Introduction

The Wilmington University Academic Affairs Assessment Plan (AAP) identifies the mission of Wilmington University as “rooted firmly in building exemplary and innovative academic programs within the context of a student-centered environment.” Outlined in this document is the College of Technology’s plan for assessing learning outcomes across each of its undergraduate and graduate programs. By design, it is consistent with the Academic Affairs Assessment Plan and Wilmington University Mission, and includes data planning, collection, analysis and reporting cycles.

Key Factors in the College of Technology Outcomes Assessment Plan

- Provides steps to preserve and improve teaching effectiveness, student learning, and promotion of educational values.
- Provides for consistency with the Academic Affairs Assessment strategy.
- Data collection, recording, and analysis are formalized to provide guidance for continuous improvement as well as maintenance.
- A “four pronged approach to assessment” as outlined in the AAP plan is utilized for assessment. The four prongs are: Assessment of Teaching Effectiveness; Assessment of Student Learning Outcomes; Assessment of Student Satisfaction; and Promotion of Educational Values. The first three assessment prongs include benchmarks and assessment tools; the four prong, Promoting Educational Values, “while not directly measured, are values the faculty wishes to develop among students” (AAP, 2011).
I. Assessment of Student Learning

Data are collected relative to student learning at the course level, which in-turn are linked to program competencies at the College level. These are also linked to graduation competencies (assessed by the College of Arts and Sciences) at the Institutional level. As cited in the AAP, the assessment methodology used will include formative and summative data as well as course-embedded criterion referenced assessment measures (CECRAM). Further explanations are outlined in the AAP (see also, Appendix B).

II. Assessment of Teaching Effectiveness

A second prong involved in “Outcomes Assessment” concerns the measure of Teaching Effectiveness. Students are a primary source of evidence here, and they are given the opportunity to provide evaluative data in specifically identified College of Technology courses. In addition, assessment of teaching effectiveness includes a periodic review of GPA Reports as well as the annual faculty evaluation process. The latter measurements and data, coupled with the IDEA data, provide key evidence for measuring teaching effectiveness.

III. Assessment of Student Satisfaction with the Academic Experience

A third prong involved in “Outcomes Assessment”, i.e. satisfaction surrounding a student’s academic experience within the College and the Institution, is a parameter of the College of Technology Assessment Plan. The ACT University Outcomes Survey is a standardized survey which is administered to graduating undergraduate and graduate students. Relevant data pertaining to the academic experience are extracted by Institutional Research. Summaries are provided to the College to gauge a level of student satisfaction in key areas. Enrollment data and IDEA Summary data may also be used to
assess student satisfaction. The Office of Institutional Research provides the College of Technology with annual and trended data for further analysis and review.

IV. Promotion of Educational Values

The Academic Affairs Plan further identifies a set of educational values, developed by the Faculty Senate. The plan further states, “these values are actively promoted by faculty and are measured through a Student Alumni Survey and the (NSSE) National Survey of Student Engagement. Individual colleges will provide a status report regarding the Promotion of Educational Values on an annual basis.” (p. 9)

Linkages Beyond the College of Technology: Reporting Results

In assessing outcomes, this plan addresses the four prongs using several measures including both direct and indirect measures. Data reviewed include but are not limited to:

- Course-embedded measures
- GPA reports
- IDEA Forms
- Enrollment data
- Alumni Surveys
- NSSE Data
- Enrollment
- Admissions and Application data
Process

CECRAM data are collected from individual classes and forwarded to College of Technology Program Chairs who review it, ultimately forwarding to the Administrative Coordinator for collating and formatting. Data reporting templates and associated rubrics are posted on the College of Technology Blackboard for faculty use. Reminders of data submissions are sent out at the beginning and end of each block.

For analysis of outcomes data, Program Chairs will Chair/Facilitate an “Outcomes Committee” meeting with select Faculty to review data, Advisory Committee recommendations and/or other direct and indirect measures to assess the need for change and “closing the loop.” Their findings/recommendations will be reported to the Dean. At least two meetings annually will be held, one in the fall to review spring data and one in the spring to review the previous fall data. In addition, Chairs will also present any significant findings or changes resulting from OA to their respective Program Advisory Committees.

The Dean will routinely review IDEA Forms, Institutional Reports, GPA reports and survey findings to assess the College level of performance. The Dean will also review the collated reports prepared by the Administrative Coordinator.

