CS-90
Strategies for Aligning Assessment for Program Improvement with Accountability for Individual Student Learning

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For more examples and related information, visit http://iea.fau.edu/pusateri/assess/ALC.htm

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Background Information

- Increased emphasis on identifying and assessing core student learning outcomes in higher education (e.g., Measuring Up 2004).

- The Florida Board of Governors included student achievement as 1 of 7 of its accountability measures.

- A Board of Governors' resolution (April 22, 2004) directed university personnel to develop Academic Learning Compacts (ALCs) and related processes.

What are ALCs?

"University personnel will provide students and prospective students with Academic Learning Compacts, which include concise statements of what active and successful participants in the joint teaching-learning process will know and be able to do, expressed in terms of the core student learning outcomes embodied in the requirements for each baccalaureate degree. The Compacts also will list the types of assessments used in the program. Compacts provided to students must be written in a user-friendly, jargon-free format."

Policy Guideline 04.08.26
State University System (of Florida)
Division of Colleges and Universities

Florida Atlantic University's is realigning its assessment system to accommodate Academic Learning Compacts.

BoG Policy Guideline
University personnel will develop Academic Learning Compacts that:
I.a. Identify, at a minimum, the expected core student learning outcomes for program graduates in the areas of
i. content/discipline knowledge and skills;
ii. communication skills*
iii. critical thinking skills*
* these skills may be defined at either the university level or the program level

FAU's Realignment
FAU's programs identify one or more of each of the following outcomes:
- **Content knowledge**
  - Vocabulary, Theories
  - Research skills
  - Technical skills
- **Communication skills**
  - Written–Oral–Other–Team
- **Critical Thinking skills**
  - Analytical – Creative – Practical
  - FAU's Writing Across the Curriculum requirement

BoG Policy Guideline
I.b. Identify corresponding assessments used to determine how well student learning matches those articulated expectations.

FAU's Realignment
Departments assess all students through one or more of the following:
- **Core required courses**
- **Capstone experience**
  - Senior thesis
  - Senior project/portfolio
  - Field placement
- **Standardized test**

Where/When are students assessed?
How are students held to performance standards?
### BoG Policy Guideline

1. **Identify corresponding assessments** used to determine how well student learning matches those articulated expectations.

2. **Develop the evaluation systems** (including external validations) necessary to corroborate that the assessments referenced above measure student achievement against the expected core learning outcomes and results will be used to improve student achievement and program effectiveness.

#### FAU's Realignment

- **Departments establish standards through one or more approaches:**
  - **Standardizing courses**
    - Common syllabi
    - Common expectations
    - Common assignments
  - **Grading rubrics**
    - Faculty define levels of student performance
    - Periodic calibration
  - **Setting cut-off scores on required exams**

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<th>BoG Policy Guideline</th>
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<td>University personnel shall develop an <strong>action plan</strong> that will be approved by their university's board of trustees and submitted to the Division of Colleges and Universities. The plan shall include a. a proposed timeline for developing policies and implementing procedures to capture each element outlined above, as well as in making Academic Learning Compacts readily available to students.</td>
<td><strong>FAU's action plan</strong></td>
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<td>• Briefings for Board of Trustees and University Undergraduate Programs Committee (Fall 04)</td>
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<td>• Consultations with academic departments (04-05)</td>
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<td>• Progress report to Faculty Senate Chair (Mar 05)</td>
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<td>• Board of Trustees - Workshop (Apr 05), - Approves timeline (May 05)</td>
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<td>• Faculty Senate approves ALC Guidelines (Oct 05)</td>
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<td>• Board of Trustees approves ALC Policies (Nov 05)</td>
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<td>• ALCs will be made available to students (Dec 05)</td>
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<td>University personnel will certify that each baccalaureate graduate has completed a program with clearly articulated core student learning expectations...and that corresponding robust and effective assessment mechanisms have been used to ensure that graduates have met the criteria of the Compacts.</td>
<td><strong>FAU will certify students through the awarding of a baccalaureate degree from programs that have articulated ALCs and that require students to achieve acceptable performance standards prior to graduation via completion of one or more of the following:</strong></td>
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<td>(a) senior capstone course,</td>
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<td>(b) exit examination</td>
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<td>(c) a series of core required courses.</td>
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These Guidelines provide instructions for complying with FAU’s Policies and Procedures for Implementing Academic Learning Compacts in ways that are consistent with the requirements articulated in Policy Guideline #PG 05.02.15 issued by the Chancellor of the State University System. Department chairs and program directors will be the individuals responsible for submitting Academic Learning Compacts for review and approval from faculty in the department/program and from the College and University.

