STUDENT LEARNING ASSESSMENT PROGRAM SUMMARY FORM AY 2004-2005

Please complete a separate worksheet for each academic program (major, minor) at each level (undergraduate, graduate) in your department. Worksheets are due to CASA annually by **June 15**. Worksheets should be sent electronically to cskjs@eiu.edu. For information about assessment, visit the Assessment webpage at http://www.eiu.edu/~assess/.

Degree and Program Name: B.S. in Industrial Technology

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PART ONE:

What are the learning objectives?	How, where, and when are they assessed? Committee/person responsible?	What are the expectations?	What are the results?	How will/have the results be used? Committee/ person responsible?
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 behaviors of industrial materials by successfully inspecting materials to national standards and performing 7 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 2004: Thirty-five students enrolled in INT 4002, of which thirty-four successfully completed the lab activities and submitted technical reports prepared to guidelines that meet academic and industry standards. Fall 2004: Twenty-nine students enrolled in INT 4002, of which twenty- nine 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.

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. 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	20 out of 31passed the exam, and exceeded the expectations, 11 students 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.
3. Demonstrate effective technical writing skills.	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	Technical report writing guidelines have been developed for the preparation of technical reports of experiments required in INT 4002 Materials Testing. Evaluation criteria for	Seven 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	The 7 technical reports in INT4002 Materials Testing represent 80% of the course evaluation. These reports are evidence of proficiency in conducting tests of mechanical properties to national

	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.	these reports have been established based on these guidelines. Students must apply guidelines.	to students early in the term. Spring 2004: Thirty-five students enrolled in INT 4002, of whom thirty-four 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 2004: Twenty-nine students enrolled in INT 4002, of whom twenty-nine successfully completed the lab activities and submitted technical reports prepared to guidelines that meet academic and industry standards.	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.
4. Demonstrate ability to spatially visualize objects and ability to use CAD software.	By creating a 3D model/pictorial drawing from a given multi view/orthographic projection of an object, and vise versa using both the manual method and CAD software. (INT 2043)	Students correctly solve 70% of such problems presented to them via assignments (class work and homework), and exams.	24% Exceeded expectations 75% met expectations 1% Did not meet expectations.	Data is collected and analyzed by faculty members and shared with IT Program Committee, and The SoT Curriculum Committee. Curriculum revisions for continuing improvements.
5. To demonstrate promising ability for future technical managerial decision-making.	Instructor evaluated students’ performance on homework/in-class assignments and examinations. (INT 4943)	Students are expected to solve problems and apply managerial theories to case study & true life managerial	Out of 40 students, 12 students (30%) exceeded expectations (earned Grade A), 25 students (63%) met expectations (earned Grades	Data is collected and analyzed by faculty members and shared with IT Program Committee, and The SoT Curriculum

		experiences. This includes abstract review, tests, and examinations.	B & C), 3 students (7%) did not meet expectations (earned Grades D & F)	Committee. Continuing improvement for the course will be generated both by faculty and student input.
6. Demonstrate ability to apply engineering principles.	By selecting components for a machine using appropriate formulas and engineering reference materials. (INT 3703)	Written tests are given to students for design of a new machine where they should calculate and select appropriate machine components in order to have the most efficient and cost effective at the best quality design level. Students that are able to calculate and select the right components at least 65% correct are considered at a satisfactory level.	Spring 2004: Out of 13 students, 6 students exceeded expectations (Grade A), 6 students met expectations (Grade B, C & D), and 1 students failed (Grade F). Fall 2004: Out of 23 students, 6 students exceeded expectations (Grade A), 14 students met expectations (Grade B, C & D), one student failed (Grade F), and one student withdrew.	Data is collected and analyzed by faculty members and shared with IT Program Committee, and The SoT Curriculum Committee. Curriculum revisions for continuing improvements.

PART TWO:

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:

- Enhancing in-class, in-lab instructional resources, implementing new methods of delivery, and maintaining on-line, technology assisted, and technology enhanced courses.
- Acquiring new graphic equipment for the Digital Printing, Imaging, and Web Technology Technical Concentration.
- Adding computer station and LCD projection system to the conference room for guest speakers and general presentations.
- Enhancing the Robotics Lab by adding 20 computer stations, PLCs, routers, PDA for wireless learning experience.
- Two automated SPC systems were purchased for quality related courses. The systems allow operator to feed data directly into the computer system after a measurement is completed. The SPC software will display raw data, histogram and control charts. This is a production control system, in which control limits will be automatically established according to the data collected. It improves the efficiency of process control operation and eliminates errors source for data transfer.

- International visiting professors provide insight to international relations for technology students, bring new ideas and procedures to the School of Technology, offer students the opportunity to associate with international individuals, and broaden the faculty's knowledge of international technology. Several visiting professors in the School of Technology for the past several years. The various international experiences those scholars brought to the School of Technology remarkably enriched the learning experience.
- Administering field trips, inviting guest speakers, and holding special seminars and workshops.
- Pursuing the special Undergraduate Research Publications project using research as a teaching tool.
- 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.
- To better serve the needs of industry, the names and contents of the Electronics and the Graphic Communication concentrations were revised and they became Automation and Control, and Digital Printing, Imaging, and Web Technology, respectively.
- The Manufacturing Option of the program and the General Concentration of its General Option were phased out due to continual drop in the number of students enrolled in Manufacturing Option over the past years and the fact that a majority of IT students that are interested in manufacturing have elected to enroll in the Production Concentration of the IT major. Elimination of the Manufacturing Option allowed for reallocation of resources and did not eliminate related courses, which are elected by the Production Concentration.
- 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. More than 95% of the 47 Industrial Technology alumni (1990-2002 graduates) responding to a recent graduate survey (2004) indicated that they are employed full-time and 87 % are employed in their IT field of study.
- Creating new faculty positions, hiring new faculty members and creating the position of Assistant Chair.
- The increase in the IT program enrollment from 143 to 175 during the past five years (over 22%) demonstrates that the program is serving the interests and needs of people in the region. 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. Program improvement included phasing out the Manufacturing Option, and the General Concentration of its General Option.
- The 2005 IBHE Review Report for the Industrial Technology program was the only one in the fifteen reports submitted that did not need revisions in assessment.