

## Learning Outcomes at UAB

At UAB, learning outcomes are developed by each academic program along with measures and achievement targets. Progress toward achieving these outcomes is assessed and posted annually along with plans for improvement. This information is maintained in the WEAVEonline system and regularly reviewed.

Some examples of UAB program learning outcomes include the following:

### **Biology, B.S.**

Outcome: Graduating Biology majors will be able to demonstrate knowledge of the fundamental concepts in the fields of genetics, ecology/evolution, physiology/development, cell/molecular biology, as well as an understanding of the major classifications of life forms.

Measure: Standardized National Examinations for admission into post-baccalaureate professions schools or graduate programs will be used to evaluate the student's basic understanding of biological knowledge (e.g., MCAT, DAT, OAT, and GRE exams).

Achievement Target: The mean score of the graduating biology students on the national standardized tests will be at or above the national mean on the biological sciences section of each respective exam.

Findings: The mean scores of graduating biology students who took the standardized national examinations were at or above the national average on the biological sciences section of the tests used.

Action Plan: Starting in Fall 2010, all graduating undergraduate students will be required to take a major field test associated with their capstone course. The major field test will allow the department to evaluate the essential areas of biology and then use the data to evaluate and improve the curricula.

### **Business Undergraduate Core**

Outcome (a): Students graduating with a BS in Business should know how to communicate effectively to solve business problems.

Measure: Given a class assignment, demonstrate the ability to present effectively in a business environment (in capstone course assignments measuring mastery).

Achievement Target: Demonstrate proficiency by a score of at least 70%.

Findings: Students demonstrated proficiency with an average score of 95%.

Outcome (b): Students graduating with a BS in Business should be able to solve business problems supported by appropriate techniques in finance and accounting.

Measure: Performance on standardized tests.

Achievement Target: Average score of 70%.

Findings: Students did not meet the target of 70%.

Action Plan: Instructors concluded from the assessment that additional time in the basic accounting class needs to be devoted to topics supporting the outcome. Excessive time was judged to be spent on mechanics, calculations, etc., so class time will be reallocated in the future focusing on the end product of the accounting process – the preparation of financial statements, and ultimately, their use.

### **Respiratory Therapy, B.S.**

Outcome (a): Graduates of this program will possess the knowledge expected of advanced respiratory care practitioners.

Measure: National Board for Respiratory Care (NBRC) Entry Level Certified Respiratory Therapist (CRT) Examination.

Achievement Target: 90% or higher pass rate.

Findings: 100% of the graduates in the measurement timeframe passed the CRT exam.

Action Plans: Seniors must pass the CRT exam to graduate. Results of the exam will be monitored by the Program Director and results will be shared with the advisory board and program faculty to make curriculum modifications as needed.

Outcome (b): Graduates of this program will exhibit behaviors consistent with the attitudes expected of advanced respiratory care practitioners.

Measure: Employer survey.

Achievement Target: 85% or higher “acceptable” responses on the Affective Domain section of the Employer Survey.

Findings: Graduates during the past year had 100% ranking greater than or equal to 3 on a 5-point Likert scale on the Employer Survey.

Action Plan: Surveys will continue to be hand-delivered to employers and an online completion option will be offered.

### **Theatre, B.A.**

Outcome: Graduating Theatre majors should demonstrate competency in the technical skills required for one or more of the creative processes involved in the production of plays, including technical skills for performers such as vocal technique and movement ability, skills in costume and scenery construction, ability to run equipment needed for the building and execution of shows, stage management skills and ability to communicate aesthetic choices.

Measure: Evaluation of the student in rehearsal, production and performance process by one or more faculty member (per production). All theatre majors are required to have a minimum of four production experiences over their academic career. Because of the variety of processes involved, specific evaluation forms are used for performance and design/production. Students are rated on a 4 point score: 0 = unacceptable, 4 = excellent.

Achievement Target: Over the course of the academic career, graduating students will, on average, have achieved a competency rating in applied theatrical techniques of at least 2.5 on a 4 point scale in one or more creative processes.

Findings: Data were gathered for 73% of graduating seniors. The average competency rate of those students for whom data was gathered was 2.9.

Action Plan: The department is developing an exit exam based on the competencies for a BA in Theatre as outlined by NAST (accrediting agency for theatre) that are common to all theatre majors. The goal for this exam is to provide more detailed and specific results than those achieved through the assessment methods currently employed.

### **Chemistry, M.S.**

Outcome: Students graduating with a MS degree in chemistry will be able to effectively communicate chemical concepts, data analysis, and scientific thought to professional chemists as well as to the general public.

Measure: Annual reports indicating research productivity will be submitted by the graduate students for review by the graduate education committee and graduate program director.

Achievement Target: 70% of Plan I (thesis) students will write a minimum of one publication as the first author in a peer-reviewed journal.

Findings: Although no students pursued Plan I, five students exceeded the goal by publishing 15 peer-reviewed manuscripts.

### **Clinical Laboratory Science, M.S.**

Outcome: Graduates of the Clinical Laboratory Science program will demonstrate that they possess the psychomotor skills to perform clinical laboratory diagnostic procedures.

Measure: Clinical instructor evaluation for competency of students in clinical practice using an evaluation checklist during clinical practice rotations which assesses the technical and decision making skills of the student in a clinical setting and the interaction of the student with coworkers under routine and stressful situations.

Achievement Target: 90% of the students will obtain an “acceptable” evaluation in 100% of the responses in the assessment of psychomotor skills.

Findings: 100% of students obtained “acceptable” evaluations on their assessment of psychomotor skills in clinical practice.

Action Plan: The clinical practice checklist (by content area) will be revised to assess students psychomotor skills based on first attempt.

## **Biochemistry and Molecular Genetics, Ph.D.**

Outcome: Students graduating with a PhD in Biochemistry and Molecular Genetics should be able to conduct independent research in the theoretical and applied fields in basic biomedical sciences.

Measure: Each student presents an updated CV on an annual basis.

Achievement Target: All students should publish two peer-reviewed articles in high impact journals by the time they graduate.

Findings: All but one student had published two or more peer-reviewed articles; some had published three or more. One student had revised reports in final review but not yet published. Delay in meeting the publication target appeared to be related to late selection of thesis project.

Action Plan: Mentors and thesis committees will be encouraged to accomplish timely identification of research plans at the time of admission to candidacy.

## **Physics, Ph.D.**

Outcome: Students graduating with a PhD in Physics will be able to communicate physics concepts and research at a professional level, both in oral and written forms.

Measure: Presentation of an updated CV on an annual basis.

Achievement Target: 100% of the doctoral physics students will present at least one talk at a national or international scientific meeting prior to graduation.

Findings: Graduating students made multiple presentations, both local and international, at professional meetings prior to graduation.

## **Dentistry, D.M.D.**

Outcome: Students graduating with a degree in dentistry should be able to apply basic science knowledge to the clinical practice of dentistry.

Measure: Students' performance on National Board Dental Examinations (NBDE).

Achievement Target: To score above the national average and to have a 100% pass rate on both Parts I and II of the NBDE on the first examination attempt.

Findings: The National average on Part I of the NBDE during the measurement year was 80.4, while the school average was 82.7. A 100% pass rate was achieved.

Action Plan: As part of the ongoing curriculum revision, a graded board review didactic course has been designed to be taken the month preceding the challenging Part I of the NBDE.