

**Operations Management
OIT Assessment Report
2011-2012**

I. Program History

History

The Operations Management degree 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. This degree option is offered in Klamath Falls and Portland as well as online. Current enrollment is 43 students between the Klamath Falls and Portland campuses and 22 students online. Seven students graduated with a degree in Operations Management in June 2011. Employers of our 2011 graduates include Bonneville Power Administration and Quality Counts. Reported starting salaries ranged from \$40,000 to \$60,000.

II. Program Purpose

The Management faculty reviewed the program purpose, objectives, and learning outcomes during the fall faculty meeting in September 2011. 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.

Student Learning Outcomes:

The Operations Management program consists of the eight core Management Department student learning outcomes, as well as two student learning outcomes specific to this program. Upon completion of this program, Operations Management graduates will be able to:

1. Demonstrate an understanding of the functional areas of accounting, marketing, finance, management, and economics.
2. Demonstrate an understanding of the legal and social environment of business.
3. Demonstrate an understanding of the global environment of business.
4. Demonstrate an understanding of the ethical obligations and responsibilities of business.
5. Demonstrate the ability to use business tools.
6. Demonstrate the ability to communicate effectively.
7. Demonstrate the ability to apply knowledge of business concepts and functions in an integrated manner.
8. Demonstrate the ability to work effectively in teams and/or groups.
9. Demonstrate knowledge of fundamental concepts of operations management.
10. Demonstrate knowledge of approaches to operational performance improvement.

III. Assessment Cycle

Assessment schedule

IACBE requires all accredited institutions to complete a full assessment cycle for all IACBE core student learning outcomes (SLOs 1-8) on an annual basis. Program-specific learning outcomes (PSLOs 9-10) will be assessed as follows:

Program-Specific Learning Outcomes	2008-2009	2009-2010	2010-2011	2011-2012
9. Demonstrate knowledge of fundamental concepts of operations management.	X	X	X	
10. Demonstrate knowledge of approaches to operational performance improvement.				X

Table 1: Assessment Cycle for Operations Management PSLOs

IV. 2011-2012 Assessment Activities

Assessment results for the eight core student learning outcomes are reported separately and can be found on the OIT website under IACBE Public Disclosure of Student Learning. This report covers PSLO #10 only per the assessment cycle above.

PSLO #10: Demonstrate knowledge of approaches to operational performance improvement.

Direct Assessment #1: The faculty assessed this outcome in MGT 461, Lean Management I, fall 2011, at the Klamath Falls and Portland campuses and was scheduled to assess the outcome online, winter 2012, using the final project.

Performance Criteria	Assessment Method	Measurement Scale	Minimum Acceptable Performance	Results
1. Clear articulation of the project goal and improvement achieved.	Final project	1-4 Proficiency Scale	80% achieve 3 or 4 rating	KF: 100% (n=17) DE: PDX:
2. Evidence of a clear connection between the tool used and the improvement made, including a description of the tool.	Final project	1-4 Proficiency Scale	80% achieve 3 or 4 rating	KF: 100% (n=17) DE: PDX:
3. Evidence of correct application of the tools.	Final project	1-4 Proficiency Scale	80% achieve 3 or 4 rating	KF: 100% (n=17) DE: PDX:

Table 2: Assessment Results for PSLO #10 in MGT 461

Strengths:

- Project assessment criteria were made very clear to students via rubric and course discussion. Additionally, previous assignments helped

prepare students for the project and subsequent assessment. The results are exemplary assessment scores.

- The three assessment criteria within the student rubric are all captured within a single rubric assessment criteria block, and therefore no confounding of other criteria (grammar, structure, etc.) are considered in the assessment scoring.

Weaknesses:

- Assessment results for Fall 2011 cover only Klamath Falls campus students. The Portland campus used a final exam to assess the outcome and expectations across the two activities varied greatly making it difficult to assess the Portland results using the identified performance criteria.
- Online assessment of the outcome, Winter 2012, did not occur as faculty struggled to identify a project of suitable depth and breadth.
- The three assessment criteria are all captured within a single rubric criteria block.

Actions:

- Coordinate with the Portland campus to ensure a consistent project experience for students, and subsequent consistency in the PSLO assessment criteria. A LEAN lab is underway at the Portland campus to provide additional project opportunities.
- Work more closely with Distance Education students to ensure a suitable project for assessment purposes.
- Suggest breaking the three criteria for PSLO assessment out as separate criteria in the student project rubric.

Direct Assessment #2: The faculty assessed this outcome in MGT 462, Lean Management II, winter 2012, at the Klamath Falls and Portland campuses and online, spring 2012, using the final project.

Performance Criteria	Assessment Method	Measurement Scale	Minimum Acceptable Performance	Results
1. Clear articulation of the project goal and improvement achieved.	Final project	1-4 Proficiency Scale	80% achieve 3 or 4 rating	KF: 100% (n=14) DE: PDX:
2. Evidence of a clear connection between the tool used and the improvement made, including a description of the tool.	Final project	1-4 Proficiency Scale	80% achieve 3 or 4 rating	KF: 93% (n=14) DE: PDX:
3. Evidence of correct application of the tools.	Final project	1-4 Proficiency Scale	80% achieve 3 or 4 rating	KF: 93% (n=14) DE: PDX:

Table 3: Assessment Results for PSLO #10 in MGT 462

Strengths:

- Project assessment criteria were made very clear to students via rubric and course discussions. Additionally, the successive nature of the assessment project helped students prepare a well-executed final result with only minor exception.
- The assessment project is well-suited for online students.