Outcomes assessment is a regular item on the College’s monthly meeting agenda. Examples of “closing the loop,” will also be presented as appropriate. Outcomes findings or recommendations will also be placed on the College Blackboard site and a notice sent to Adjunct Faculty via e-mail to advise them of the site updates as well as posting the College meeting minutes. Chairs will present on respective programmatic OA data at a spring staff meeting.

Annually, the Dean will present the data and findings including any examples of “closing the loop,” for the college at an annual Academic Affairs Outcomes Summit. Each college
presents their summary of the OA process for the year.

Program Review

As outlined in the AAP, academic programs at Wilmington University normally undergo a review process every five years. Programs that are accredited or approved by an external agency may require a different timetable. Programs undergoing the University’s Program Review process are to include a section which reflects an aggregate of the four prongs of the assessment since the last program review was held. Further information on the Program Review Process is outlined in the Academic Affairs Policy Manual.

Program and Graduation Competencies

Student learning outcomes at the University-wide level relate to the achievement of universally accepted Graduation Competencies. These criteria are periodically revisited and reviewed by the University’s Faculty Senate, and endorsed by the Wilmington University administration. At the College of Technology program level, mapping has been developed to depict the tracking and assessment of University’s Undergraduate Graduation Competencies by the College of Arts and Sciences. The College of Technology collects, records, and analyzes assessment data to College of Technology Program Competencies.

Undergraduate Graduation Competencies/Educational Values

In concurrence with the Academic Affairs Assessment Plan, College of Technology courses and curricula will strive to expose students to the following Educational Values:
• Lifelong Learning: Commitment to self-directedness, self-discipline and lifelong learning

• Diversity: Sensitivity to and respect for a pluralistic society

• Collaboration: Awareness of self in relationship to others and the benefits of working in teams

• Creativity: Appreciation of creative expression including the arts and humanities

• Citizenship: Commitment to responsible citizenship as a contributing member of society

• Well Being: Commitment to the holistic health of an individual

• Civility: Commitment to a civil, supportive, and collegial campus environment and beyond

Moreover, through those same curricula, it is intended that College of Technology students earning an undergraduate degree will demonstrate University-level proficiency in the following areas:

**General Education**

**Oral Communication**

• Speak with confidence, clarity, and concisely.

• Research, prepare, and deliver professional presentations.

**Written Communication**

• Write with clarity and precision using correct English grammar: mechanics (punctuation) and usage (sentence structure and vocabulary).

• Correctly and ethically present scholarly writings utilizing the Publication Manual of the American Psychological Association (APA).
Disciplined Inquiry

- Exercise critical thinking strategies, including scientific and quantitative reasoning, problem solving, analysis and evaluation.

College of Technology Academic Program (listed by cognate area)

Students in the Computer and Network Security Program (BS) will be able to:

- Apply the ethical principles required of computer professionals;
- Demonstrate technical knowledge in Information Assurance necessary to prepare for an entry level position in the Computer and Network Security field;
- Analyze requirements for Information Security projects using best practices and current methodologies;
- Employ the process used to analyze, design, implement, test, and deliver Information Assurance projects;
- Demonstrate knowledge of best practices used to manage Computer and Network Security projects; and
- Practice the use and employ the benefit of library resources, including subscription services and other sources generally accepted as legitimate and valid.

Students in the Game Design and Development Program (BS) will be able to:

- Apply the ethical principles required of computer professionals;
- Demonstrate an understanding of the aesthetics of design and its importance in the world of communications and technology;
- Demonstrate personal skills in self-management and problem solving;
• Practice the use and employ the benefit of library resources, including subscription services and other sources generally accepted as legitimate and valid;

• Demonstrate technical knowledge in Game Development necessary to prepare for an entry-level position in the field;

• Analyze requirements for current trends in game development projects using the best practices and current methodologies (systems analysis); and

• Demonstrate knowledge of best practices used in Game Development.

Students in the Information Systems Management Program (BS) will be able to:

• Apply the ethical principles required of computer professionals;

• Demonstrate technical knowledge in Information Technology necessary to prepare for an entry level position in the field;

• Analyze requirements for Information Technology projects using the best practices and current methodologies;

• Employ the Systems Development Life Cycle (SDLC) process used to analyze, design, implement, test and deliver Information Technology projects;

• Demonstrate knowledge of best practices used to manage Information Technology projects; and

• Practice the use and employ the benefit of library resources, including subscription to services and other sources generally accepted as legitimate and valid.
Students in the Media Design Program (BS) will be able to:

- Practice professional and ethical behavior of Media Design professionals;
- Demonstrate an understanding of the aesthetics of design and its importance in the world of communications and technology;
- Demonstrate personal skills in self-management and problem solving;
- Prepare for a position in chosen field through development of a professional portfolio of work; and
- Practice the use and employ the benefit of library resources, including subscription services and other sources generally accepted as legitimate and valid.

