

**Management – Operations Management
Annual Assessment Report
2013-2014**

I. Program History

The Operations Management degree at Oregon Tech has undergone several iterations in recent decades. OIT originally offered an Industrial Management degree; this degree evolved in the mid 1990s into an Industrial Engineering degree which was accredited by ABET. OIT hoped to increase enrollment with these changes. Enrollment, however, dropped dramatically as students were not interested in an engineering emphasis. In 2002 the curriculum was revised, the ABET accreditation was dropped, and the degree name was changed to Operations Management. Today, the Operations Management program is transfer- friendly, preparing students for leadership positions in the production and service industries. Curriculum enhancements for the 2014-2015 academic year include a new course sequence that offers courses in Materials Management, Logistics Management and Quality Management. This sequence is intended to bring additional depth to the Operations Management degree program.

This degree option is offered in Klamath Falls and Wilsonville as well as online. Total enrollment across all campuses is approximately 60 students; 8 at the Klamath Falls campus, 13 in Wilsonville campus, and the remainder online. Annual salaries reported for 2014 averaged \$43,200. The Operations Management degree program was awarded accreditation by the International Assembly of Collegiate Business Educators (IACBE) in 2008.

II. Program Mission, Objectives and Student Learning Outcomes

The Management faculty reviewed the program purpose, objectives, and learning outcomes during the fall faculty meeting in September 2013. The faculty reaffirmed the statements below:

Operations Management Mission Statement:

The Operations Management degree prepares students for leadership positions in the production and service industries.

Educational Objectives:

1. The Operations Management degree program prepares students for graduate school programs such as the MBA or the MIM.
2. The Operations Management degree program prepares students for supervisory positions in organizations, including for-profit organizations, non-profit organizations, and government organizations.

3. The Operations Management degree program prepares students for M.A.T. programs and future careers in high school education.
4. The Operations Management degree program develops skills in problem solving, project management, communication, and managing effectively in team-based work environments, and prepares students for employment within a wide variety of service and product industries.

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Student Learning Outcomes:

The Operations Management program assesses student learning at three levels: at the institutional level, at the department level, and at the program level. Institutional student learning outcomes (ISLOs) and assessments are directed by Oregon Tech's Assessment Executive Committee. The Management Department also assesses eight core student learning outcomes (listed below) in accordance with IACBE guidelines, these core student learning outcomes (PSLOs) are assessed and evaluated at both the department level and at the program level.

A description of Oregon Tech's ISLOs and the Management Department's annual assessment report, as submitted to IACBE, may be found on the Oregon Tech website. PSLO and ISLO data, specific to the Management – Operations Management program, are the subject of this report.

Upon completion of this program, Operations Management graduates will be able to:

1. Explain the major concepts in the functional areas of accounting, marketing, finance, and management.
2. Evaluate the legal, social, and economic environments of business.
3. Describe the global environment of business.
4. Describe and explain the ethical obligations and responsibilities of business.
5. Apply decision-support tools to business decision making.

6. Construct and present effective oral and written forms of professional communication.
7. Apply knowledge of business concepts and functions in an integrated manner.
8. Use specialized knowledge in Operations Management to solve business processes.
 - a. Apply knowledge of fundamental concepts of operations management.
 - b. Apply knowledge of approaches to operational performance improvement.

III. Assessment Cycle

Oregon Tech's ISLOs are assessed on a six-year cycle. The ISLO assessment schedule may be found on the Oregon Tech website under Institutional Student Learning Outcomes.

IACBE requires all accredited institutions to complete a full assessment cycle for all IACBE core student learning outcomes (PSLOs: 1-8) on an annual basis.

IV. 2013-2014 Assessment Activities

Departmental assessment results for the IACBE core student learning outcomes are reported separately and can be found on the Oregon Tech website under IACBE Public Disclosure of Student Learning. This report presents program level assessment results for the IACBE core student learning outcomes, as well as for ISLO #4, Critical thinking and problem solving.

Direct Assessment #1:

ETS Major Field Test in Business: The ETS Major Field Test in Business was administered to graduating seniors, winter term, in their senior project class. The exam was administered in Klamath Falls, Wilsonville, and online.

Outcomes Assessed:

1. Explain the major concepts in the functional areas of accounting, marketing, finance, and management.
2. Evaluate the legal, social, and economic environments of business.
3. Describe the global environment of business.
4. Apply decision-support tools to business decision making.

Performance Target/Criteria: 80% of students score in the 70th percentile or higher.

Assessment Results:

Total Test (n=9)		
Scaled Score Range	Percent of Students	Percent Below
165-200	12.5	89
160-164	50	44
155-159	12.5	33
150-154	25	11
140-150	12.5	11

Table 1: Assessment Results for ETS Major Field Test in Business: Total Test Score by Program

Assessment Indicator Number	Assessment Indicator Title	Percent Below
1	Accounting	57
2	Economics	72
3	Management	67
4	Quantitative Business Analysis	94
5	Finance	40
6	Marketing	87
7	Legal and Social Environment	15
8	Information Systems	99
9	International Issues	8

Table 2: Assessment Results for ETS Major Field Test in Business: Assessment Indicator Score by Program

Strengths:

Students in the Operations Management degree program scored well in Quantitative Business Analysis.

