**Student Learning Outcomes at UAB**

At UAB, student learning outcomes, measures, and achievement targets are developed by each academic program. Success at achieving these outcomes is assessed annually along with plans for improvement. These data are maintained in the WEAVEonline system and regularly reviewed.

Some examples of how UAB assesses student learning:

**Biology, B.S.**

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

**Measure:** Acceptance into Graduate or Professional School. One measure of success of an undergraduate program is the program’s ability to provide students with an exceptional educational experience that would allow them to apply and be accepted into graduate or professional schools. Data on the number of undergraduate students over the last three years that have applied and been accepted into graduate or professional school will be collected by the academic advisors through the use of a required exit survey and optional follow-up survey administered at one and three years after graduation.

**Target:** 50% of graduating students who apply will be accepted into graduate or professional schools within three years of graduating with a B.S in Biology.

**Finding:** 59% of students graduating in the last three years who have applied to graduate or professional schools have been accepted. (2011-12)

**Chemistry, Ph.D.**

**Outcome:** Students graduating with a Ph.D. in Chemistry will be able to plan and successfully conduct original research at a professional level that produces publishable scientific contributions to the field.

**Measure:** Annual Review of Graduate Students. The student’s progress toward degree is reviewed annually through the submission of a research progress report at three different levels: the graduate research committee (including faculty mentor), the chemistry Graduate Education Committee, the chemistry Graduate Program Director. At each review level, the student’s research productivity (i.e. scientific publications throughout the year, presentations at regional, national, and international scientific meetings, and progress toward degree) is critically reviewed and the results of the reviews are conveyed to the student in the form of a written memorandum. Annual reports and updates are maintained in the Ph.D. student’s files in the Department of Chemistry office.

**Target:** 100% of all graduate students in the Department of Chemistry will be reviewed on an annual basis by the Department of Chemistry Graduate Education Committee as well as a one-on-one meeting and review by the Department of Chemistry Director of Graduate Studies.
Finding: In the 2011-12 academic year, all graduate students received an annual written review and met with the Department of Chemistry Graduate Program Director for an overall assessment of progress to degree. For this review, graduate students are required to submit a Graduate Student Information Form (GSIF) detailing the academic, research activities, and progress to degree over the past academic year. This report is reviewed by the Department of Chemistry Graduate Education Committee (GEC) and the Graduate Program Director. In April, the GEC meets with the Graduate Program Director to discuss each of the students. The Graduate Program Director then meets with each of the students in a one-on-one setting to discuss progress over the past year, set goals for the upcoming year, and progress to the degree. The graduate student and their research mentor then receive a letter, outlining the results of the review and specifies goals for the upcoming year. The GEC has revised the Department of Chemistry Graduate Student Handbook and set specific timelines toward progress to degree and admission to candidacy. Since implemented, time to degree (Ph.D.) continues to drop and the success of our students has increased. (2011-12)

Criminal Justice, B.S.

Outcome: Professional Ethics/Critical Thinking. Students will identify and understand the major ethical foundations for the criminal justice system, its agencies, and personnel including the major tenets of such systems as Utilitarian, Ethical Formalism, Ethics of Care, and Religious Ethics.

Measure: Major Field Test: Professional Ethics & Critical Thinking. A student graduating with the B.S. in Criminal Justice will be able to identify and understand the major ethical foundations of the criminal justice system, its agencies, and personnel including the major tenets of such systems of ethics as Utilitarian, Ethical Formalism, Ethics of Care, and Religious Ethics as measured by correct answers on questions relating to professional ethics found on the ETS Major Field Test for Criminal Justice.

Target: Student will correctly answer 60% of MFT questions relating to ethics.

Finding: Students (n=73) taking the MFT scored an average of 64% correct on questions relating to ethics/critical thinking. (2011-12)

Action Plan: During 2011-2012, faculty members did a better job of integrating ethics/critical thinking into core required courses via exercises, discussion groups, etc. Given that the goal of 60% correct answers for this subarea of the MFT has been met, the goal will now be changed to 70% correct answers (on average) beginning in 2012-2013.