I. GUIDELINES FOR CORE STUDENT LEARNING OUTCOMES

Academic Learning Compacts for each baccalaureate degree program will include concise statements of core learning outcomes that will be incorporated into the degree requirements1 for that program. The statements will articulate, at minimum, the content/discipline knowledge and skills, communication skills, and critical thinking skills appropriate for students who will receive a baccalaureate degree from that program. Each statement will be written in a way that permits assessment of student achievement prior to completion of the program. FAU’s department chairs and program directors will refer to the following definitions when developing outcome statements appropriate for each baccalaureate degree program. Each definition also provides suggestions for some assessment processes that may be used to measure student achievement.

A. Content/Discipline Knowledge and Skills

“Content/Discipline knowledge and skills” may include both declarative knowledge (“knowing that”) and procedural knowledge (“knowing how”) specific to a discipline.

Academic Learning Compacts for each baccalaureate degree program will include concise, measurable, and discipline-specific statements of at least two of the following three subcategories of content/discipline knowledge and skills. Chairs and Directors who submit an Academic Learning Compact that includes only one subcategory should present compelling reasons for excluding the other subcategories.

Declarative knowledge: Students will demonstrate knowledge of the vocabulary, history, theories or concepts specific to the discipline and appropriate for the awarding of a baccalaureate degree. Skills related to declarative knowledge are usually assessed via in-class or standardized tests, typically in an objective (multiple-choice; short answer) format.

Procedural knowledge: Research skills: Students will demonstrate knowledge of the procedures involved in discipline-specific research (e.g., idea generation, literature review, data collection, reporting) appropriate for the awarding of a baccalaureate degree. These skills are usually assessed via a research report, research project, or thesis.

Procedural knowledge: Technical skills: Students will demonstrate technical skills related to the discipline (e.g., preparation of a business report or lesson plan, mastery of a musical instrument, fluency in a foreign language, use of statistical software) appropriate for the awarding of a baccalaureate degree. These skills are usually assessed via an in-class project (e.g., case study, paper), observation (e.g., juried performance), or portfolio.

B. Communication skills

“Communication skills” usually involve assessment of an individual student’s written communication, oral communication, or both. However, faculty in some programs may expect their majors to develop communication skills using other media or a combination of media (e.g., an artistic product, an audiovisual presentation, a graphical representation of information, etc.). Some programs may promote team-oriented, collaborative skills that require assessment of groups rather than individual students.

Academic Learning Compacts for each baccalaureate degree program will include concise, measurable, and discipline-specific statements of at least two of the following four subcategories of communication skills. Chairs and directors who submit an Academic Learning Compact that includes only one subcategory should present compelling reasons for excluding the other subcategories.

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1 Note: Any change in degree requirements must first be approved through appropriate institutional channels before it will be permitted to appear in the Academic Learning Compact for that program.
In articulating outcomes for written communication skills, chairs and directors may make reference to FAU's Writing Across the Curriculum program that is part of FAU's writing requirement for all baccalaureate degrees. For some programs, completing this writing program may represent sufficient skills in writing for students in that program. However, it is strongly recommended that Academic Learning Compacts include identification and assessments of discipline-specific communication skills.

**Written communication:** Students will produce writing that is grammatically correct, well-organized, and properly formatted for the purpose of the assignment and the discipline at a level appropriate for the awarding of a baccalaureate degree. These skills are usually assessed via individual paper assignments or essays where instructors assess the quality of written expression.

**Oral communication:** Students will prepare and deliver informative and/or persuasive oral presentations that attend to the audience and are well-organized at a level appropriate for the awarding of a baccalaureate degree. These skills are usually assessed via individual oral presentations in a classroom setting, although sometimes instructors and/or supervisors may assess oral communication across time (e.g., during classroom discussions or at an internship site).

**Other forms of communication:** Students will prepare and present information or persuasive material using media that may or may not include written or oral communication (e.g., a musical performance, theatrical performance, or art exhibit; a visual, audiovisual, or graphical product) at a level appropriate for the awarding of a baccalaureate degree. These skills are usually assessed via classroom projects, juried performances, or portfolios.

**Team/Collaborative communication:** Students will demonstrate team-oriented, collaborative skills in which they contribute to group products at a level appropriate for the awarding of a baccalaureate degree. These skills are usually assessed via group papers or presentations and may involve peer-assessment (e.g., group members assess each other), assessment by audience members (e.g., an instructor, supervisor, or peer), or both.

