

ASSESSMENT PLAN PAPER SCIENCE DEPARTMENT

Behavioral Objectives for Paper Science Graduates

Graduates of the Paper Science program at the University of Wisconsin - Stevens Point have the greatest potential for success in their professional lives if they possess the following attributes:

1. Fundamental knowledge of pulp and paper raw materials and processes
2. Excellent communication skills
3. A high level of computer literacy
4. The ability to work effectively as part of a team
5. A professional comporment
6. The ability to continue learning

Assessment Plans

The faculty in the Department will continue to focus on the first three objectives in our assessment activity. Specifically, we will continue to:

1. Administer a Paper Science Knowledge Exam to graduating seniors
2. Evaluate writing skill development with the assistance of faculty from the English Department.
3. Evaluate oral presentation skills with the assistance of industry representatives.
4. Assess computer skills through student performance in a required Paper Science course.

In addition, we will explore opportunities to assess our students' development in the other three behavioral objectives, especially through outside evaluation or in the context of required course work.

**ASSESSMENT PLAN
PAPER SCIENCE DEPARTMENT
REVISED: OCTOBER 2003**

Department Mission

The UWSP Paper Science program is committed to preparing students for successful technical careers in the pulp, paper and allied industries. This mission is accomplished by promoting excellence in instruction, undergraduate research opportunities, industrial internships, and involvement in professional organizations.

Department Vision and Goals

UWSP Paper Science will provide a premier undergraduate educational opportunity, preparing graduates to be valuable assets to the paper and allied industries. Graduates will be productive in the industrial setting virtually immediately, with a very short learning curve on the job. To realize this vision, Paper Science faculty will:

- Maintain currency with industrial developments
- Educate themselves in pedagogical techniques
- Use technological tools in coursework as appropriate
- Use and apply paper industry examples wherever possible in course work
- Incorporate the use of the department paper machine in course work where appropriate
- Incorporate environmental issues in coursework where appropriate
- Expose students to a wide variety of paper industry technologies
- Provide collaborative problem solving opportunities
- Promote pride in careers in the pulp, paper and allied industries

Objectives and Learning Outcomes for Paper Science Graduates

Graduates of the Paper Science program at the University of Wisconsin - Stevens Point have the greatest potential for success in their professional lives if they possess the following attributes:

1. Fundamental knowledge of pulp and paper raw materials and processes
2. Excellent communication skills
3. A high level of computer literacy
4. The ability to work effectively as part of a team
5. A professional comportment
6. The ability to continue learning

Measurement of Knowledge and Skills

The assessment activities will focus on the first three objectives in our assessment activity. Specifically, we will:

1. Administer a Paper Science Knowledge Exam to graduating seniors and to first and second year students (this is new this year).

2. Evaluate writing skill development with the assistance of faculty from the English Department.
3. Evaluate oral presentation skills with the assistance of industry representatives.
4. Assess computer skills through student performance in a course required for all Paper Science majors.

Data Collection Methods

1. Paper Science Knowledge exam will be given to Paper Science seniors during the fourteenth week of Spring Semester. The exam is computer scored by testing services.
2. The writing assessment will be administered halfway through Spring Semester. The English Department continues to graciously administer and evaluate a writing assessment (a repeat of the freshman English placement test), and provides the Paper Science Department with both the current and entering scores for our majors.
3. The Academic Advisory Committee will meet on May 13, 2004, and will review the presentations of senior design projects.
4. All students take Paper Science 485 during the Fall Semester of their junior year. Grades from this course indicate their level of computer skills.

Assessment Timeline

Paper Science Assessment activities take place annually, and are scheduled as indicated under "Data Collection Methods".

Expected Results

1. The average score on the Paper Science Knowledge Exam should be 50% or higher.
2. The distribution of scores on the writing assessment should show a shift of one rating unit upwards.
3. Ratings of senior presentations will have at least 75% of respondents rate performance in all areas as "Very Good" or "Excellent".
4. Paper Science 485 students should achieve at least a 3.5 grade point average in the course.

How Results Will Be Used

Results that do not satisfy expectations will trigger examination of student performance. If curricular change is warranted, appropriate action will be taken.