Students in the Video and Motion Graphics Program (BS) will be able to:

- Demonstrate the core skill set of video and film-style production techniques;
- Demonstrate an understanding of the pipeline and workflow of Pre-Production, Production, and Post-Production;
- Demonstrate an understanding the process of creating programming from script to screen;
- Utilize the right tools and techniques for any kind of production;
- Develop a higher level core set of skills within Video and Motion Graphics through the production of a demo reel;
- Demonstrate knowledge of best practices for their respective areas of the industry;
- Practice the use and employ the benefit of library resources, including subscription services and other sources generally accepted as legitimate and valid;
- Practice professional and ethical behavior;
• Demonstrate personal skills in self-management and problem solving; and

• Participate in on-the-job preparation for a professional position in his/her chosen career field.

Students in the Web Information Systems Program (BS) will be able to:

• Apply the ethical principles required of computer professionals;

• Demonstrate knowledge in technologies of the web necessary to prepare for an entry level position in the field;

• Analyze requirements for web applications using best practices and current methodologies;

• Practice the Software Development Life Cycle (SDLC) process used to analyze, design, implement, test, and deliver web applications;

• Demonstrate knowledge of best practices used to manage software develop projects for the web (software project management); and

• Practice the use and employ the benefit of library resources, including subscription services and other sources generally accepted as legitimate and valid.

Graduate-level Graduation Competencies

I. Oral Communication

• Speak with confidence, clarity, and conciseness.

• Research, prepare, and deliver professional presentations.
Written Communication

- Write with clarity and precision using correct English grammar: mechanics (punctuation) and usage (sentence structure and vocabulary).

- Correctly and ethically present scholarly writings utilizing the Publication Manual of the American Psychological Association (APA).

II. Disciplined Inquiry

- Effectively apply appropriate processes of inquiry (such as quantitative, qualitative and scientific reasoning) in order to gather and analyze complex issues and construct logical conclusions.

III. Information Literacy

- Access and use information effectively, efficiently, and appropriately.

- Evaluate the quality of sources and content.

- Use technology to effectively locate and communicate information.

IV. Ethics

- Demonstrate knowledge and application of prescribed ethical code(s) and/or behaviors promoted by the profession.

V. Integration Component

- Identify systemic interrelationships.

- Apply a Systems Thinking Approach to identify benefits, disadvantages, and synergies of an Information System.
VI. Business Application

- Synthesize creative solutions recognizing the interdependence of various components in an organizational system.
- Demonstrate the ability to apply various models concerning planning, organizing, controlling, and actuating an informational environment within a modern organization.
COLLEGE OF TECHNOLOGY

OUTCOMES ASSESSMENT PLANNING CYCLE

Year 1: Implement findings from program review

Year 2: Data collection

Year 3: Analysis of data; data collection, analysis and reflection. Report findings and implement recommended action.

A representative sampling of course sections may be utilized for the collection of outcomes assessment data. The Program Chair may adjust the sampling size as necessary. The following guidelines have been established for representative sampling:

- As a goal, data collection should be statistically meaningful;
- Data will be collected from all course sections if seven or fewer sections are offered in a data collection year (or 100 students). Where there are eight or more sections offered, sampling will be collected on a random basis.
- All University sites and instructional formats (face to face, hybrid, distance learning, etc.) will be included. Data from various course delivery formats and geographical sites should be compared periodically for consistency.

Guidelines for Benchmarks (AAP 2011)

The following guidelines have been established for summative assessments and are included in the AAP. COT benchmarks are noted in italics:

- The benchmark for program/graduation competencies should be recorded as a mean score.
- The benchmark for rubric-based assignments at the graduate level is a mean of
4.00. The target for rubric-based assignments for undergraduate programs is a mean of 3.00.

- For data reported as percentage (e.g., comprehensive examination scores), the target for graduate level programs is a mean of 90%. For undergraduate programs reporting data as percentage, the target is a mean of 80%.

- The benchmark for teaching effectiveness, as measured by the IDEA results, is that Wilmington University will score at or above the national norm.

- The benchmark for student satisfaction with the academic experience, as measured by ACT University Outcomes surveys, is that Wilmington University will score at or above the national norm. Benchmarks for items from the NSSE are set by Academic Affairs.

