I. Program Reviewed: B.S. in Packaging

Program Director: Bob Berkemer (Interim)

PRC Consultants: Georgios Loizides and Dick Tyson

Purpose of Review: The purpose of the review is to assess the quality of the B.S. in Packaging as part of a seven-year review cycle required of all degree programs at UW-Stout.

Committee Findings: The PRC recommends that the B.S. in Packaging continue to be one of the undergraduate degree programs at UW-Stout. The committee recommends continuation of the program through 2015-16 as part of the seven year review cycle.

II. Abstract:

The B.S. in Packaging prepares students for careers in the packaging industry. The packaging career field involves the use of materials, methods, design concepts and machinery to develop and produce the packages that protect and preserve a product, help market the product and instruct the consumer in its proper use. Packaging careers include package printing; business and sales; manufacturing and quality management; or package design, research and development. The UW-Stout program is well known nationally and there is a continued strong demand for graduates from the program.

The program requires 124 credits, 59 in general education and 53 in major studies with 12 credits in emphasis of choice. Emphases include graphic design, manufacturing, package printing, package design, business, and foods packaging. This degree was first offered in the fall of 1995; consequently, this program review is the second for the packaging program.

The packaging industry is in a period of rapid growth. Stout's program is designed to meet the need of students entering this expanding and changing field. The program has a large, diverse, and active Program Industrial Advisory Committee. It received renewed accreditation from the National Association of Industrial Technology (NAIT) in 2003 for the period through 2009. Pending full staffing, ABET accreditation may be sought.

In 2007, the 23 graduates of the program have experienced 100% placement and salaries averaging $52,000. The 2008 graduates similarly enjoyed 100% placement, with earnings among the highest of Stout programs. There are far more co-ops available than students to fill them. UW-Stout packaging students will clearly be in demand for the foreseeable future. The emphasis of the degree, like that of UW-Stout's special mission, is towards
hands-on learning. New emphases being explored include packaging machinery, hazardous material, and pharmaceutical and medical packaging.

III. Process Followed for Current Review:

Professor Danny Bee, Chair, Engineering and Technology Department, prepared the self-study program report and Interim Dean Rich Rothaupt and Associate Dean Diane Christie appeared before the PRC on February to present it and address questions and concerns. The PRC consultants prepared this report based on the self-study as well as other documentation as outlined in PRC procedures and included the following: key instructors, program advisory committee, and student surveys as well as three year follow-up survey of graduates. Revisions and additions were suggested and the final report was forwarded to the PRC, which approved it at the ____ meeting.

IV. Previous Review:

Recommendations for Department Chair, Program Director and Dean (2000):

1. The department chair and dean should continue to address the issue of retention of key faculty. Packaging shares the same problem with other technical programs (such as engineering, business, and computer sciences) of attracting and keeping dedicated faculty and staff who can earn significantly higher salaries in industry rather than in academics. Packaging needs to emphasize departmental stability in its faculty and staff by assuring cooperative and inclusive efforts toward meeting their strategic goals.

Response: (2000)
“During the past few years there has been a turnover in packaging faculty due to retirements and a resignation based on salary. The present faculty are working hard to meet their strategic goals by increasing communications and meeting frequently (once a week) on issues. Packaging faculty will be held to the same standards of any faculty within the Technology Department and a balance of research, service and teaching will continue to be required. The department chair is keenly aware of some of the problems associated with packaging faculty stability and has been meeting with the packaging faculty to address issues and concerns.

While the program did develop strategic goals, the refinement and monitoring of these goals are the responsibility of the program director, associate dean and the program committee”

Summation of Consultants: (2009)

The instability/high turnover of faculty and staff continues to be one of the most important problems facing the Packaging program. As the department chair explained to the Program Review Committee, the problem lies with the high demand the packaging industry has for potential faculty/staff members as well as the high salaries that these specialists enjoy in the private sector as compared to the salaries offered by the university. The Department has made good progress in securing administrative support for more attractive benefit packages to potential
faculty/staff and it seems that this year may witness the solution of this problem by the current (2009) hiring process. According to the Program Director Report, the Department aimed to “secure a minimum of two new hires by fall of 2009 (if not sooner).”

