TECHNICAL DEPARTMENT
STUDENT LEARNING ASSESSMENT PLANS & REPORTS
SPRING 2009 REPORT

During the fall 2007 and spring 2008 semesters the Coordinators for the 13 programs in the Technical Department were asked to develop assessment plans to assess student learning in their programs. During the 1 year period following the developed plan submittals empirical data was gathered to support the plans and in the fall of 2008 a series of annual reports were developed and submitted to the Student Learning Committee for posting on their Web site.

The table below is a roll-up of the Technical Department’s efforts to date regarding Student Learning plans and assessed outcomes.

Table 1 - Yearly Assessment Plans & Reports

<table>
<thead>
<tr>
<th>PROGRAM</th>
<th>Plan Submittal</th>
<th>Posted 1/19/09</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture / Engineering / Construction</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Automotive Service Technology</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Computer Aided Design &amp; Drafting</td>
<td>YES (2)</td>
<td>YES (2)</td>
</tr>
<tr>
<td>Criminal Justice Studies</td>
<td>YES</td>
<td>INTERIM</td>
</tr>
<tr>
<td>Law Enforcement</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Electrical / Electronics Automated Systems Technology</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>Electronics Engineering Technology</td>
<td>NO</td>
<td>NO</td>
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<tr>
<td>Heating, Ventilation &amp; Air Conditioning</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>Industrial Maintenance Technology</td>
<td>YES</td>
<td>NO</td>
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<tr>
<td>Mechanical Production Technology</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Precision Machine Technology</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>Orthotics &amp; Prosthetics Technology</td>
<td>YES (2)</td>
<td>YES (2)</td>
</tr>
<tr>
<td>Process Control &amp; Instrumentation Technology</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>Welding &amp; Metal Fabrication</td>
<td>YES</td>
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</tbody>
</table>

For reference purposes each of the reports submitted to the committee on January 19th of this year are attached for your review. A check this morning of the committee’s Web site (http://www.jjc.edu/about/committees/student-learning/Pages/technical.aspx) revealed that the yearly reports have not been posted as of this writing. I will be working with the committee to assure that our work becomes an official record of the school.

A sincerely thank you to program Coordinators who supported the committee’s work on the important task of assessing student learning. In just a few short years the Technical Department’s support the important task of assessing student learning has grown from 7% to 54% involvement!
PLAN 1: CADD PROGRAM PLAN: SCOTT BOUDREAU

Student Learning Outcome: Master electronic scaling methods in both paper space and model-space drawing environments

Program Goal: 75% of all students will be proficient with the appropriate skill level for developing electronically scaled design drawings.


Who is the lead Instructor? Scott Boudreau

Why was this process selected? Over the years many companies have relied upon drawings that were created using “model-space” methods. Our students need this critical skill to perform well on their jobs.

How will student learning be measured? Using a series of written and practical application exams an average score will be obtained for each student learning this skill level.

What approach will be used? Lecture, quizzes, worksheets, practice and final exams on this specific topic will be administered.

When will data collection be collected? Each semester.

Who will analyze the results? Each Instructor will assess their student’s attainment of this skill level.

PLAN 2: CADD PROGRAM PLAN: SCOTT BOUDREAU

Student Learning Outcome: Successful completion of the a preparatory AutoCAD Certification Exam

Program Goal: 70% of all CAD students will achieve a 70% or higher on the exam.

Assessment Process: Using an industry standard AutoCAD Certification Exam for written and drawing assessments.

Who is the lead Instructor? Scott Boudreau

Why was this process selected? Over the years many companies have relied upon written examinations to determine the credibility of a student’s skill level during the interview process.

How will student learning be measured? Using a series of written and practical application exams an average score will be obtained for each student learning this skill level. The AutoCAD Certification Practice Exam will be the main assessment tool used for this student learning assessment.

What approach will be used? Lecture, quizzes, worksheets, practice and final exams will be administered throughout the seminar to prepare the student’s for taking the typical AutoCAD Certification practice exam.

When will data collection be collected? Each semester.

Who will analyze the results? Each Instructor will assess their student’s attainment of this skill level.