Weaknesses:

- Criteria 2 and 3 are highly correlated. A clear connection between tool used and the improvement made is dependent, in part, on correct application of the tool.

Actions:

- Coordinate with the Portland campus to ensure a consistent project experience for students, and subsequent consistency in the PSLO assessment criteria. Action has already begun to share supplemental course materials with instructors at the Portland campus.
- Investigate opportunities to decouple criteria 2 and 3 for subsequent assessments.

Indirect Assessment: The faculty indirectly assessed the Operations Management PSLOs spring 2012. Seniors completed an exit survey that asked students to rate how well the Operations Management program prepared them with regards to the program-specific student learning outcomes and corresponding competencies.

Eight Operations Management graduates completed the senior survey, all from the Klamath Falls campus.

Program-specific learning outcomes	Assessment Method	Measurement Scale	Minimum Acceptable Performance	Results
Fundamental concepts of operations management	Student rating	1-4 Scale	80% of graduates indicate a 3 or 4 rating	100% (8/8)
Approaches to operational performance improvement	Student rating	1-4 Scale	80% of graduates indicate a 3 or 4 rating	100% (8/8)

Table 4: Assessment Results for Operations Management PSLOs from Senior Survey

In general students rated their preparedness high in regards to the Operations Management PSLOs.

V. Summary of Student Learning

Students of Operations Management are prepared for the operational performance improvement sequence (MGT 461, 462, and 463) by way of a pre-requisite course in operations management (MGT 321). While not an impediment to success in the 46X sequences, this prerequisite provides context to manage performance improvement of business operations.

Students in MGT 461 learn and apply the tools of Lean; an approach to the definition and elimination of waste within any operation. As a first course in operational performance improvement, the emphasis is incremental improvement using both qualitative and light quantitative approaches.

Students in MGT 462 learn and apply the tools of Six Sigma, specifically the Define, Measure, Analyze, Improve, Control (DMAIC) methodology. In this course the tools are both qualitative and quantitative with much more emphasis on qualification of the magnitude of business problems, causes, and level of improvement achieved. Beginning in 2012-2013, a new prerequisite for this course (BUS 457) will better equip students entering MGT 462 with the applied statistical tools to be more successful with the quantitative requirements of MGT 462.

Students in MGT 463 learn and apply approaches to manage the deployment of a large initiative like Six Sigma across the broader enterprise. The two previous courses in this sequence allow emphasis on the cultural maturity required of a business that wants to pursue a large initiative like Six Sigma, project and talent selection, and addressing potential impediments to the success of such a deployment.

VI. Changes resulting from assessment

During the 2012-2013 academic year, faculty members reviewed and revised the program specific learning outcomes to better align with the current curriculum. The updated PSLOs are included in this report. New performance criteria were also identified to better represent the PSLOs. Project rubrics and assessment scoring criteria are now better aligned with program outcomes.

Operations Management SLO-Curriculum Map

SLO #1: The student will demonstrate knowledge of fundamental concepts of operations management.

Courses that are shaded below indicate that the SLO above is taught in the course, students demonstrate skills or knowledge in the SLO, and students receive feedback on their performance on the SLO.

I = Introduced R = Reinforced E = Emphasized

	Fr.	Soph.	Jr.	Sr.	
Fall	BUS 215	ACC 201	ACC 325	BUS 467	
	PSY 201	MATH 361	MGT 321	E	BUS 496
	WRI 121	MIS 311	MGT 461		Elective
	Hum Elective	MSSS Elective	MIS 375		Elective
	Elective	Elective	MSSS Elective		Elective
Win	MATH 111	BUS 226	MGT 322	E	ANTH 452 or PSCI 326
	MIS 102	ECO 202N	MGT 462		BUS 497
	SPE 111	MATH 371	WRI 327		PHIL 331
	WRI 122	MSSS Elective	Elective		PSY 347
	Elective	Elective	MSSS Elective		Elective
Spr	BUS 223	ACC 203	BUS 456		BUS 478
	ECO 201N	BUS 356	MGT 323	R	MSSS Elective
	MIS 275	SPE 321	MGT 445		Elective
	WRI 227	Lab Sci Elective	MGT 463		Elective
	Hum Elective		Elective		

**Operations Management
SLO-Curriculum Map**

SLO #2: The student will demonstrate knowledge of approaches to operational performance improvement.

Courses that are shaded below indicate that the SLO above is taught in the course, students demonstrate skills or knowledge in the SLO, and students receive feedback on their performance on the SLO.

I = Introduced R = Reinforced E = Emphasized

	Fr.	Soph.	Jr.	Sr.
Fall	BUS 215	ACC 201	ACC 325	BUS 467
	PSY 201	MATH 361	MGT 321	I BUS 496
	WRI 121	MIS 311	MGT 461	E Elective
	Hum Elective	MSSS Elective	MIS 375	Elective
	Elective	Elective	MSSS Elective	Elective
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	SPE 111	MATH 371	WRI 327	PHIL 331
	WRI 122	MSSS Elective	Elective	PSY 347
	Elective	Elective	MSSS Elective	Elective
Spr	BUS 223	ACC 203	BUS 456	BUS 478
	ECO 201N	BUS 356	MGT 323	MSSS Elective
	MIS 275	SPE 321	MGT 445	Elective
	WRI 227	Lab Sci Elective	MGT 463	R Elective
	Hum Elective		Elective	