Distribution of Assessment Results

- Present results to seniors at the beginning of each Spring Semester
- Present results to industry representatives at Paper Science Academic Advisory Committee meeting

Review of Program Assessment Plan
UWSP Assessment Subcommittee
Kirby Throckmorton, Chair

Program: Paper Science

According to the University Handbook, “Every unit/department on campus shall have a program assessment plan, stating mission, goals, objectives, outcomes, and expectations of the major, means of assessment, methods of analysis, how results will be disseminated, and process for curricular reform.” The UWSP Assessment Subcommittee has reviewed your Program Assessment Plan and offers the following comments and suggestions. If there are questions or concerns, please contact the chair.

1. **Mission/Purpose:** Missing
2. **Goals:** Missing
3. **Objectives:** Specified as attributes and referenced under assessment plans as objectives.
4. **Learning Outcomes:** Missing. Learning outcomes are implied by assessment methods.
5. **How knowledge, skills, or attitudes will be measured:** Direct measures of student learning, faculty and industry representatives evaluation of skills and knowledge.
6. **Data Collection Methods:** Paper science knowledge exam, evaluation of writing skill development, evaluation of oral presentation skills, and assessment of computer skills. No details are provided—details have been provided in program assessment reports. Consideration should also be given to adding current student, alumni, and employer satisfaction surveys to the assessment plan.
7. **When assessment is done (timeline):** Missing
8. **Expected results, criteria for success, standards:** Missing
9. **How the results will be used:** Missing
10. **Distribution of assessment results:** Missing

**ASSESSMENT PLAN
PAPER SCIENCE AND ENGINEERING DEPARTMENT
REVISED: NOVEMBER 2006**

Department Mission

The UWSP Paper Science and Engineering (PS&E) program is committed to preparing students for successful technical careers in the pulp, paper and allied industries. This mission is accomplished by promoting excellence in instruction, undergraduate research opportunities, industrial internships, and involvement in professional organizations.

Department Vision and Goals

UWSP PS&E will provide a premier undergraduate educational opportunity, preparing graduates to be valuable assets to the paper and allied industries. Graduates will be productive in the industrial setting virtually immediately, with a very short learning curve on the job. To realize this vision, PS&E faculty will:

- Maintain currency with industrial developments
- Educate themselves in pedagogical techniques
- Use technological tools in coursework as appropriate
- Use and apply paper industry examples wherever possible in course work
- Incorporate the use of the department paper machine in course work where appropriate
- Incorporate environmental issues in coursework where appropriate
- Expose students to a wide variety of paper industry technologies
- Provide collaborative problem solving opportunities
- Promote pride in careers in the pulp, paper and allied industries

Learning Outcomes for Paper Science Graduates

Graduates of the PS&E program at the University of Wisconsin - Stevens Point have the greatest potential for success in their professional lives if they possess the following attributes:

- (a) the ability to apply knowledge of mathematics, science, and engineering
- (b) the ability to design and conduct experiments, as well as to analyze and interpret data
- (c) the ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- (d) the ability to function on multi-disciplinary teams
- (e) the ability to identify, formulate, and solve engineering problems
- (f) the understanding of professional and ethical responsibility
- (g) the ability to communicate effectively
- (h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- (i) a recognition of the need for, and the ability to engage in life-long learning
- (j) a knowledge of contemporary issues
- (k) the ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Measurement of Knowledge and Skills

1. Provide assignments that require students to develop and demonstrate their mastery of the learning outcomes as part of normal course work.
2. Evaluate writing skill development with the assistance of faculty from the English Department.
3. Evaluate oral presentation skills with the assistance of industry representatives.

Data Collection Methods

1. Students will build a portfolio of their work. The portfolio will include examples of assignments and projects that are part of their courses. These portfolios will be reviewed by evaluators from outside of the Paper Science and Engineering Department, using rubrics developed for this purpose.
2. The English Department continues to graciously administer and evaluate a writing assessment (a repeat of the freshman English placement test), and provides the PS&E Department with both the current and entering scores for our majors.
3. Industry attendees at the annual Academic Advisory Meeting will review the presentations of senior design projects.

Assessment Timeline

1. Student portfolio development will occur continuously. Portfolios will be evaluated annually.
2. Writing assessments are administered annually.
3. The Academic Advisory Meeting occurs in May of every year.

Expected Results

1. Portfolio evaluators will find evidence of high quality student work on assignments and projects related to the learning outcomes.
2. The distribution of scores on the writing assessment should show a shift of one rating unit upwards.
3. Ratings of senior presentations will have at least 75% of respondents rate performance in all areas as "Very Good" or "Excellent".

