**STUDENT LEARNING ASSESSMENT PROGRAM**  
**SUMMARY FORM AY 2007-2008**  

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<tr>
<th>Degree and Program Name:</th>
<th>B.S. in Industrial Technology</th>
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<td>Submitted By:</td>
<td>Dr. Wafeek Wahby</td>
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**PART ONE:**

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<th>What are the learning objectives?</th>
<th>How, where, and when are they assessed?</th>
<th>What are the expectations?</th>
<th>What are the results?</th>
<th>Committee/ person responsible? How are results shared?</th>
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</table>
| 1. Demonstrate ability to Identify mechanical behavior associated with industrial materials. | Instructors evaluate students’ performance of lab activities requiring the destructive and nondestructive testing of materials to standards adopted by the American Society of Testing and Materials. INT 4002: Materials Testing. | Students are expected to identify the mechanical, physical, and chemical behaviors of industrial materials by successfully inspecting materials to national standards and performing 8 laboratory experiments related to the destructive and nondestructive testing of metals and nonmetals then reporting their findings in a format that is based on technical reporting guidelines that are accepted by academic discipline and industry. | Spring 2007: Twenty students enrolled in INT 4002, of which nineteen successfully completed the lab activities and submitted technical reports prepared to guidelines that meet academic and industry standards.  
Fall 2007: Twenty students enrolled in INT 4002, of which twenty successfully completed the lab activities and submitted technical reports prepared to guidelines that meet academic and industry standards. | The technical reports and the lab procedures will be evaluated by the instructors to determine level of student performance. The technical reports will also be used as part of student portfolios that include samples of students’ writing, which also are incorporated in the employment interview process. Data is collected and analyzed by faculty members and shared with IT Program Committee, and The SoT Curriculum Committee. |

Please complete a separate worksheet for each academic program (major, minor) at each level (undergraduate, graduate) in your department. Worksheets are due to CASA this year by **June 13, 2008**. Worksheets should be sent electronically to cskjs@eiu.edu and should also be submitted to your college dean. For information about assessment or help with your assessment plans, visit the Assessment webpage at [http://www.eiu.edu/~assess/](http://www.eiu.edu/~assess/) or contact Karla Sanders in CASA at 581-6056.
<p>| 2. Demonstrate quality management concepts. | 1. By taking appropriate action of “acceptance or “rejection” when testing multiple batches of product samples according to established acceptance levels. (INT 4843) 2. Expressing/Displaying/Charting data representative of process parameters and determine if responsible industrial process is “in-control” or “out-of-control.” (INT 4843) 3. By designing the appropriate sampling technique in order to meet the quality requirements of a particular business (INT 4843) | 1. The final exam covers the three basic principles of the above column, Successfully passing the final exam (Grades A, B or C ) is one good indication of students’ understanding of the underlined quality principles. 2. Weekly HW activities provide the students a good opportunity to expand and apply knowledge related with the above principles 3. Laboratory activities provide a “hands on” experience with professional software and professional metrology tools. Successfully getting good grades in laboratory and HW (A, B or C) is a good indication of the student’s understanding the underlined quality principles. 4. Each student has to build a portfolio with homework, exams, class activities, and lab reports. The portfolio reflects homework and exam problems failed and their correct solution. | Spring 2007: Out of 26 students, 4 exceeded the expectations, 14 met the expectations, and 8 did not meet the expectations. Fall 2007: Out of 19 students, 3 exceeded the expectations, 11 met the expectations, and 5 did not meet the expectations. | 1. Data is collected and analyzed by faculty members 2. Data is shared with IT program committee 3. Exams, Quizzes and HW are classified by content area and analyzed in order to find out the weakest areas at which student performance shows poor performance 4. The SoT Curriculum Committee conducts course revisions for continuing improvement. |</p>
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<th>Task</th>
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<td>3. Demonstrate effective technical writing skills.</td>
<td>Students are required to report their findings, related to laboratory experiments involving the testing of materials for mechanical properties, in a discipline and industry accepted format for technical report writing. INT 4002 Materials Testing. Students’ technical laboratory reports are evaluated using grading rubric that corresponds to the Laboratory Report Guidelines document that they are given during the first week of class. Each laboratory report is worth 100 points and must conform to the form and format described in the document titled “Laboratory Report Guidelines”. Each report must include the following: Title Page; Abstract; Introduction; Theory; Laboratory Equipment, Materials and Procedures; Results and Discussion; Conclusions; References; and Tables, Figures and Graphs. Technical report writing guidelines have been developed for the preparation of technical reports of experiments required in INT 4002 Materials Testing. Evaluation criteria for these reports have been established based on these guidelines. Students must apply guidelines. Eight technical reports on experiments involving the destructive and non-destructive testing of materials were completed and met the criteria listed in Guide to Lab Evaluation Criteria which was distributed to students early in the term. Spring 2007: Twenty students enrolled in INT 4002, of whom twenty successfully completed the lab activities and submitted technical reports prepared to guidelines that meet academic and industry standards and one student dropped the class during the drop period. Fall 2007: Twenty students enrolled in INT 4002, of whom twenty successfully completed the lab activities and submitted technical reports prepared to guidelines that meet academic and industry standards. The 8 technical reports in INT4002 Materials Testing represent 60% of the course evaluation. These reports are evidence of proficiency in conducting tests of mechanical properties to national standards and proficiency in technical report writing. Data is collected and analyzed by faculty members and shared with IT Program Committee, and The SOT Curriculum Committee.</td>
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<td>4. Demonstrate ability to spatially visualize objects and ability to use CAD software.</td>
<td>By creating a solid model/pictorial drawing from a given multi view/orthographic projection of an object, and vise versa using both the manual method and CAD software. Students are given 6 complex projects to create using CAD principles. One Mid-term examination and Final examination are given. (INT 2043). Students are expected to achieve 100% performance on all class work and tests. 90% Exceeded expectations (grade of A) 10% Met expectations Data is collected and analyzed by faculty members and shared with IT Program Committee, and The SoT Curriculum Committee. Curric-ulum revisions for cont-inuing improvements.</td>
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<td>5. To demonstrate promising ability for future technical managerial decision-making.</td>
<td>Instructor evaluated students’ performance on homework/in-class assignments and examinations. (INT 4943)</td>
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<td>6. Demonstrate ability to apply engineering principles.</td>
<td>Using reference materials, drafting techniques and formulas, students learn spatial relationship to determine size, shape, and geometry of objects through isometric, orthographic, and perspective drawing techniques. (INT 1012)</td>
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**PART TWO:**

