purpose of drawing valid conclusions*. This is a learning outcome that guides all Integral writing assignments. One in particular is a program requirement. Each student is required to write a culminating essay for the Sophomore Mathematics Tutorial *comparing, synthesizing, and evaluating* the evidence and astronomical arguments put forward in the theories of Ptolemy and Copernicus.

The Spring semester translation and research paper of the Freshman Language Tutorial and the culminating essay of the Sophomore Mathematics Tutorial are submitted to outside evaluators (respectively, Professor Willis Barnstone, University of California, Berkeley [translator of Sappho]; Professor Dennis Duke, Florida State University [History and Philosophy of Science: astronomy]). Copies of these essays, together with selected essays from each student's seminar and additional tutorials or laboratories, are retained in each student's don rag file.

Learning Goals and Outcomes

Here follow Integral's own Learning Goals and Outcomes for Habits of Mind from last year's approved submission on The Integral Curriculum and the Revised Undergraduate Core. These goals and outcomes closely correspond with the Composition Program's. The Integral Program plans to evaluate writing demands in the curriculum via occasional workshops for faculty to develop familiarity and consistency with the Program writing rubric and to modify as needed.

Articulation Guidelines:

Since all courses in the Integral Program are discussion based with writing requirements, Integral students learn to think critically, partake in shared inquiry, and advance oral and written communication skills in all Integral courses. Additionally, students learn to conduct research and evaluate information in the Freshman and Sophomore Language Tutorials. For a further account see last year's approved submission on The Integral Curriculum and the Revised Undergraduate Core

Critical Thinking

Learning Outcomes

Students will:

1. Identify and understand assumptions and theses that exist in the work of others.
2. Ask meaningful questions, originate plausible theses, and identify their own underlying assumptions.
3. Seek and identify confirming and opposing evidence relevant to original and existing theses.
4. Evaluate and synthesize evidence for the purpose of drawing valid conclusions.

Shared Inquiry

Learning Outcomes

Students will:

1. Advance probing questions about a common text or other object of study.
2. Collaborate in sustained lines of inquiry.
3. Reexamine judgments in light of evidence and collaborative discussion.
4. Engage in inclusive, respectful conversation with others.

Written and Oral Communication

Learning Outcomes

Students will:

1. Recognize and compose readable prose, as characterized by clear and careful organization, coherent paragraphs and well-constructed sentences that employ the conventions of Standard Written English and appropriate diction.
2. Recognize and formulate effective written and oral communication, giving appropriate consideration to audience, context and format.
3. Analyze arguments so as to construct ones that are well supported, are well reasoned, and are controlled by a thesis or exploratory question.
4. Use the process of writing to enhance intellectual discovery and unravel complexities of thought.

Information Evaluation and Research

Learning Outcomes

Students will:

1. Develop search strategies and use library catalogs and databases to find relevant material; and
2. Critically evaluate sources; and
3. Integrate and cite evidence appropriately; and
4. Understand the concept of intellectual property and practice academic honesty.

Attachments:

Integral 4-year Writing Rubrics:

www.integralprogram.org/images/stories/documents/IntFreshman%20writing%20standards.pdf
www.integralprogram.org/images/stories/documents/IntSophomore%20writing%20standards.pdf
www.integralprogram.org/images/stories/documents/IntJunior%20writing%20standards.pdf
[/www.integralprogram.org/images/stories/documents/IntJunior%20writing%20standards.pdf](http://www.integralprogram.org/images/stories/documents/IntJunior%20writing%20standards.pdf)

Course syllabi with writing assignments:

1,2 Freshman Seminar Fall-Spring

3,4 Freshman Mathematics Fall-Spring

5,6, Freshman Language Fall-Spring

7,8 Freshman Laboratory Fall-Spring

9, 10 Sophomore Mathematics Fall-Spring