REPORT: Fall 2008

<table>
<thead>
<tr>
<th>STUDENT LEARNING ASSESSMENT REPORT</th>
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<tbody>
<tr>
<td>CADD PROGRAM</td>
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<tr>
<td>ACADEMIC YEAR</td>
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<tr>
<td>----------------</td>
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<tr>
<td>FL05 - SP06</td>
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<tr>
<td>FL06 - SP07</td>
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<td>FL07 - SP08</td>
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<td>FL08</td>
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PLAN: AUTOMOTIVE SERVICE TECHNOLOGY PLAN – LYNN GRAF

Student Learning Outcome: Our students are required to demonstrate, to an instructor as the work is being performed, a mastered level rating of tasks listed within a blue task competency card, (Please see the attached blue task competency card).

Program Goal: The student is required to achieve a minimum of 85% of all listed tasks at the master's level on that blue competency card.

Assessment Process: The lead instructors will be Tim Airney, Lynn Graf and Jim Coleman. The student learning will be measured by instructor observation and evaluation while the student is performing a particular task listed on the blue task competency card. The approach is for the student to repeat a particular task until he or she feels confident that they are performing that mechanical process correctly. Then the student will ask an instructor to observe either the process while being performed or the end result after the task completion. Immediately feedback will be given to the student at the time of the observation. Data will be collected on a daily basis and recorded on each student’s blue task competency card. The results, when compiled, will be analyzed collectively by the 3 automotive instructors at the end of each semester.

Who is the lead Instructor? Lynn Graf

Why was this process selected? The process is part of an on-going 5 year automotive service NATEF program certification.

How will student learning be measured? Learning will be measured by one on one observations of task completion.

What approach will be used? A rating scale is assigned to all tasks required. The scale is as follows 0, no experience/knowledge 2, unsuccessful attempt 3, partial demonstration 4, repetitive demonstration, and 5, mastered.

When will data collection by collected? At the end of each day and again, comprehensively, at the end of each semester.

Who will analyze the results? The instructors and the student.

REPORT: (Fall 2008)

The assessment of the automotive students is an ongoing process. The lists of tasks required under our NATEF program certification are such that a student must master at least 80% of all prescribed tasks.

At the Freshmen Level: These students are in the process of completing tasks assigned to each individual course in the Automotive Services Technology Program during their first semester. Consequently, for these 36 freshmen there are approximately 32 that have demonstrated an 80% or higher rating and are proceeding with the NATEF guidelines. Those few that are below the 80% are receiving additional instructor assistance in an attempt to make them successful in meeting the NATEF guidelines.

At the Sophomore Level: Students are in their third semester of program completion, approximately 33 of 36 have completed 80% or higher of the assigned NATEF required tasks for program completion. Those few below 80% are receiving additional instructor assistance in an attempt to make them successful in meeting the NATEF guidelines.
Recent Graduates: Recent graduates have chosen several directions after successful program completion. Approximately 22% to 28% have demonstrated their success at Joliet Junior College Automotive Service Technology program by continuing their education at either Southern Illinois University in Carbondale, Illinois or Ferris State University in Big Rapids, Michigan. After completion of the 2 afore mentioned Advanced Automotive Technology Programs our former graduates will achieve, after 2 additional years, a Bachelors of Science Degree.

The remaining 71 – 77% have found employment as service technicians either at dealerships, fleets, or independent repair facilities some locally, others nationally.

Approximately 1% for unknown reasons, have chosen employment outside the automotive arena after completion of their AAS degree at Joliet Junior College in the Automotive Services Technology program.
PLAN 1:

ORTHOTIC & PROSTHETICS TECHNOLOGY PLAN: MICHAEL BRNCICK
Student Learning Outcome: Are our students competent in the fabrication of upper and lower extremity prostheses and upper extremity, lower extremity and spinal orthoses?
Program Goal: 80% of the students reach a “B” or better average grade in each course.
Assessment Process: Students are evaluated on knowledge and skills necessary to fabricate orthoses and prostheses at all levels. Exams are given to evaluate comprehension and application of the knowledge base. A practical exam is given that provides students the opportunity to demonstrate their skill level. Faculty will record and collect data, and provide it to the director of the department in order to evaluate outcomes with respect to pass/failure information. Modifications will be made in curriculum delivery, course content and other areas affecting the desirable levels of knowledge and skills.
Who is the lead Instructor? Mike Brncick
Why was this process selected? The process was selected to assess learning at the programmatic level as well as at a national standards level.
How will student learning be measured? Written and practical exams are given to assess student competencies.
What approach will be used? National exam assessment will be used for evaluation.
When will data collection be collected? The program is new. Data collection will begin with the first graduating class.
Who will analyze the results? The Program Director will be responsible for data collection and analysis of results.