**C. Critical thinking skills**

Yale psychologist Robert Sternberg proposed a theory of successful intelligence which argues that individuals demonstrate “critical thinking skills” when they analyze, create with, or apply their knowledge. Sternberg proposes three types of critical thinking skills (analytical thinking, creative thinking, and practical thinking), each of which requires individuals to employ discipline-specific knowledge. FAU has adapted Sternberg’s theory for the development of Academic Learning Compacts.

Academic Learning Compacts for each baccalaureate degree program should include one or more concise, measurable, and discipline-specific statements of at least one of the following three subcategories of critical thinking skills. Chairs and directors are strongly encouraged to include more than one subcategory in the Compact.

**Analytical skills:** Students will analyze, evaluate, compare/contrast or judge discipline-specific theories, issues, events, or other content at a level appropriate for the awarding of a baccalaureate degree. These skills are usually assessed through examining the quality of argument in a student essay, oral presentation, or formal report.

**Creative skills:** Students will create a product by synthesizing knowledge from a discipline (e.g., create a new piece of art, interpret a piece of music in a personal and appropriate way, develop a new theory or research proposal) at a level appropriate for the awarding of a baccalaureate degree. These skills are usually assessed by an instructor or supervisor examining a student product for the quality of its synthesis of current knowledge into a new product.

**Practical skills:** Students will put into practice their knowledge and skills within a discipline (e.g., developing a business proposal or lesson plan, writing a grant) at a level appropriate for the awarding of a baccalaureate degree. These skills are assessed ideally by examining an authentic product the student employs in an appropriate setting (e.g., a student teacher delivering a lesson, an intern proposing a plan to a supervisor); they may also be assessed via in-class projects in which students propose practical solutions based on their understanding of the discipline (e.g., case study analysis).
II. GUIDELINES FOR ASSESSMENT PROCESSES USED TO MEASURE STUDENT ACHIEVEMENT

Academic Learning Compacts for each baccalaureate degree program will identify the assessment processes used to measure student achievement on each of the core student learning outcomes for the program. These assessment processes will specify all of the following:

A. the required courses or other academic equivalents through which all students pursuing the baccalaureate degree are assessed on each outcome,

B. the assessments used in those courses or academic equivalents that correspond to each outcome, and

C. the standards used during the assessments to determine if student work matches the expectations articulated for each outcome. FAU’s department chairs and program directors will refer to the following guidelines when developing statements of the assessment processes appropriate for each baccalaureate degree program.

A. **Required courses or academic equivalents**

Chairs and directors will submit Compacts that identify one or more of the following requirements for each program, the combination of which will adequately cover the content/discipline-specific knowledge and skills, communication skills, and critical thinking skills articulated in the statements of core learning outcomes for that program.

**Core required courses**: Programs that require all students to complete a series of core courses may embed all or some of their assessment processes within a subset of the core courses. Programs that permit students options for completing one or more core courses may embed assessment processes in those options as long as all options are included in the assessment. The core courses selected for assessment should include upper-division (3000- and 4000-level) courses that constitute an appropriate breadth of upper-division requirements for the degree program. Chairs and directors will include the following information in the Compact for each baccalaureate degree program: the names and numbers of all courses selected for assessment; the core learning outcomes covered in each course; and the assessments in each course which correspond to those outcomes. Chairs and directors will report procedures for establishing and maintaining equivalencies in the learning outcomes and assessments incorporated across multiple sections or options of core courses.

**Senior capstone experience**: Programs that require seniors to complete an integrative capstone experience may embed all or some of their assessment processes within the capstone experience. Examples of integrative capstone experiences include, but are not limited to, the completion of a senior thesis, major project, field experience, or senior portfolio. The capstone experience should require seniors to integrate core learning outcomes developed in earlier courses within the degree program. Chairs and directors will identify the capstone experience in the Compact, including statements describing how the capstone integrates learning from previous academic work, how it adequately covers one or more of the core learning outcomes for that program, and how students will be assessed on those outcomes. Chairs and directors will report procedures for establishing and maintaining equivalencies in the learning outcomes and assessments incorporated across multiple sections or options for the capstone experience.

**Exit examination**: Programs that require seniors to complete and pass an exit examination may embed all or some of their assessment processes within this examination. Ideally, the exit examination will be a standardized examination that permits external comparisons to students at other institutions. Any program that chooses to develop and administer an exit examination created by faculty within the program is strongly encouraged to consult with the Assessment Director prior to developing and administering the exam. Chairs and directors will describe the exit examination in the Compact, including a statement of how the examination adequately covers one or more of the core learning outcomes for that program.