Describe what your program’s assessment accomplishments since your last report was submitted. Discuss ways in which you have responded to the CASA Director’s comments on last year’s report or simply describe what assessment work was initiated, continued, or completed.

- Monitoring employment opportunities through EIU Career Services, Career Days, and industry recruiters. This is also done through input from critical industrial sources such as the Technology Advisory Board, Industrial Technology graduates, industrial employers of Industrial Technology graduates, professional organizations, National Association of Industrial Technology (NAIT), and constant faculty contact with industries.
Faculty members have been constantly working to ensure that the curriculum of the IT program is relevant to effectively serve the interests and fulfill the needs of both our students and the organizations that employ them locally, regionally, and nationally. This includes revising existing courses and adding new topics to their contents to keep them at the cutting edge in the ever-changing technological applications, dropping courses that no more serve the learning objectives of the curriculum due to technological progress and market needs, and developing new courses to cover new areas of technology.

- Enhancing in-class, in-lab instructional resources, implementing new methods of delivery, and maintaining on-line, technology assisted, and technology enhanced courses.
- Students who do not meet expectations are identified, given special attention and assistance, and sometimes directed to take other complementary studies or courses to help upgrade their learning.
- Bringing real-life experiences to students through organizing plant tours and field trips to manufacturing facilities and construction sites, inviting guest speakers from industry, and holding special seminars and workshops.
- Organizing hands-on training workshops where tradesmen would come and offer their experiences to students and have them do what they learn under their supervising.
- Creating new faculty positions and hiring new faculty members.
- Upgrading labs and computer labs through available budgets or through gifts from industry.
- Sponsoring student chapters and providing free memberships in professional societies.
- Fostering students’ oral presentations and technical writing in classes.
- Sponsoring projects such as Undergraduate Research Publications.
- Facilitating students’ industrial internships.
- Continuing to develop instructional methods and tools such as Show And Tell And Let Apply (SATALA) utilizing available software to enhance the learning process.

PART THREE

Summarize changes and improvements in curriculum, instruction, and learning that have resulted from the implementation of your assessment program. How have you used the data? What have you learned? In light of what you have learned through your assessment efforts this year and in past years, what are your plans for the future?

The following are some changes and improvements in curriculum, instruction, and learning that have resulted from the implementation of the IT assessment program. They include, but are not limited to:

- The curriculum is subject to ongoing revisions that include updating existing courses, eliminating those which may become irrelevant to the job market needs, and adding new ones that better serve the graduates’ career goals as well as the job market needs. This includes both of course content and delivery method.
- The special Undergraduate Research Publications project using research as a teaching tool was pursued.
• New lab equipment were acquired to enhance the hands-on experiences of students and more contributions to support lab equipment will be sought.
• More industry-academia collaboration will be cultivated.
• Establishment of student scholarships will be encouraged.