REPORT: (Fall 2008)

At this time 80% of the students are reaching a “B” or better on this course work. The student enrollment is not at capacity at this time. The instructor to student ration is a factor and may be influencing the outcome at this time. Once the program develops and has a full student cohort, the data will be more reliable. An adjunct instructor has been utilized for the fall 2008 course offerings and the results of a new faculty member teaching one of the courses may also have an effect on results.

PLAN AMENDMENT: (Fall 2008)

Re-evaluate the program with an anticipated growth in student numbers to better determine outcomes.
PLAN 2:

ORTHOTIC & PROSTHETICS TECHNOLOGY PLAN: MICHAEL BRNCICK

Student Learning Outcome: Have they reached a level of competency to successfully pass the national registered technician exam?

Program Goal: 85% pass rate on the National Registered Technician Exam.

Assessment Process: Pass failure rates will be compiled on students who take the national registered technician exam. Results will be tabulated and records will be kept by the director of the department on a yearly basis to monitor program effectiveness. We will evaluate areas of strengths and weaknesses to the extent that individual areas of competency can be highlighted in the national exam and shared with the program. Faculty will be provided with the information in order to modify content, knowledge and skill areas in order to meet the competency requirements of the exam.

Who is the lead Instructor? Mike Brncick

Why was this process selected? The process was selected to assess learning at the programmatic level as well as at a national standards level.

How will student learning be measured? Written and practical exams are given to assess student competencies.

What approach will be used? National exam assessment will be used for evaluation.

When will data collection by collected? The program is new. Data collection will begin with the first graduating class.

Who will analyze the results? The Program Director will be responsible for data collection and analysis of results.

REPORT: (Fall 2008)

The program is new and has just graduated 3 students that have not taken the national exam as of this reporting period. Students will be eligible to sit for the exam during the spring 2009 semester.

COURSE OF ACTION:

Evaluate exam results and outcomes once the students complete the national exam.
STUDENT LEARNING ASSESSMENT RESULTS
ARCHITECTURE, ENGINEERING, & CONSTRUCTION
FALL 2007 – SPRING 2008

PLAN: ARCHITECTURE / ENGINEERING / CONSTRUCTION PLAN – MARIA ANNA RAFAC & GREG PAKIESER

Student Learning Outcome: Students should have an 80% understanding of basic skills and vocabulary as presented in AEC 106.
Program Goal: To evaluate the students’ progress and knowledge base in a key foundation course, AEC106.
Assessment Process: Evaluation by the instructor through final exam. The basis for the evaluation is a standardized set of objectives. The test questions will be developed from the material used in the class. The question will be from the different topics and coded. The results of the test could then be sorted and analyzed to determine where the students have the most successes.
Who is the lead Instructor? Greg Pakieser
Why was this process selected? It measures the basic skills needed in the construction industry and most advanced course.
How will student learning be measured? A series of questions chosen from a set of prints that represent the major skills needed for reading blueprints.
What approach will be used? Through the use of a standardized final for all the courses.
When will data collection by collected? At the end of each semesters.
Who will analyze the results? Greg Pakieser.

REPORT: Fall 2008 (2 year plan underway – Status Report)

- 5 assessment question sets have been developed.
- All developed question sets are being incorporated into ANGEL/iCampus for use during the spring 2009 semester.
- The question sets will be used as the basis for the AEC 106 & 107 final exams.
- Data collection is underway with an initial set being collected during the Fall 2008 semester.
STUDENT LEARNING ASSESSMENT RESULTS
MECHANICAL PRODUCTION TECHNOLOGY
FALL 2007 – SPRING 2008