**Other degree requirement(s)**: Programs that have other degree requirements in addition to courses may use these degree requirements to assess all or some of the core students learning outcomes. For example, a program may require students to submit a portfolio, a reflective narrative, or other academic product prior to graduation. Departments should consult with the Assessment Director to discuss the appropriateness of using other degree requirements for this purpose. Chairs and directors will report how these degree requirements will be used in the assessment of core learning outcomes.
B. **Assessments used in required courses or in academic equivalents**

Chairs and directors will submit Compacts that identify appropriate and sufficient assessments that adequately cover the content/discipline-specific knowledge and skills, communication skills, and critical thinking skills articulated in the statements of core learning outcomes for that program. In addition, chairs and directors will indicate the required courses or academic equivalents in which those assessments are administered. Suggestions for assessments corresponding to learning outcomes appear earlier in the section entitled “Guidelines for Core Student Learning Outcomes.”

C. **Standards used during assessments**

Chairs and directors will submit Compacts that specify the standards faculty or other evaluators (e.g., field supervisors) will use during assessments to determine if student work matches the expectations articulated for each learning outcome in the Compact. In addition, chairs and directors will indicate in the Compacts the action steps individual students must take if they fail to meet the standards, such as adequate revision of the assignment, completion of equivalent remedial work, referral to an appropriate academic service (e.g., the University Center for Writing Excellence) to improve the quality of future work, or course failure with a requirement to retake that course or its equivalent.

This section of the guidelines describes some strategies for department chairs and program directors to establish equivalencies in the application of standards across sections of core required courses or capstone experiences. Chairs and directors may incorporate these or other equivalent strategies that align appropriately with the program’s learning outcomes.

**A strategy for establishing equivalencies across multiple sections of core courses/capstones:** Chairs and directors may convene a committee for each core course comprised of faculty members who teach that course. Each committee could be charged with: developing equivalent learning outcomes for all sections of the course; convening periodically to share and review course syllabi and samples of student work; recommending refinements to the course as appropriate; and submitting the learning outcomes and committee recommendations to the chair or director for approval. Committees could also be encouraged to collect and incorporate information on best practices for the courses from similar programs at peer institutions, from discipline-specific professional associations, and from appropriate accrediting agencies. Chairs and directors would maintain oversight of the process of developing and refining equivalent learning outcomes of core courses.

**A strategy for establishing equivalencies of subjective assignments via scoring rubrics:** Some programs may require students to complete papers, oral presentations, or projects that faculty or other evaluators subjectively assess for student achievement on core learning outcomes. For these assignments, chairs and directors may involve faculty in the development and refinement of standard scoring rubrics to be used in all equivalent sections of core courses or capstone experiences. Chairs and directors may also provide training to those who will use the rubric to assess student work. It is recommended that each scoring rubric include clear statements of the core learning outcomes assessed in the assignment and at least three categories of performance (e.g., unsatisfactory, satisfactory, exemplary) per learning outcome. In addition, students should be provided access to the scoring rubric prior to beginning work on the assignment. The Academic Learning Compact for the degree program should describe the scoring rubric(s) used in the program and should indicate the action steps students must take if they submit unsatisfactory work for assignments.

**A strategy for establishing equivalencies of objective examinations and embedded questions:** Some programs offer multiple sections of core courses, often with large student enrollments. These programs may rely on objective (e.g., multiple-choice, short answer) examinations in those courses to assess content/discipline knowledge and/or critical thinking skills. For such courses, chairs and directors may involve faculty members in developing standards for using examinations to assess core learning outcomes in each section of the course. Faculty members may develop a common pool of questions to be embedded into examinations in each section of the course. In order to establish equivalencies in student achievement on core learning outcomes across sections of the course, the chair or director may periodically request that faculty members collect and analyze information about student performance on these embedded questions. Faculty members may then discuss the
implications of these data for improving student achievement on the core learning outcomes and, if appropriate, may recommend refinements to the embedded questions or to the contents of the course.

**A strategy for setting cut-off scores for exit examinations:** If a program requires students to complete and pass an exit examination prior to graduation, the chair or director should indicate in the Academic Learning Compact the cut-off score (or subscores) students must achieve to pass the examination and the action steps individual students must take if they fail to meet this requirement. Chairs are encouraged to consult with the Assessment Director concerning the rationale for setting cut-off scores at levels appropriate for the program.

**Discipline-specific strategies.** Programs may incorporate other strategies appropriate for the discipline. Chairs and directors are encouraged to consult with the Assessment Director to discuss the appropriateness of using such strategies.