Weaknesses:

Students in the Operations Management degree program scored lowest in the areas of Legal/Social Environment and International Issues.

It is desired that Operations Management students score better in these assessment areas.

Actions:

Additional operations management course emphasis will be placed on social and international considerations where applicable. Additionally, texts that include specific chapters and sections in these areas will be given special consideration.

Develop additional program depth in specific management areas for Fall 2014.

Continue to leverage the quantitative aspects of the Operations Management degree program.

Direct Assessment #2:

Comprehensive Case Study: The faculty assessed Outcome #6 in BUS 478, Cases in Strategy and Policy, fall 2013, online, and spring 2014, in Klamath Falls and Wilsonville. A case study was used for this assessment.

Outcomes Assessed:

1. Explain the major concepts in the functional areas of accounting, marketing, finance, and management.
2. Evaluate the legal, social, and economic environments of business.
3. Describe the global environment of business.
4. Describe and explain the ethical obligations and responsibilities of business.
5. Construct and present effective oral and written forms of professional communication.
6. Apply knowledge of business concepts and functions in an integrated manner.
7. Use management processes in an applied organization or business situation.

Performance Target/Criteria: 80% of students score a 3 or 4 on each learning-outcome-related performance criteria (using a 1-4 proficiency scale). The faculty rated the proficiency of students using the following criteria for assessment.

Assessment Results:

Assessment results from Klamath Falls Operations Management (KFOM) shown below are limited to a single student. Assessment results from all other 16 Klamath Falls business management (KFBM) students, with the exception of Accounting students, are also indicated below.

Performance Criteria	Assessment Method	Measurement Scale	Minimum Acceptable Performance	Results
Company Background and Statement of the Business Problem or Issues	Case Study	1 – 4 Proficiency Scale	80% achieve 3 or 4 rating	KFOM = 100% KFBM = 75%
Cross-functional Business Analysis	Case Study	1 – 4 Proficiency Scale	80% achieve 3 or 4 rating	KFOM = 100% KFBM = 75%

Conclusions	Case Study	1 – 4 Proficiency Scale	80% achieve 3 or 4 rating	KFOM = 100% KFBM = 63%

Table 3: Assessment Results for Comprehensive Case Study in BUS 478

Strengths:

Student can successfully and thoroughly describe the company and provide business context needed to fully understand cross-functional business issue.

Additionally, students apply appropriate analytical tools to assess the business and clearly consider the cross-functional implications of the business strategy.

Weaknesses: While conclusions are mostly clear and succinct, conclusions take into consideration the analysis of the case, are logical and reflect an informed analysis, but are incomplete. Some students struggle to make the connection between the analysis applied and the conclusions that may be drawn from the analysis.

Assessment criteria are well-defined but somewhat subjective.

Actions:

Pursue opportunities in existing courses to reinforce drawing conclusions from analyses applied.

Revise the assessment rubric criteria to offer greater objectivity, and provide greater consistency across Klamath Falls and Wilsonville campuses, and online learners.

Direct Assessment #3:

Senior Project: The faculty assessed this outcome in BUS 497, Senior Project, winter 2014. The final project was used for this assessment.

Outcomes Assessed:

1. Evaluate the legal, social, and economic environments of business.
2. Describe and explain the ethical obligations and responsibilities of business.
3. Apply decision-support tools to business decision making.
4. Construct and present effective oral and written forms of professional communication.
5. Apply knowledge of business concepts and functions in an integrated manner.
6. Use management processes in an applied organization or business situation.

And, as applicable:

7. Apply knowledge of fundamental concepts of operations management.

8. Apply knowledge of approaches to operational performance improvement.

Performance Target/Criteria: 80% of students score a 3 or 4 on each learning-outcome-related performance criteria (using a 1-4 proficiency scale). The faculty rated the proficiency of students using the following criteria for assessment.

Assessment Results:

Performance Criteria	Assessment Method	Measurement Scale	Minimum Acceptable Performance	Results (n=10)
Project Objective - Identification	Final project	1 – 4 Proficiency Scale	80% achieve 3 or 4 rating	80%
Organization Environment - Context	Final project	1 – 4 Proficiency Scale	80% achieve 3 or 4 rating	90%
Project Management - Process	Final project	1 – 4 Proficiency Scale	80% achieve 3 or 4 rating	60%
Project Completion – Product	Final project	1 – 4 Proficiency Scale	80% achieve 3 or 4 rating	60%
Culminating Experience	Final project	1 – 4 Proficiency Scale	80% achieve 3 or 4 rating	70%
Written Communication of Results	Final project	1 – 4 Proficiency Scale	80% achieve 3 or 4 rating	Not available
Oral Communication of Results	Final project	1 – 3 Proficiency Scale	80% achieve rating of 3 on all 6 performance criteria	Not available

Table 4: Assessment Results for Senior Project in BUS 497

Strengths:

Operations Management students are well-equipped in the identification, articulation and organization of project work.