Dentistry, D.M.D.

Outcome: Recall and apply basic dental science knowledge. Students graduating with a degree in dentistry will be able to apply basic science knowledge to the clinical practice of dentistry as measured by competency-based examinations administered at the School of Dentistry and by the results of the National Board Dental Examination.

Measure: National Board Dental Examinations. The American Dental Association provides testing and ultimately the results of student performance on a nationally certified credentialing examination. The National Board Dental Examinations (NBDE) are developed and administered by the American Dental Association's Joint Commission on National Dental Examinations to all dental students.
typically during the second year and during the fourth year of their dental curriculum. All students must pass both parts in order to receive their DMD degree from the UAB School of Dentistry.

Additionally, all state and regional credentialing examinations require passing grades on the NBDE in order for candidates to be issued a license to practice dentistry.

Target: The School of Dentistry achievement target is to score above the national average and have fewer failures as a percentage of students taking the examination than the national average on Part I of the National Dental Board Examination.

Finding: The national average standard score for Part I of the National Board Dental Examination (NDBE) taken between February 1, 2011 and December 31, 2011 was 82.1. The UAB School of Dentistry student standard score for this time frame was 84.5. The national failure rate was 5.4% (47/4767 candidates failed) and the UAB School of Dentistry failure rate was 2.1% (1/47 failed). (2011-12)

Materials Engineering, B.S.Mt.E.

Outcome: Ability to Communicate. B.S.Mt.E. graduates will be able to communicate clearly and effectively through technical writing and oral presentations. This statement is the ninth of the Materials Engineering Program Outcomes and embodies the ABET EAC Criterion 3(g).

Measure: Communication Workproduct. Workproduct for "Ability to Communicate" undergoes Direct Assessment biennially in academic years starting with an odd number, e.g. 2007-2008.

Target: The Achievement Target for Direct Assessment is for 80% of students to attain a rubric score of 3 ("meets minimum standard") or higher on a given workproduct. All students are expected to attain a scores of 3 or better on 2 or three workproducts for a given Outcome by graduation.

Finding: Panels of MSE faculty examined term papers from MSE 413 – Composite Materials and Rolling and Recrystallization Laboratory Reports from MSE 310 – Materials Engineering Laboratory II. The reports and papers were generally of high quality, with 96.5% of the rubric data “3” (Goal) or above. 53.7% attained rubric level "5," and 34.2% attained level "4." No systemic issues were observed. The summary report is attached. Panels of MSE faculty attended and evaluated MSE 465 – Characterization of Materials, Characterization of an Unknown Presentations and MSE 499 – Capstone Design Project II, Final Presentations. The presentations were generally of high quality, with 100% of the rubric data “3” (Goal) or above. 42.3% attained rubric level "5," and 41.7% attained level "4." No systemic issues were observed. (2011-12)

Theatre, B.A.

Outcome: Competency in technical theatre skills. A student graduating with a BA in Theatre should be able to demonstrate competency in the technical skills required for one or more of the creative processes involved in the production of plays as outlined in the document "Learning Outcomes for the Department of Theatre." Examples include vocal technique and movement ability for performers, costume or scenery construction methods for technicians, equipment operation for crew members running performances, management skills for stage managers, and artistic communication methods required for designers to communicate aesthetic choices.
Measure: Rubric-based Evaluation of Student. Evaluation of the student in rehearsal, production and performance process by one or more faculty members (per production). All theatre majors are required to have a minimum of three 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 scale: 0 = unacceptable, 1 = poor, 2 = average, 3 = good, 4 = excellent.

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 3 on a 4 point scale in one or more creative processes.

Finding: Data was gathered for 100% of graduating seniors. The average competency rate in applied analysis for students graduating with a BA in Theatre was 3.0 on a 4 point scale. Students in the group participated in an average of 5 productions over the course of their academic career and received an average of 10.8 assessments over the same time period. Measurement is based on data collected over a four year period beginning in Fall 2008. (2011-12)