### III. GUIDELINES FOR EVALUATION SYSTEMS USED TO CORROBORATE THAT THE ASSESSMENT PROCESSES MEASURE THE LEARNING OUTCOMES

Department chairs and program directors will develop evaluation systems sufficient to corroborate that the assessments in the Compact measure student achievement on each of the expected core learning outcomes. As part of FAU’s annual departmental performance review process, chairs and directors will provide an annual update to the FAU Assessment Reporting Database which will summarize the results of evaluations from the prior academic year and describe how these results were used to improve student achievement and program effectiveness. When summarizing the results in each annual update, chairs and directors will report data such as the distribution of student scores the assessments articulated in the Compact (e.g., the number or percent of students who submitted work that is unsatisfactory, satisfactory, and exemplary).

This section of the guidelines describes strategies for department chairs and program directors to develop evaluation systems and produce annual updates. The Assessment Director wrote these strategies with full awareness that faculty members in each program are the ultimate decision makers for the curricular requirements of that program; these strategies were written to provide illustrations and are not meant to be prescriptive. The evaluation systems used for different programs may vary depending upon the learning outcomes, assessment methods, and standards articulated in the Compact for each program. In addition, the evaluation systems for some programs may need to address practical constraints inherent in the program (e.g., its size, its complexity, its distribution across multiple campuses). Chairs and directors are encouraged to consult with the Assessment Director in developing evaluation systems appropriate for each program.

**Strategies for comparing course grades to scores on assessments.** Course grades alone are unlikely to provide sufficient evidence that students have achieved one or more of the core learning outcomes articulated in a program’s Compact. For example, if written communication is a core learning outcome for a required course, but the assessment of writing constitutes only 20% of the course grade, it may be possible (albeit unlikely) for a student to pass the course without demonstrating adequate written communication. Similarly, if a program assesses content knowledge or critical thinking through the use of embedded questions across multiple sections of a required course, it may be possible for a student to pass the course without passing the subset of embedded questions. In cases such as these, it may be necessary for chairs and directors to request faculty members who teach the course to submit student scores on assessments related to the learning outcomes in addition to student grades in the course.

Chairs and directors who collect both course grades and scores on assessments may then analyze these data to determine whether students who received passing grades in the course also obtained acceptable scores on the assessments articulated in the Compacts. Ideally, no student who passes a course should submit unacceptable work on the assessments. Data which deviates from this ideal may indicate areas for program improvement to increase future student achievement.

In some programs, majors may be required to complete a course at a specific grade level (e.g., obtain a grade of C in the course) prior to graduating. For purposes of this analysis, chairs may consider the grade required for graduation as equivalent to the “passing grade” when analyzing data or reporting results. Using the example of a grade of C as a graduation requirement, chairs and directors could determine if there were any students who obtained a grade of C or higher in the course but who also submitted unacceptable work on the assessments.
The Compacts of some programs may include courses in which declared majors, undeclared majors, and nonmajors are enrolled, and it may be difficult for faculty members, chairs, and directors to distinguish students who are majors from those who are nonmajors for this analysis. In this case, it is appropriate for chairs to collect and report data on all students who enroll in the course, considering that majors will still need to pass the course in order to obtain the degree.

Chairs and directors should collect and report data from as many students as practical on the assessments identified in the Compact. In programs with large total enrollments in combined sections of a course that is targeted for assessment, chairs and directors should consult with the Assessment Director to develop procedures for collecting a sample of data from students that will adequately represent the range of student performance across sections of the course.

Strategies for demonstrating and maintaining shared standards among multiple raters of student work. An earlier section of these guidelines discussed strategies for developing scoring rubrics for subjective assessments. In programs where student performance is assessed regularly by multiple raters (e.g., juried performances, senior capstone projects), chairs and directors may request the scores each rater assigned to each student and use these scores to report the level of agreement with which multiple raters evaluate student work and the implications of these data for enhancing future student achievement. Chairs and directors are encouraged to consult with the Assessment Director for assistance with this type of analysis.

In programs where individual faculty members teach different sections of required courses, chairs and directors may develop systems for demonstrating that faculty members teaching different sections are using equivalent standards for evaluating student work. For example, they may request periodically that each faculty member select samples of student submissions that represent the range of performance in that section of the course (e.g., one or two unsatisfactory student submissions, one or two satisfactory submissions, and one or two exemplary submissions). The chair or director may then convene faculty members to rate the samples of student submissions and use these ratings to calculate and report the level of agreement among the raters.

In programs where only one faculty member possesses sufficient expertise to teach a required course and to evaluate the quality of student work in that course, chairs and directors may work with this faculty member to determine strategies for developing appropriate and practical evaluation systems for this course. One possibility is for the faculty member to develop and maintain a teaching portfolio, including samples of assignments and student work, which may periodically be reviewed by an expert at another institution.

A strategy for reporting student performance on exit examinations. In programs where students are required to complete and pass an exit examination, chairs and directors may collect and report data concerning the number of students who completed the examination, the percent who received scores above and below the cut-off score, and the action steps for students who failed to achieve a passing score in the examination.