Weaknesses:

The project management process and achievement of project objectives represent opportunities for improvement. Weaknesses in this area were derived from application of the DMAIC (define, measure, analyze, improve, control) methodology for project management. The dmaic criteria and expectations differ somewhat from the senior project criteria and expectations.

Actions:

Develop and/or modify senior project criteria for students in Operations Management that choose to apply the DMAIC methodology.

Indirect Assessment #1:

Focus Group: A senior focus group, facilitated spring 2014, collected student feedback regarding program curricula.

Focus group summary:

Focus group student feedback from Operations Management is limited to a single student. As such, the information with which to assess is limited. However, a recurring theme for the program from the feedback provided was emphasis on real-world courses and problem solving, both as a positive for the current program courses and as a negative for those courses outside the program that do not exhibit these characteristics.

ISLO Assessment**ISLO #4: Critical thinking and problem solving****Critical thinking assessment:**

Controversial Issues in Management: The faculty assessed this outcome in BUS 447, Controversial Issues in Management, winter 2014. The final paper was used for this assessment.

Cases in Strategy and Policy: The faculty also assessed this outcome in BUS 478, Cases in Strategy and Policy, spring 2014 in Klamath Falls. A case study analysis was used for this assessment.

Performance Target/Criteria: 80% of students score a 3 or 4 on each learning-outcome-related performance criteria (using a 1-4 proficiency scale). The faculty rated the proficiency of students using the following criteria for assessment.

Assessment Results:

Performance Criteria	Assessment Method	Measurement Scale	Minimum Acceptable Performance	Results (KF: n=15)
Identification	Final paper and case study analysis	1 – 4 Proficiency Scale	80% achieve 3 or 4 rating	KF = 47%
Clarification	Final paper and case study analysis	1 – 4 Proficiency Scale	80% achieve 3 or 4 rating	KF = 80%
Evaluation	Final paper and case study analysis	1 – 4 Proficiency Scale	80% achieve 3 or 4 rating	KF = 93%

Strengths:

Conclusions made by students take into consideration the complexities of the case, are logical, and reflect an informed evaluation and ability to place evidence and case perspectives in priority order. Conclusions are clear and succinct.

Weaknesses:

Students successfully state the critical issues/problems to be considered, but the descriptions leave some terms undefined, some ambiguities unexplored, some boundaries undetermined, and/or problem background unknown.

Assessment criteria are well-defined but somewhat subjective.

Actions:

Identify reinforcement opportunities to critically identify and articulate business issues and problems. Courses wherein this may be considered are BUS 456, MGT 462, BUS 478 and MIS 375.

Revise the assessment rubric criteria to offer greater objectivity, and provide greater consistency across Klamath Falls and Wilsonville campuses, and online learners.

V. Summary of Student Learning

Students of Operations Management are well-equipped in quantitative approaches and problem solving in management. The required courses that significantly contribute to providing this foundation include MGT 321, MGT 461, MGT 462 462, MIS 375, and BUS 457. The program will continue to leverage these courses going forward.

Students of Operations Management are equipped in approaches to management with some opportunity for improvement. The required courses that can significantly contribute to providing a stronger managerial foundation include MGT 322, MGT 323, MGT 335, MGT 463, and the new course sequence MGT 421, 422, and 423.

Students of Operations Management are somewhat lacking in international, legal/social considerations in management.

VI. Changes resulting from assessment

Closing the loop:

PSLO and ISLO Assessments

Overall, Operations Management students demonstrate proficiency in all program and institutional areas assessed during the 2013-2014 assessment cycle. Discussions regarding rubric and performance criteria development, as well as efforts to better align assessment activities with outcomes are on-going for both classroom-based courses and online courses. The 2013-14 PSLOs are scheduled to be reassessed in 2014-15.

In summary, following the substantive changes have been made and/or will be considered for the Operations Management program for 2014-15 to address the issues and observations sited in Sections IV and V of this report.

- Inclusion of international, legal and social considerations into course content and/or discussion within existing courses.
- Inclusion of BUS 308, International Business as a required course for Operations Management Students.
- Inclusion of BUS 349, Human Resource Management as a required course for Operations Management students.
- Inclusion of MGT 421, 422 and 423, as a required course sequence for all Operations Management Students.
- Further refinement of PSLO and ISLO assessment rubrics in order to ensure greater assessment relevance, consistency and objectivity.

Continued evaluation and conversation regarding program curriculum and content is ongoing. The Management Department is completing a comprehensive self-study for reaffirmation of accreditation with the IACBE during the 2013-14 academic year. This comprehensive review includes explicit evaluation of program design and

content to ensure adequate coverage, and appropriate assessment, of both program-specific and IACBE-directed learning outcomes and will provide a structured framework for these conversations this year.