Auburn University’s Institutional Effectiveness Report Preparation:

Educational Programs

September 24-25, 2014
Institutional Effectiveness

CR 2.5
The institution engages in ongoing, integrated, and institution-wide research-based planning and evaluation processes that (1) incorporate a systematic review of institutional mission, goals, and outcomes; (2) result in continuing improvement in institutional quality; and (3) demonstrate the institution is effectively accomplishing its mission. (Institutional Effectiveness)

CS 3.3.1
The institution identifies expected outcomes, assesses the extent to which it achieves these outcomes, and provides evidence of improvement based on analysis of the results in each of the following areas: (Institutional Effectiveness)
3.3.1.1 educational programs, to include student learning outcomes
3.3.1.2 administrative support services
3.3.1.3 academic and student support services
3.3.1.4 research within its mission, if appropriate
3.3.1.5 community/public service within its mission, if appropriate
Welcome to Auburn University’s Institutional Effectiveness Site

News and Announcements

The Office of the Provost and the University Assessment Council announce the availability of small grants in support of efforts to improve the assessment of student learning and the use of assessment results to promote academic achievement. The goal of these grants is to encourage academic programs to engage in sound learning assessment practices. Initiatives funded by these grants will also serve as models for other programs. Click here for application guidelines.

Click here to submit a 2013-14 assessment report for your program or unit.

To begin a report for your unit, please click on “My Dashboard” in the navigation menu, then on the “Effectiveness Report” tab. On the new screen, select your program or unit from the expandable Auburn University organization chart in the left-hand navigation panel, and then click on “New Item.” Click here for step-by-step list of instructions for completing 2014 assessment report.

The Office of Institutional Research and Assessment offers training sessions to assist those preparing assessment reports. Four sessions have been scheduled for September 2014, with two equivalent sessions for educational programs and one session each for administrative and academic/student support units:

- Academic and Student Support Units: Tuesday, September 23 at 10:00 a.m.
- Administrative Support Units: Tuesday, September 23 at 2:00 p.m.
- Educational Programs: Wednesday, September 24 at 2:00 p.m.
- Educational Programs: Thursday, September 25 at 2:00 p.m.

All training sessions will be held in 105 Rouse Life Sciences Building and will last approximately one hour. Seating is limited to 20 participants. To reserve a seat, email OIRA@auburn.edu.
### My Dashboard - Planning Items

**Table Filtered By:** Year: 2014-2015
- Expected Outcomes, Summaries

#### Select Items
- **Year:** 2014-2015
- Options:
  - Expected Outcomes
  - Summaries

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**My Roles**

- Assoc. Provost & VP Research
- Assoc. Provost Diversity & Multicultural Affairs
- Assoc. Provost Undergraduate Studies
- Associate Provost
- Asst. VP University Outreach
- College of Agriculture
- College of Architecture, Design & Construction
- College of Business
- College of Education
- College of Human Sciences
- College of Liberal Arts
- College of Sciences & Mathematics
- College of Veterinary Medicine
- Graduate School
- **Institutional Research & Assessment**
- James Harrison School of Pharmacy
- Office of Institutional Research

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**Effectiveness Rep...**

- Assessment Reports

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**Student Affairs St...**

- Budget

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**Roles**
Learning Outcomes

What is a student expected to demonstrate in terms of knowledge and skills upon completion of a program?

Outcomes should be program specific, detailed and measurable:

Students will be able to explain the role of proper nutrition in poultry growth efficiency, including the functions and deficiency signs of amino acids, minerals, and vitamins.

- Poultry Science – Pre-Vet/Production, BS
Importance of Action Verbs

• Graduates will master the basic principles of at least one topical area within the field of ..., and understand how these principles are applied to solve advanced problems.
Examples of Student Learning Outcomes

• Interior Architecture students will demonstrate proficiency with the graphic representation of an interior architecture project through use of drawings, models, and other media.
  