Discipline-specific strategies. Programs may use other strategies that are appropriate for the discipline. Chairs and program directors are encouraged to consult with the Assessment Director to develop appropriate strategies for corroborating the assessment process.

IV. GUIDELINES FOR REVIEW PROCESSES FOR REFINING COMPONENTS OF THE ACADEMIC LEARNING COMPACT

Department chairs and program directors will conduct periodic review for the purpose of refining, when appropriate, the Academic Learning Compact, the assessment process, and the evaluation systems.

Chairs and directors are also strongly encouraged to send recommendations for revisions of these Guidelines to the Assessment Director.
CONTENT KNOWLEDGE (Declarative knowledge): Graduates in Geology will understand basic concepts, theories, field and experimental evidence, and graphical data pertinent to the field including natural hazards (earthquakes, volcanoes, tsunamis, and plate motions), internal composition and structure of the earth and their importance in plate tectonics, resources in relation to plate tectonics, structural characteristics of plate margins, stability of triple junctions, orogenesis, concepts and methods used to study the structure and dynamics of the earth, including rotation, gravity, seismology, heat flow, radioactivity, and deformation.

Students will complete a senior capstone course, GLY 4XXX (Geoscience in a Plate Tectonic Framework) in which they will complete term papers, exercises and exams that test content knowledge.

CONTENT KNOWLEDGE (Technical skills) and COMMUNICATION (Written Communication; Oral Communication, Other Forms of Communication): Graduates in Geology will produce writing that is grammatically correct, well-organized, and properly formatted; will deliver an oral presentation based on their research; and will utilize graphics appropriate to the geosciences in their oral presentations.

In GLY 4XXX, students will complete a major research project that illustrates their understanding of the scientific method as applied to geological problems. They will produce a substantial written report of this research project and orally present the project in the class and/or the department colloquium series. The term paper must represent a synthesis of current thinking about a significant problem in Geology. The oral presentation must include graphical information (maps, diagrams, and or images) which are produced by the student from data or are adapted from other resources for the presentation.

CRITICAL THINKING (Analytical skills, Creative skills, Practical skills): Graduates in Geology will use critical thinking to evaluate information and data, including graphical data, related to all aspects of Geological Sciences by applying basic principles of scientific methodologies including 1) the nature of scientific explanations, 2) assessments of the validity and reliability of the observations, 3) measurement limitations imposed by the limits of analytical capability, 4) acceptable methods of testing hypotheses, and 5) the proper interpretation of observational and experimental data.

This outcome will be assessed through examinations, exercises and the written and oral presentation of the term paper that will all require tools of critical thinking as appropriate to the discipline of geology.
CONTENT KNOWLEDGE (Declarative Knowledge): Graduating philosophy majors will demonstrate knowledge of the vocabulary, history, theories and concepts specific to philosophy.

In PHH 3100 (Ancient Philosophy), students learn the history of ancient philosophy, which may include the pre-Socratic cosmologists, Socrates, Plato, Aristotle, as well as the Roman philosophers. In PHH 3240 (Early Modern Philosophy), students learn the history of early modern philosophy, from Descartes to Hume. In PHH 4440 (Late Modern Philosophy), students learn the history of late modern philosophy, beginning with Immanuel Kant through the 19th century. In these courses, the students’ acquisition of declarative knowledge will be assessed through a series of examinations, which can be a combination of short answer and essay questions. Declarative knowledge may also be assessed through one or more research papers.

CONTENT KNOWLEDGE (Technical Skills) and CRITICAL THINKING (Analytical Skills): Graduating philosophy majors will demonstrate advanced skills in logic that will help them both develop and evaluate philosophical arguments and theories.

In PHI 3132 (Logic), students will learn logical principles and critical thinking skills through the study of Aristotelian syllogistic logic, and first-order symbolic (predicate and propositional) logic. The students’ acquisition of logical and critical thinking skills will be assessed through a series of examinations, in which students will have to evaluate arguments for validity, construct valid arguments, translate ordinary language arguments into symbolic notation, and develop proofs to demonstrate the validity of symbolic arguments.

CONTENT KNOWLEDGE (Research Skills) Graduating philosophy majors will demonstrate knowledge of the procedures involved in philosophical research, such as idea generation, library research skills, and review of philosophical texts.
COMMUNICATION (Written communication; Oral communication): Graduating philosophy majors will demonstrate the ability to write grammatically correct, well-organized, and properly formatted philosophy papers. Graduating philosophy majors will also demonstrate the ability to prepare informative, persuasive, and well-organized oral presentations.