2. The program director should examine efforts to increase enrollment in the major. Since the number of majors in the program has doubled over the past five years, faculty allocations should be monitored. (2000)

Response: (2000)
“Enrollment in the program continues to be a major concern. While the PRC report stated that the enrollment doubled during the past five years, the reality of the packaging enrollment remains unchanged. When it was a concentration in 1995 the enrollment was 125. The fall 1999 enrollment was 127. While the credits in the technical courses remain unchanged from the concentration, the content in courses has been significantly updated.

Student recruitment is complex. Most high school counselors, and especially parents and high school students, lack exposure and knowledge about the packaging profession. This presents several opportunities. The packaging program committee needs to become more proactive in assisting Stout in recruitment. A video, enhanced web site, developing a student ambassadors program, new program posters, radio sports, visits to schools by packaging professionals, the strengthening of present, and development of new, articulation agreements with technical colleges, and additional strategies need to be developed by a subcommittee of the packaging advisory committee. In addition, the packaging campaign will provide an opportunity for the program director to be freed-up for additional time next year to do a better job in recruitment. Packaging faculty will also meet with the university's recruitment staff on recruitment issues and concerns each semester. A packaging faculty member will also meet with students at technical colleges that have developed articulation agreements with the packaging program. Packaging faculty will also work closely with the Skills USA events to sponsor a packaging event by 2002-03.”

Summation of Consultants: (2009)

Enrollment in the program was in the range of 150-160 in 2000-02 and has been in the range of 180+ during the past 2 years. There were 50 new students in the Fall, 2008. Enrollment does not appear to be a major concern at this time.

3. The program director and faculty should continue to explore opportunities for updating labs, laboratory equipment, computer resources, and software. Although efforts to acquire funding for these projects have been initiated, student surveys indicate that this is a concern. An option to pursue might be some kind of "trade-in" policy from product suppliers. Additionally, the dean and program director might investigate the option of becoming one of Stout's pilot laptop programs. (2000)

Response: (2000)
“The updating of labs, software and equipment is not a problem unique to the packaging program. All of the programs at Stout with a heavy reliance on technology have this problem. The packaging program director and faculty will continue to actively seek appropriate donations from the program advisory committee and business and industry. The Technology Department's department chair will
place the packaging labs on the laboratory modernization schedule and monitor its placements. The packaging capital campaign has been of significant assistance and will help with some of the needs. Packaging faculty will also explore the option of a laptop program and present their recommendations to the advisory committee during the 2000-01 school year.”

**Summation of Consultants:** (2009)

Updating of labs appears to be a continuing problem.

Both student and faculty surveys point to the need for upgrading the outdated laboratory equipment and improved maintenance. In particular, key instructors within the Department in 2009 have rated the equipment to be inadequate (score 2 out of 5), while undergraduate students surveyed in 2008-9 for the Planning and Review Committee expressed disagreement with the statement “the laboratory equipment for my program is up to date (score 2.72 out of 5, where 2=disagree and 3=neutral). Along the same lines, in the undergraduate one-year follow-up survey, only 49% of 2006 Stout graduates have rated the laboratory facilities and equipment to be satisfactory (categories 4 and 5 on a 5 point scale). This was significantly lower than the degree of satisfaction regarding equipment and facilities in previous years.

4. Efforts to recruit and retain women and minority students in the major should be continued. Collaboration with the STEPS program is a commendable effort in this regard. (2000)

**Response:** (2000)

“The packaging program faculty will work together to address this concern. Trips to Milwaukee, Appleton, and the Twin Cities will be made during the 2000-01 school year to focus on target groups. Packaging program faculty will continue their involvement with the STEPS program and other similar programs. Inviting any minority students to participate in a student ambassadors program will also be considered. The packaging faculty will meet with the university recruitment office staff to discuss this issue.”