  Interior Architecture, BIAR

• Students will demonstrate the ability to select treatment material, modify treatment objectives, provide reinforcement/feedback and manage time during their clinical practicum.
  
  Communication Disorders, BS

• By the time of graduation from the program, graduates of the Electrical Engineering (ELEC) Program will have achieved and demonstrated an ability to design and analyze a component or system to meet desired needs within the field of electrical engineering.
  
  Electrical Engineering, BEE
Properties of Good Assessment Techniques

- Valid—directly reflects the learning outcome being assessed
- Reliable—especially inter-rater reliability when subjective judgments are made
- Actionable—results help faculty identify what students are learning well and what requires more attention
- Triangulation—multiple lines of evidence point to the same conclusion

Source:
Assessment Method Examples

Assessment Methods

Direct
- Scoring guide or rubric
  - Test

Indirect
- Survey
  - Interviews
## Scoring Guide or Rubric

Rank the following from 1 to 4 with 4 being the highest score.

<table>
<thead>
<tr>
<th>Measures</th>
<th>4 Advanced</th>
<th>3 Proficient</th>
<th>2 Basic</th>
<th>1 Little or None</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The student demonstrates appropriate musicianship.</strong></td>
<td>The student is expertly effective in demonstrating appropriate musicianship.</td>
<td>The student is consistently effective in demonstrating appropriate musicianship.</td>
<td>The student is generally effective in demonstrating appropriate musicianship.</td>
<td>The student is inconsistent and/or only somewhat effective in demonstrating appropriate musicianship.</td>
</tr>
<tr>
<td><strong>The student demonstrates appropriate technical proficiency.</strong></td>
<td>The student is expertly effective in demonstrating appropriate technical proficiency.</td>
<td>The student is consistently effective in demonstrating appropriate technical proficiency.</td>
<td>The student is generally effective in demonstrating appropriate technical proficiency.</td>
<td>The student is inconsistent and/or only somewhat effective in demonstrating appropriate technical proficiency.</td>
</tr>
<tr>
<td><strong>The student demonstrates appropriate tone quality.</strong></td>
<td>The student is expertly effective in demonstrating appropriate tone quality.</td>
<td>The student is consistently effective in demonstrating appropriate tone quality.</td>
<td>The student is generally effective in demonstrating appropriate tone quality.</td>
<td>The student is inconsistent and/or only somewhat effective in demonstrating appropriate tone quality.</td>
</tr>
</tbody>
</table>
Summarizing and Analyzing Assessment Results: Using a Rubric to Produce Both Grades and Assessment Data

<table>
<thead>
<tr>
<th>Students</th>
<th>Dimensions</th>
<th>Mean Score and Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Central Argument</td>
<td>Supporting Evidence</td>
</tr>
<tr>
<td>John Adams</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Mary Allen</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Collin Jones</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Average Score</td>
<td>4.0</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Grades**

**Assessment data**

**Strength**

**Weakness**
Findings Based on Rubric

<table>
<thead>
<tr>
<th>Measures</th>
<th>BM (6)</th>
<th>BA (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Musicianship</td>
<td>2.98</td>
<td>2.76</td>
</tr>
<tr>
<td>Technical Proficiency</td>
<td>2.88</td>
<td>2.48</td>
</tr>
<tr>
<td>Tone Quality</td>
<td>3.12</td>
<td>2.64</td>
</tr>
</tbody>
</table>
Advantages of Objective Assessments

- Students can provide a great deal of information on a broad range of learning goals in a relatively short time.

- Objective assessments encourage broader—albeit shallower—learning than subjective assessments because of their efficiency.

- Objective assessments are fast and easy to score.

- Objective assessment results can be summarized into a single number.