How Results Will Be Used

- Results that do not satisfy expectations will trigger examination of curricular content.
- If curricular change is warranted, appropriate action will be taken.

Distribution of Assessment Results

- Present results to seniors at the beginning of each Spring Semester
- Present results to industry representatives at PS&E Academic Advisory meeting

**2006-2007 Review of Paper Science and Engineering Department
Program Assessment Plan
UWSP Assessment Subcommittee
Justin Rueb/Paula DeHart, Co-Chairs**

According to the University Handbook, “The primary purpose of assessment is to improve student learning by making appropriate curricular and instructional changes.” There are three basic questions: 1) What are students expected to learn? 2) Are they learning what is expected? 3) If not, what must be changed? The UWSP Assessment Subcommittee has reviewed your Program Assessment Plan and offers the following recommendations with the above in mind. If questions or concerns arise, please contact the chair.

1. Mission, Vision and Goals: The mission of the Paper Science and Engineering (PS&E) program is clearly identified. Your vision for your students takes into account the need to be immediately productive upon employment. To equip your students accordingly you have identified the steps and requirements your faculty must likewise demonstrate and utilize. It is assumed that faculty development and continuing education is ongoing both on an individual basis and for your department as a whole.

2. Learning Outcomes for Paper Science Graduates: Your outcomes are framed as abilities and attributes that students should possess upon graduation to assure their success as professionals. It would be helpful to identify the specific venues where students have opportunities to develop these abilities (e.g., courses/projects/extracurricular/student organizations). What are the standards students must attain to demonstrate these abilities? What qualifies as “possessing an ability?”

3. Measurement of Knowledge and Skills: Your departmental assessment plan identified three objectives focusing on your assessment efforts. You are commended for having enlisted the assistance and perspective of the English Department and industry representatives in assisting students to develop their writing and speaking skills respectively. However, how and to what degree will other objectives (learning outcomes) be assessed. We will look forward to hearing of those efforts in the future.

4. Data Collection Methods: You have identified three methods relevant to the three objectives you are measuring. The portfolio will provide a clear picture of some of their abilities relative to the associated courses. Will seniors conduct an in-person” oral presentation in front of industry representatives or will video tape or some other means be provided at the Academic Advisory meeting? How will you determine the standard to which they are held accountable?

5. Assessment Timeline: Specific times are designated for the writing and speaking objectives. How often are the student portfolios assessed as your students progress through their college career? How do they know to what level of proficiency they must strive? What are your assessment methods for your other objectives?

6. Expected Results (Performance Outcome): While striving for “high quality” work is commendable, how will that level be attained and how and when will students be apprised of their performance as they progress toward their degree. Are they given individual or group guidance in specific areas of portfolio development?

7. How Results Will Be Used: What kind of examination will result if expectations are not met? How would such an exam be different from routine exams? Given the portfolio assumedly contains evidence of a wide variety of abilities, not all students would demonstrate uniform skill levels. Does the examination allow for individual divergence from the expected level of proficiency? What impact does the examination have on individual student learning? What opportunities are students given to master abilities in which they score low?

8. Distribution of Assessment Results: The PS&E Department provides assessment results to seniors at the beginning of each spring semester and to the industry representatives at the Academic Advisory meeting. When, and how, are the results disseminated to your faculty, to the Dean, and to the Vice Chancellor?

NOTE: Given the most recent update of the assessment process and the University Handbook Chapter 7- Assessment, approved May 2, 2007, all assessment plans, reports, and program self studies will be disseminated to the concerned department faculty, responsible Dean, and the Provost’s office. Future reports will be forwarded to these offices.

9. Changes Implemented because of Previous Assessment Results: Future plans should also mention any changes made as the result of assessment since your last assessment report, which according to the new Assessment and Program Review Reporting Cycle should be the Program Self Study.

10. Recent Assessment UWSP Changes: Given recent major changes in the Assessment and Program Review Reporting Cycle assessment process and the University Handbook Chapter 7, Section 3 -Assessment, your department is highly encouraged to read these documents and contact the Assessment Sub-Committee chair(s) should any questions arise. The University website is: <http://www.uwsp.edu/institres/Assess/assess.htm>.