PLAN: MECHANICAL PRODUCTION TECHNOLOGY PLAN – JOSEPH GLADKOWSKI
Student Learning Outcome: The student’s ability to apply basic Manufacturing machining techniques learned within the MFG 101 curriculum.
Program Goal: Students will demonstrate a 90% understanding of the basic machining skills incorporated within the first semester manufacturing 101 course.
Assessment Process: An instructor-proctored assessment will qualify the students understanding within two Manufacturing areas: Hands-on mastery of course project and basic understanding of text oriented theory.
Who is the lead Instructor? Joe Gladkowski
Why was this process selected? This process was selected to quantify each student’s retained knowledge of both theory and hands-on educational material taught within the specified courses.
How will student learning be measured? The students learning will be measured prior to the end of the semester. This will enable an assessment of all knowledge presented throughout the course.
What approach will be used? To assess each student’s retained knowledge, a written and hands-on assessment will be administered.
When will data collection by collected? Assessment data will be analyzed after the second semester of the processes emplacement. This time period will allow a wider range for averages of student-learning outcomes.
Who will analyze the results? The assessment process will be proctored, data collected, and analyzed by the Coordinator of the MFG Program.

REPORT: (Fall 2008)

Testing data has been collected from the spring 2008 MFG 101 classes, with testing and data collection for the fall 2008 MFG 101 classes to be conducted prior to the end of the semester. The spring 2008 data has shown that the average testing score is higher than the goal of 90% that we were hoping to attain. The Hands-on score has been shown to be higher than Theory score that is assessed by the written test. It is encouraging that after this one semester, both scores (the hands-on and Theory) were in excess of 90%. However, as indicated in the assessment plan, more than one semester is needed to provide a larger study group for analysis.

MFG 101 course enrollment is higher in the 2008 Fall Semester, with a more diverse group than in the previous semester. Consequently, the data collected this semester (Fall 2008) should give us a more accurate indicator of what knowledge the average MFG 101 student retains.
PLAN: LAW ENFORCEMENT PLAN – KIMBERLY KARLBERG & STEVE CHRISTIANSEN

Student Learning Outcome: Law Enforcement students will be tested on our Bill of Rights and be able to define our first Ten Amendments and examine how they effect United States Citizens and Law Enforcement personnel every term.

Program Goal: Law Enforcement students will achieve a 90% or better on this topic of study during the fall semester, 2007.

Assessment Process: Evaluation of student's exam by a LENF instructor.

Who is the lead Instructor? Kimberly Karlberg

Why was this process selected? This process was selected because of the importance of the material as it relates to Law Enforcement Officials.

How will student learning be measured? The student is measured through exams one and two.

What approach will be used? A test question for all the classes to use, a survey, a quiz, a homework assignment or project, or other form of assessment.

When will data collection be collected? 1-2 semesters allowed for gathering data then tabulated and assessed.

Who will analyze the results? The instructor of Law Enforcement will analyze the results.

REPORT: (Fall 2008)

Law Enforcement students enrolled in the CRT 110 courses achieved a 90% or better when answering questions related to the Bill of Rights, which focused on defining the amendments: 1, 2, 4, 6, 8, & 14, from the fall 2007 through fall 2008 semesters for Exam I and II.
PLAN: CRIMINAL JUSTICE STUDIES PLAN – KIMBERLY KARLBERG

Student Learning Outcome: Criminology students learn to write a detailed, comprehensive chapter outline with key terms and definitions.

Program Goal: Criminology students in all sections during the fall 2007 semester will achieve an 80% grade or better on average.

Assessment Process: Evaluation by the instructor of each Criminology student’s detailed outline.

Who is the lead Instructor? Steve Christiansen

Why was this process selected? This process was selected in order to assess each student’s ability to apply what they have learned in the classroom and analyze the chapter in the book in order to create a detailed outline.

How will student learning be measured? Student learning will be measured on a grade percentage scale with an 80% average being the overall goal of both classes in Criminology.

What approach will be used? The assessment is a written detailed outline over one of the chapters in the Criminology textbook. The assessment is assigned as a homework project and is done in teams of two students per team. Other assessments include a test question for all classes to use, a survey, a quiz, a homework assignment or project, or other form of assessment.

When will data collection by collected? 1-2 semesters to allow for data gathering, then tabulate and assess.

Who will analyze the results? Steve Christiansen – the Instructor will analyze the results.

REPORT: (Fall 2008) 2-year plan: Status Report

Due to change in instructors the program’s assessment is being revised from its original assessment plan and data collection and reporting will resume during the spring 2009 semester.