- Benchmarks can be changed over time based on reflection upon assessment results.

- College of Technology Chairs may adjust their benchmarks (cannot go lower than the standard) to meet programmatic standards, accreditation/certification parameters or industry standards. Chairs may use a 5 point scale or percentage as long as it can be related and is consistent with the AAP plan benchmarks.
Instructors report CECRAM Data to Program Chairs via prepared reporting templates

Program Chairs review raw CECRAM data and forward to senior admin

Data Reports are summarized and reported to Program Chairs and Institutional Research at the end of each semester

Summary Reports Compiled: CECRAM, Enrollment, GPA and IDEA

Analyzed by Program Faculty (led by Chairs); recommendations forwarded to Dean

Dean reviews all summary data reports and closing the loop actions

OA Process Reviewed; Necessary changes implemented; Process begins again.
Definitions

**Formative Assessment:** According to the Middle States Commission on Higher Education (2006), “formative assessment is ongoing assessment that is intended to improve an individual student’s performance” and “is used internally, primarily by those responsible for teaching a course or developing a program” (p. 27). Course-embedded outcomes assessment conducted in some or all courses is done to improve the course content, provide feedback to faculty and program administrators, assist faculty to integrate the concept of outcomes assessment as a routine part of their instruction, and provide consistent evaluation parameters that will inform both students and faculty of expectations. Formative assessment results are the purview of the academic program and College and are not reported at the University level although the program may track the information.

**Summative Assessment:** Assessments at this level are intended to provide a true gauge of “outcomes” of the students’ experiences at the University. Results are used to evaluate the extent to which program goals have been achieved. Summative data are generally collected in one to four courses near program completion (except for College of Arts and Sciences courses). Each program includes course-embedded assessments that are conducted in selected courses throughout the program of study. Each course-embedded project, test, portfolio, or other student learning experience may assess several program competencies.

**Direct Evidence:** Direct evidence of student learning indicates whether or not a student has a command of a specific subject content area, can perform a certain task, exhibit a particular
skill, demonstrates a certain quality in his/her work, or hold a particular value (Middle States, 2006). Examples of such measures include course homework assignments, term papers and reports, rubrics, research projects, etc. at the course level as well as capstone projects, employer or supervision ratings of student performance at the program level.

One primary method of assessment of student learning is through course-embedded criterion-referenced assessment measures (CECRAM). This approach was developed by consensus of the Vice President for Academic Affairs and all College Deans in the year 2000. CECRAM is typically implemented through grading rubrics that are designed to explicate each criterion to be assessed and an explanation of the product at each performance level from 1 (unsatisfactory) to 5 (excellent). All Colleges employ a five-point rubric. Each program is expected to measure at least one program competency with a rubric (except where external accreditation requires a variation).

Additional direct methods are used to assess student learning outcomes which may include:

- Exams with embedded questions (generally used for science or math courses that may be measured on a percentage scoring system),
- Clinical evaluations (generally but not always used in conjunction with a rubric in programs such as nursing and education), and
- Standardized comprehensive exams.

**Indirect Evidence:** Indirect evidence of student learning is correlational -- meaning that data exist which indicate that students are probably learning, but the evidence is less clear than evidence from direct methods (Suskie, 2009). As a result, indirect evidence should not be the
only means of assessing outcomes (Middle States, 2006). Examples of indirect methods at the course level include course grades, as well as the time spent on service learning or homework. At the program level, employer or alumni surveys, student perception surveys, and graduate school placement are some examples of indirect evidence.

**Graduation Competencies:** Critical outcomes of the academic experience have been developed by the Faculty Senate and are called competencies (See Appendix B: Graduation Competencies).

The undergraduate competencies are subdivided into *general education* and *academic program* competencies. The general education competencies will be assessed primarily by the College of Arts and Sciences with the specific academic program assessing the program competencies. The graduate level competencies are assessed at the program level. Each academic College has developed a written outcomes assessment plan that lays out the assessment process for each program. In this plan, the terms, *University level proficiency*, and *advanced level* pertain to the graduation competencies. In addition, an ad hoc Faculty Senate Committee on Information Literacy developed a rubric for use by all academic programs to assess Information Literacy.

Student learning outcomes, as reported at the University level, relate to the achievement of the graduation competencies. At the program level, *mapping* identifies the linkage of graduation competencies, program competencies, course objectives, and assessment measures.

*Source: Wilmington University Academic Affairs Assessment Plan 2009*
References