CRITICAL THINKING (Analytical skills; Creative skills): Graduating philosophy majors will demonstrate advanced analytical critical thinking skills by being able to analyze, evaluate, compare and contrast, and judge different logical arguments. They will demonstrate the ability to identify the structure of an argument, distinguish premises from conclusion, and apply proper methods of analysis to determine the validity of an argument. Graduating philosophy majors will also demonstrate creative critical thinking skills by being able to synthesize philosophical knowledge.

In PHI 4938 (Senior Seminar), students’ acquisition of research skills, written communication skills, oral communication skills, and critical thinking skills will be evaluated through a series of theoretical research papers. In order to write these papers, students will be required to do library research. The papers will have to be written in a style and format that conforms to accepted standards for philosophy research papers, including the appropriate use of citation. Students will have to read a draft of each of their papers in class and answer questions from both other students and the professor. These papers will have to be revised in light of comments and turned in for a final grade. Students’ oral communication skills will be evaluated through the class presentations in terms of how well a student is able to engage comments and questions from his/her peers and the professor. Written communication skills will be evaluated when the papers are graded for syntax, clarity, spelling, grammar, and content. Critical thinking skills will be evaluated when grading research papers by examining the student’s ability to construct good argument to defend the paper’s thesis and his/her ability to critically evaluate the arguments of other philosophers.

COMPLETE DEGREE REQUIREMENTS APPEAR IN FAU’S UNIVERSITY CATALOG
In all required nursing practice courses, students are evaluated by faculty via the Collaborative Nursing Practice Evaluation Instrument. This evaluation instrument is available to view at http://nursing.fau.edu/newnursingsite/handbook/forms/practiceevaluation.html. The instrument describes in detail the competencies of caring that are the foundation for the nursing program. These competencies are summarized below:

CARING COMPETENCIES
- **Compassion:** The quality that fosters trusting relationships.
- **Competence:** The state of having knowledge, judgment, skills, energy, experience and motivation required to respond adequately to the demands of one’s professional responsibilities.
- **Confidence:** A way of living born out of an awareness of one’s relationship to all living creatures.
- **Conscience:** The morally sensitive self attuned to values and is integral to personhood.
- **Commitment:** A complex affective response characterized by a convergence between one’s desires and one’s obligations and by a deliberate choice to act in accordance with them.
- **Comportment:** Bearing or demeanor expressed through the dress, language and behavior of nurses while caring for patients.

This Academic Learning Compact highlights the 12 Critical Behaviors that are also included in the evaluation instrument. Students will demonstrate the following critical behaviors throughout their nursing practice courses:

CRITICAL THINKING (Analytical Skills, Practical Skills)
- Performs holistic and comprehensive assessments on patients.
- Identifies and anticipates priorities of care and take appropriate action.
- Demonstrates accountability for own learning and actions.
- Implements nursing responses that are safe, individualized and appropriate for the patient.
- Demonstrates an ability to understand calls and responses, including multiple ways of knowing and critical thinking in analyzing and interpreting calls and responses.

COMMUNICATION (Team/Collaborative Communication)
- Demonstrates authentic presence and caring behaviors that nurture wholeness (active listening and responding to “that which matters to those nursed”).
- Collaborates with other health care providers in designing a plan of care and meeting the patient’s calls for nursing.
- Demonstrates preparation, energy integration of multiple ways of knowing to hear and respond to patient’s calls and nursing responsibilities during the nursing practice experience.
COMMUNICATION (Written Communication)
- Writes a story illustrating the nursing situation, the invitation to care and the mutuality of persons in the caring experience. Responds to critical questions and presents work as a professional paper or presentation.

CONTENT KNOWLEDGE (Technical Skills)
- Records all significant data, nursing actions and patient responses in an accurate, concise and timely manner.
- Administers medications safely.
- Maintains a safe environment, including aseptic technique, infection control, fall precautions and any unit specific safety policies.

Students will be observed and evaluated by faculty on each of these 12 Critical Behaviors. Consistent demonstration of these behaviors is essential to successful completion of any nursing practice course. The student must earn a YES response for each of the 12 criteria to pass each nursing practice course. Critical criteria must be consistently demonstrated over the duration of the nursing practice course.

CONTENT KNOWLEDGE (Declarative Knowledge) and CRITICAL THINKING (Analytical Skills)
Students will demonstrate the following competencies necessary to perform safely and effectively as a registered nurse: A critical understanding of pathophysiology and disease processes, technical skills and procedures, medications, diagnostic tests, the nursing process (assessment, analysis, planning, implementation, evaluation), awareness of client needs (safety/effectiveness, physiological and psychosocial integrity, health promotion), knowledge of specialty areas in nursing (medical-surgical, pediatric, maternity, mental health, community, gerontology), and professional nursing leadership skills.