# Summarizing and Analyzing Assessment Results

**Biology Test Results Mapped Back to the Test Blueprint**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Test Items Addressing This Learning Goal</th>
<th>Average Proportion of Students Answering These Questions Correctly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scientific method</td>
<td>4, 7, 11, 12, and 15</td>
<td>80%</td>
</tr>
<tr>
<td>Key Vocabulary</td>
<td>1, 3, 6, 8, and 9</td>
<td>84%</td>
</tr>
<tr>
<td>Quantitative reasoning</td>
<td>2, 5, 10, 13, and 14</td>
<td>48%</td>
</tr>
</tbody>
</table>

Summarizing and Analyzing Test Results

*Mathematics Test Results Mapped Back to the Test Blueprint*

<table>
<thead>
<tr>
<th>Topics</th>
<th>Test Items Addressing This Learning Goal</th>
<th>Average Proportion of Students Answering These Questions Correctly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real Number System</td>
<td>1 and 2</td>
<td>60%</td>
</tr>
<tr>
<td>Topology of Cartesian Spaces</td>
<td>3 and 4</td>
<td>60%</td>
</tr>
<tr>
<td>Convergence of Sequences</td>
<td>5, 6, and 7</td>
<td>53%</td>
</tr>
<tr>
<td>Elementary Proof Techniques</td>
<td>8, 9 and 10</td>
<td>35%</td>
</tr>
</tbody>
</table>
Assessment Methods

- Assessment method should be clearly linked to an outcome.
- Assessment method description should be detailed and include the time period when the assessment took place, number of students who participated, and the description of an instrument:

  In a required capstone course in spring of 2012, 25 seniors completed a product development project. Their assignment was to transmute one metal into another and to write a full report, including technical appendices that demonstrated their ability to use alchemical methods, to transmute one metal into another, and to present their findings in writing. Project reports were scored by the department’s Undergraduate Studies Committee, using a rubric that scores students’ ability to apply alchemical methods, transmute one metal into another and to present their findings in writing on a scale from 1-beginning to 3-exemplary. Rubric is enclosed. Student-level scores were aggregated to determine typical strengths and weaknesses.

- In cases when the number of students is rather small, one can combine several years of data.
Student Surveys

• Do not limit the survey instrument to global item(s), such as:
  • I would rate the overall effectiveness of … as: (1) poor; (2) fair; (3) good; (4) excellent.

• Include open-ended questions

• Avoid the following question formulation mistakes:
  • Ambiguous or imprecise questions, such as:
    • My friends often use campus recreation facilities: (1) yes; (2) no; (3) do not know
  • Two questions in the same question
    • The advisor I saw was friendly and helpful.
  • Questions that presume a particular answer
    • Wouldn’t you like to receive our free brochure?
  • Questions where a respondent does not have needed information
    • Do you agree with the university’s current residency requirement?
University-wide Surveys

- **Exit Survey**: administered each semester among graduating seniors 3-4 weeks prior to the end of classes

- **Alumni Survey**: administered among first-time bachelor degree recipients 4 years after graduation

- **Survey of Graduating Graduate Students**: administered among graduate students, when they apply for graduation

- **National Survey of Student Engagement (NSSE)**: administered each Spring semester among freshmen and seniors
Findings

• Findings would ideally provide information about common strengths and weaknesses. It is insufficient to provide one number or grade distributions for all students:

  95% of students were satisfied with their educational program.
  80% of students received grades of an “A” or a “B.”

• When rubric is used, one can use averages for each dimension that measures an outcome.

• When test is used, test subscores or the percentage of correct answers for each test item can be used.
Use of Findings for Improvement

Improvements should be linked to findings.

Examples:

• The learning outcome consistently scoring the lowest is: Organize LEED Green Building activities. A new one credit hour class called Introduction to Sustainable Construction was introduced into the program in Fall 2012. Students taking this class will complete exit surveys in Spring 2014.

  (Building Science, BS)

• Based on students weaknesses in theory and methods, number of options were discussed during the Spring 2012 meeting: (1) requiring STAT 2010 or SOCY 3700 as a pre-requisite for all senior-level courses; (2) requiring that the theory course be completed prior to enrollment in SOCY 4800.

  (Sociology, BA)
Assessment Report Due Date:
October 15, 2014