2012-2013 Undergraduate Academic Assessment Plan

IDS Biochemistry and Molecular Biology

College of Liberal Arts and Sciences

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Mission Statement

The College of Liberal Arts and Sciences offers a student with a strong interest in biochemistry, molecular cell biology, molecular biology, biotechnology, molecular genetics, structural biology, metabolism, or physical biochemistry, an Interdisciplinary Major in Biochemistry and Molecular Biology. This Interdisciplinary Major, under the auspices of the Department of Biochemistry and Molecular Biology, provides an opportunity to design an in-depth program in modern biochemistry and allied areas that are not otherwise available. Although the degree is offered by the College of Liberal Arts and Sciences, the Department is a part of the College of Medicine. The program requires participation in basic research; this is the best means to learn modern biochemical approaches and laboratory techniques. The program is intended for students who will pursue an advanced degree in one of the life sciences or whose career goals are leading to medical school, veterinarian school, or dental school. It is especially suitable for students with a strong interest in biochemical or biomedical research.

The mission aligns with the College of Liberal Arts and Sciences mission to conduct scholarly inquiry, produce creative works, and mentor students to become the next generation of intellectual and scientific pioneers; and the UF mission that states Research and scholarship are integral to the educational process and to the expansion of our understanding of the natural world, the intellect and the senses.

The IDS major is a limited access program. A 3.0 GPA is required for application. Students must choose two faculty members from different departments who agree to serve as advisors during the program, from the planning stages to completion At least one of these faculty must be from the College of Liberal Arts and Sciences. Each interdisciplinary program of study must be approved by the College Committee on Interdisciplinary Studies and include at least 20 credit hours of 3000-4000 level coursework taken in two or more departments. All other College degree requirements (e.g., foreign language, basic distribution, electives, etc.) must be met. The student must also take at least seven credit hours of IDS 4906 (Independent Research) under the direction of one or both of the supervisory faculty members and produce a senior thesis which incorporates the findings of the research project. Students should begin planning an interdisciplinary program early on in the undergraduate career. Students may start the application process for the IDS program by the end of the 4th semester, beginning of the 5th semester.

Student Learning Outcomes (SLOs)

Content

1. Students identify, describe and explain biochemistry, molecular biology and molecular cell biology.
2. Draw appropriate conclusions and inferences from properly conducted laboratory research.

Critical Thinking

3. Evaluate the significance, quality and veracity of information gathered via experiment and literature and apply them effectively.

Communication

4. Articulate research results clearly and effectively in speech and in writing in an accepted style of presentation.

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Curriculum Map

See page 3 of the "Developing an Undergraduate Academic Assessment Plan" guide.

Curriculum Map for:

IDS Biochemistry and Molecular Biology College of Liberal Arts and Sciences

Key: **I**ntroduced **R**einforced **A**ssessed

Courses SLOs	Course1 IDS4906	Course2 IDS4906
Content Knowledge		
#1	I, R	I, R, A Thesis
#2	I, R	I, R, A Thesis
Critical Thinking		
#3	I, R	I, R, A Thesis
Communication		
#4	I, R	I, R, A Thesis

Assessment Cycle

The program is reviewed annually.

Assessment Cycle Chart

Assessment Cycle for:

IDS Biochemistry and Molecular Biology College of Liberal Arts and Sciences

Analysis and Interpretation: Spring Term
Improvement Actions: Fall Term
Dissemination: Following Spring Term

Year / SLOs	10-11	11-12	12-13	13-14	14-15	15-16
Content Knowledge						
#1	x	x	x	x	x	x
#2	x	x	x	x	x	x
Critical Thinking						
#3	x	x	x	x	x	x
Communication						
#4	x	x	x	x	x	x

Methods and Procedures

SLO Assessment Matrix

The SLO Assessment Matrix is new for the 2012-13 Academic Assessment Plans. We have populated the matrix to the extent possible with the information we have available. Please complete the matrix.

Assessment Method - For each SLO, please enter the assessment method you are using – exam (course, internal, or external), project, paper, presentation, performance, etc.

Measurement – list the measurement procedure you use for this outcome. It can be a faculty-developed rubric with the minimum acceptable level identified, an exam score and the minimum passing score, or other measurement. **Required for 2012-13: Include at least one example of a rubric used to assess an SLO.**

SLO Assessment Matrix for 2012-13

2012-13 Student Learning Outcome	Assessment Method	Measurement Procedure
SLO 1	Thesis	Rubric
SLO 2	Thesis	Rubric
SLO 3	Thesis	Rubric
SLO 4	Thesis	Rubric

Direct assessment of research produced in IDS 4906 (7 – 12 credits), where all 4 SLOs are met. The work consists of a research paper. The IDS Biochemistry and Molecular Biology major is a limited access major. Students are selected through a rigorous process of application through a committee that consists of faculty across several disciplines. The application package includes a proposal for the final research project. The committee can approve the student's application to the major, approve it conditionally, or outright reject the application. The minimum GPA required to apply is 3.0. The GPA must remain at or above 3.0 after being admitted into the major. The rubric of acceptance into the major is based on a majority vote by the committee members based on GPA, reason for requesting the major, thesis proposal and ability to complete the research thesis within the required timeframe, support of faculty sponsors, strength of letters of recommendation, and ability to graduate within prescribed 4 years.

Indirect assessment will be done through exit interviews to find out what the student learned in the major and how that knowledge will be used to meet the goals of the student. The rubric used to assess the final thesis is established by the faculty sponsors making the evaluation which will vary by student. A general rubric will include the following:

A	A clear, accurate, detailed and comprehensive understanding of the relevant facts / data / theories/ terms.
B	An adequate understanding of the relevant facts / data / theories/ terms.
C	An uneven understanding of the relevant facts / data / theories/ terms.
E	An inadequate understanding of the relevant facts / data / theories/ terms.

Assessment Oversight

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