

**Operations Management  
Annual Assessment Report  
2012-2013**

**I. Introduction**

The Operations Management degree has undergone several iterations in recent decades. Oregon Tech originally offered an Industrial Management degree; this degree evolved in the mid 1990s into an Industrial Engineering degree which was accredited by ABET. Oregon Tech 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. Reported starting salaries ranged from \$40,000 to \$60,000. As of Spring 2013 enrollment in the operations management degree program is 60 students.

**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 2012. 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.

## 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	2012-2013
9. Demonstrate knowledge of fundamental concepts of operations management.	X	X	X		X
10. Demonstrate knowledge of approaches to operational performance improvement.				X	

Table 1: Assessment Cycle for Operations Management PSLOs

**IV. 2012-2013 Assessment Activities**

Assessment results for the eight 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 covers PSLO #9 only per the assessment cycle above.

**PSLO #9: Demonstrate knowledge of fundamental concepts of operations management.**

**Direct Assessment #1:** The faculty will assess this outcome in MGT 321, Operations Management I in Fall 2012 at the Klamath Falls and Portland campuses and online Winter 2013 using common final examination questions.

<b>Performance Criteria</b>	<b>Assessment Method</b>	<b>Measurement Scale</b>	<b>Minimum Acceptable Performance</b>	<b>Results</b>
1. Apply tools common to operations management	MGT 321 Final exam questions 1-4	% correct for each question	50% of students assessed achieve 70% or above correct	KF: 85% (n=20)  DE: 67% (n=18)  PDX: n/a
2. Identify key concepts of operations management	MGT 321 Final exam questions 8, 9, 11, 12, 15	1-5 proficiency scale	50% of students assessed a 3-5 rating	KF: 80% (n=20)  DE: 100% (n=18)  PDX: n/a
3. Describe best practices associated with supply chain management.	MGT 322 Final project	1-4 Proficiency Scale	80% achieve 3 or 4 rating	KF: 100% (n=5)  DE: 87.5% (n=8)  PDX: n/a

Table 2: Assessment Results for PSLO #9

**Strengths:**

- Assessment performance criteria are applied reasonably consistently and across student groups.
- Assessment performance criteria are reasonably objective (not subject to interpretation), ensuring inter-rater reliability.
- In most cases better than half the students assessed perform average or better.
- This assessment includes the Klamath Falls campus and online students, which is an improvement over the 2011 assessment.

**Weaknesses:**

- The assessment does not include Portland students due, in part, to inconsistencies in course content across MGT 321 and MGT 322.
- Performance criteria for this PSLO have changed somewhat since the last assessment cycle.
- The assessment information captured in MGT 321 includes non-Operations Management majors. This may negatively skew the results since non-majors may treat the content with less importance than OM majors.
- Lack of adequate staffing for assessments and associated actions remains an impediment to expeditious assessment reporting and closure of actions.
- *Observation only:* On campus students perform better with applications than online students. Online students perform better with concepts than on-campus students even though the course assignments for both are identical.

**Actions:**

- Create expanded course descriptions to ensure content consistency across all learning venues (Klamath Falls, Online and Portland campuses). The goal is to have the expanded course descriptions completed and implemented for Fall 2013.
- Coordinate with the Portland campus to ensure consistent performance criteria for this PSLO, with the goal of consistency in performance criteria across all three learning venues. This *may* mean that the performance criteria and minimum acceptable may change yet again. A summit meeting to address expanded course descriptions, assessment activity and outcomes, and new course offerings is tentatively scheduled for July 19, 2013
- Continue to monitor the discrepancy between on-campus and online students pertaining to ‘application’ learning vs. ‘concepts’ learning.

## Senior Exit Survey (Indirect Measures)

Senior exit survey results for Operations Management students (n=8) are provided below as an indirect assessment measure of the outcomes assessed this year. The results below give indication in four separate areas: program-level student learning outcome preparation, Importance of Curriculum, Satisfaction with Curriculum and Course & Curriculum. Additionally, verbatim comments from students are offered. This information may be used to help shape the execution of the aforementioned actions.

<b>PSLO preparation</b>	<b>% agreement</b>
Fundamental concepts	100
Approaches to operational performance improvement	100

<b>Importance of Curriculum</b>	<b>% agreement</b>
Rigorous	87
Challenging	100
Hands-on	100
Applicable	100

<b>Satisfaction with Curriculum</b>	<b>% agreement</b>
Rigorous	100
Challenging	100
Hands-on	100
Applicable	100

<b>Courses and Curriculum</b>	<b>% agreement</b>
Course were available when needed	75
Opportunities for professional development	88
Opportunities for hands-on experience	100
Lower division courses provided foundation for upper division courses	75

### Comments:

- Should be marketing this program to more students because a small business degree doesn't hold a candle to OM if the person in that program plans to work for a company instead of starting their own business.
- Pat Schaeffer was absolutely pivotal in my development as an OM student.
- The Oregon Tech OM program is first rate. I am highly satisfied with the education I received.
- Due to the small size of the program, it was often difficult to get the classes that I needed to take.
- Never get rid of Pat S.

## **V. Summary of Student Learning**

Students of Operations Management are prepared for the operations management course sequence (MGT 321, 322 and 323) by a prerequisite course BUS 215, Principles of Management. This course provides context for the operations management sequence.

Students in MGT 321 learn and apply the fundamental tools consistent with nearly all operations across most industries; capacity planning, scheduling, forecasting, material requirements planning as well as quality and strategic elements of managing an operation. As a first course in operations management, the emphasis is more breadth than depth. As such, students are exposed and gain familiarity with a wide variety of tools and concepts.

Students in MGT 322 learn operations management “outside the four walls” of an operation, specifically management of the supply chain which includes the physical supply and physical distribution. In this course students gain exposure to best practices associated with supply chain management through investigation and critical analysis of supply chain industry leaders. MGT 321 is a prerequisite for MGT 322.

Students in MGT 323 learn and apply approaches to operational budgeting. This course is reinforced by several courses in accounting and finance across the Operations Management degree program.

## **VI. Changes resulting from assessment**

Faculty members reviewed and revised the program specific learning outcomes (PSLO's) to better align with the current curriculum. The updated PSLOs are included in this report.

This assessment cycle includes online students not previously assessed. Course content, assignments, exams, and learning outcomes are now very consistent with Klamath Falls campus' in-class learning.

New performance criteria and acceptable performance minima were also identified to better represent the PSLOs. The rationale for acceptable performance minima are *at least* half the students assessed performing at an average and/or better than average level. However, this will likely not be the final iteration for performance criteria.

Expanded course descriptions will be created as a result of this assessment cycle. These expanded descriptions will create consistency between the Portland campus and the other two learning venues (Klamath Falls and Online).

## 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

	<b>Fr.</b>	<b>Soph.</b>	<b>Jr.</b>	<b>Sr.</b>
<b>Fall</b>	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
<b>Win</b>	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
<b>Spr</b>	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

	<b>Fr.</b>	<b>Soph.</b>	<b>Jr.</b>	<b>Sr.</b>	
<b>Fall</b>	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
<b>Win</b>	MATH 111	BUS 226	MGT 322	ANTH 452 or PSCI 326	
	MIS 102	ECO 202N	MGT 462	E	BUS 497
	SPE 111	MATH 371	WRI 327		PHIL 331
	WRI 122	MSSS Elective	Elective		PSY 347
	Elective	Elective	MSSS Elective		Elective
<b>Spr</b>	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		