Approximately three months prior to graduation, all seniors will take the Health Education Systems, Inc. (HESI) examination. This test is a valid predictor of performance on the National Licensing Examination (NCLEX). Students must achieve a HESI score of 850 or better to graduate. Students who do not receive a passing score are provided with advising and a remediation plan and the opportunity to re-take the exam; they will not graduate until their score is 850 or better.

CONTENT KNOWLEDGE (Declarative Knowledge, Research Skills), COMMUNICATION (Written Communication), and CRITICAL THINKING (Analytical Skills)
Students will demonstrate that they have acquired discipline-specific research skills including knowledge of relationships between theory development, research and the practice of nursing, critical analysis of the conceptual and technical aspects of nursing research, and the ability to produce a substantive written research paper in appropriate APA format.

In NUR 4165 (Nursing Research), students complete a written clinical inquiry project.

COMPLETE DEGREE REQUIREMENTS APPEAR IN FAU’S UNIVERSITY CATALOG

14
I. **(Approved version due December 1, 2005)** Identify at least five core student learning outcomes that students should demonstrate prior to the awarding of a baccalaureate degree.

<table>
<thead>
<tr>
<th>A. Content/Discipline Knowledge and Skills.</th>
<th>Include at least two of the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Declarative knowledge: Vocab, history, theories, concepts</td>
<td></td>
</tr>
<tr>
<td>• Procedural knowledge: Research skills</td>
<td></td>
</tr>
<tr>
<td>• Procedural knowledge: Technical skills</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>B. Communication Skills.</th>
<th>Include at least two of the following:</th>
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<tbody>
<tr>
<td>• Written communication</td>
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<tr>
<td>• Oral communication</td>
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</tr>
<tr>
<td>• Other forms of communication (e.g., multimedia, graphic, artistic expression, poster, other)</td>
<td></td>
</tr>
<tr>
<td>• Team/Collaborative communication</td>
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</tbody>
</table>

<table>
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<tr>
<th>C. Critical Thinking Skills.</th>
<th>Include at least one of the following:</th>
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</thead>
<tbody>
<tr>
<td>• Analytical skills</td>
<td></td>
</tr>
<tr>
<td>• Creative skills</td>
<td></td>
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<tr>
<td>• Practical skills</td>
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</tbody>
</table>

II. **(Approved version due December 1, 2005)** Describe the assessment processes used to measure student achievement on these outcomes.

<table>
<thead>
<tr>
<th>A. Identify the required courses or other academic equivalents through which all students pursuing the baccalaureate degree are assessed on each outcome.</th>
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</thead>
<tbody>
<tr>
<td>Possibilities include:</td>
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<tr>
<td>• Core required courses (representing an appropriate breadth of upper-division degree requirements)</td>
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<tr>
<td>• Senior capstone course</td>
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<tr>
<td>• Exit examination</td>
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<tr>
<td>• Other degree requirement(s)</td>
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<tr>
<th>B. Identify the assessments used in those courses or academic equivalents that correspond to each outcome.</th>
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<tbody>
<tr>
<td>Possibilities include examinations, papers, presentations, projects, juried performance, supervisor evaluation, discipline-specific assessments</td>
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</table>

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<tr>
<th>C. Describe the standards used during the assessments to determine if student work matches the expectations articulated for each outcome.</th>
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</thead>
<tbody>
<tr>
<td>Possibilities include:</td>
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<tr>
<td>• Equivalencies across multiple sections of a required course or capstone experience</td>
</tr>
<tr>
<td>• Use of scoring rubrics for subjective assignments</td>
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<tr>
<td>• Use of embedded questions in objective examinations</td>
</tr>
<tr>
<td>• Cut-off scores for exit examinations</td>
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<tr>
<td>• Discipline-specific strategies</td>
</tr>
</tbody>
</table>

III. **(Approved version due February 1, 2006)** Develop evaluation systems to corroborate that the assessment processes measure the learning outcomes, and use this data for program improvement.

<table>
<thead>
<tr>
<th>Possibilities include:</th>
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<tbody>
<tr>
<td>• Comparing course grades to scores on assessments</td>
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<tr>
<td>• Demonstrating and maintaining shared standards among multiple evaluators of student work</td>
</tr>
<tr>
<td>• Reporting students performance on exit examinations</td>
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<tr>
<td>• Discipline-specific strategies</td>
</tr>
</tbody>
</table>

IV. Periodically review, and refine if necessary, the components of the Academic Learning Compact.