**Summation of Consultants:** (2009)

The UW-Stout Equity Scorecard (2007) reports that the Packaging program is among the top 5 programs with the highest percentage of White students, and among the 5 programs with the lowest percentage of minority students. Twenty percent of the Packaging program students, however, are women which is significantly higher than the 10% average for all engineering programs.

V. Program Review:

**Program Strengths:** Data from the surveys and report of the program director support the following observations:

1. The packaging program provides graduates for a growing, high demand industry. According to placement data, there is a 100% placement rate among graduates. The 23
placed in 2007 averaged $52,000 salaries. The five-year follow up indicated average salaries of $69,500. 

Source: annual placement report, UW-Stout

2. The program has a strong, successful vital co-op program. The department continues to enjoy commendable relationships with industry and business. Average coop wages were $16.77/hr.

Source: program director, annual coop reports

3. Most professional courses are highly experiential, emphasizing hands-on learning with packaging equipment, computer applications, and project-oriented courses. Students place high value on these courses.

Source: program director reports, student, faculty surveys

4. The Packaging program has a strong, active, and committed Program Advisory Committee to advocate for equipment, faculty, and other necessary support to ensure a quality program.

Source: program director reports, faculty surveys

5. Industry experience and expertise of instructors inside and outside the Technology Department. Students feel the faculty generally provide current, relevant information.

Source: program director reports, student, faculty surveys

6. Program graduates appreciate the depth of preparation; the breadth of available placements is also seen as a real plus.

Source: program director reports, student surveys

**Issues of Concern**

1. One of the most important problems facing the Packaging program is the instability/high turnover of faculty and staff (Source: Program Director Report, 2009, Key Instructor surveys, Student surveys). The Department has made good progress in securing administrative support for more attractive benefit packages to potential faculty/staff; it remains to be seen whether this year will witness the solution of this problem by the current (2009) hiring process. The Packaging program has developed a comprehensive “Staffing Action Plan 2008-12” which if successfully implemented, will to a large degree alleviate this issue of concern as well as #3 and # 4 below.

2. Laboratory equipment is in need for upgrading as well as maintenance. It is by far the most frequently cited “weakness” of the program by students. (Source: Program Director Report, 2009, Key Instructor surveys, Student surveys). Current student surveys report a significantly lower degree of satisfaction regarding equipment and facilities than in previous years.

3. The Packaging program has an extremely high student faculty ratio as compared with other, comparable programs. (Source: Program Director Report) The student to instructional staff ratio was 46:1, as compared with 17:1 for Clemson University, 23:1 for Michigan State University and 21:1 for the Rochester Institute of Technology. This issue is related to the high turnover of faculty and may be alleviated following the potential hiring of faculty in the fall 2009 semester.
4. The fourth major issue of concern is the need for a permanent Program Director, which has yet to be resolved. (Source: Program Director Report, 2009, Key Instructor surveys, Student surveys) This issue is also connected to the problem of new hires, as they will provide the pool from which a new Program Director will be selected.

**Recommendations for the Program Director**

The Program Director and faculty should continue to explore opportunities for updating labs, laboratory equipment, computer resources, and software. Industry support has been good, and hopefully can continue to be supportive. Work intensely with the Program Advisory Board to develop a capital campaign.

**Recommendations for the Chair of the Department**

Monitor and assist in every way possible implementation of the Staffing Action Plan

The chair should continue to explore opportunities for updating labs, laboratory equipment, computer resources, and software out of available department funding as well as any additional sources

**Recommendations for the Dean**

Monitor and assist in every way possible implementation of the Staffing Action Plan. This may include faculty development efforts for degree-completion or research release, or other efforts to secure a stable staffing of highly qualified instructors.

The Dean should continue to explore opportunities for updating labs, laboratory equipment, computer resources, and software out of available college funding as well as any additional sources; collaborate with and support the capital campaign.