

**Information Technology – Applications Development Option
Oregon Tech Assessment Report
2014-2015**

I. Program History

History

The Information Technology degree was first offered at OT in 1999. In addition, the Management Department offered degrees in Management Information Systems and Management Information Systems, Management Accounting Option. Because of similarities across these degrees, and in response to student and employer requests, the Department restructured the Information Technology degree in 2006. Today the Information Technology degree allows students to choose from four specialty areas: Accounting, Applications Development, Business/Systems Analysis, and Health Informatics. The Applications Development Option focuses on the acquisition of theory and technical competencies to prepare students for successful careers as applications programmers. This degree option is offered in Klamath Falls and in Portland as well as online. Current enrollment in Information Technology – Applications Development is 59 students, including 37 students between the Klamath Falls and Portland campuses, and 22 students online. 8 students petitioned to graduate with an Information Technology – Applications Development degree in June 2015.

The Information Technology – Applications Development program was awarded accreditation by the International Assembly of Collegiate Business Educators (IACBE) in 2008.

II. Program Purpose

The Management faculty reviewed the program purpose, objectives, and learning outcomes during the fall faculty meeting in September 2014. Faculty realized that a future plan needs to be developed regarding outcome similarities between Application Development and Systems Analysis options. The faculty reaffirmed the statements below:

Information Technology – Applications Development Option Mission Statement:

The Information Technology – Applications Development Option degree provides students with the foundation necessary to enable them to design and implement business information systems.

Educational Objectives:

- (1) The Information Technology – Applications Development degree program prepares students to apply critical thinking skills to the ever changing Information Technology industry.
- (2) The Information Technology – Applications Development degree program prepares students to succeed in broad industry applications such as mid-level managers or as IT professionals.

Student Learning Outcomes:

The Information Technology – Applications Development option consists of the eight core Management Department student learning outcomes as well as four student learning outcomes specific to this program. Upon completion of this program, Information-Technology-Applications Development 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 to solve business problems
 - a. Demonstrate the ability to analyze, design, implement, and support Relational Database Management Systems (RDMS).
 - b. Analyze business needs with the view to design and implement data networks.
 - c. Perform the general planning and analysis of business systems that will support the development of modern business information systems (IS).
 - d. Develop fundamental programming skills and apply those skills to solving business information system problems.

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.

IV. 2014-2015 Assessment Activities

Direct Assessment

ETS Major Field Test (SLO 1,2,3,4 are Assessed)

Compared to Nation	Klamath Falls n = 0	Wilsonville n = 4	Distance Ed n = 3
Total Percentile	na	23%	78%

Table 1: ITD Option compared to national individuals who took the ETS Major Field Test

Subject Area	Program Specific n = 7 Percentile Below
1. Accounting	61%
2. Economics	7%
3. Management	30%
4. Quantitative Business Analysis	87%
5. Finance	32%
6. Marketing	22%
7. Legal and Social Environment	28%
8. Information Systems	97%
9. International Issue	1%

Table 2: Program compared by subject

Strengths

Students demonstrated strengths in Information Systems and Quantitative Analysis.

Weaknesses

Students performed poorly in most areas, specifically Economics, International Issues, Marketing and Legal Issues.

Action Plans

Improve students understanding of the value with the ETS Major Field Test process. We can improve student understanding by illustrating the connections and value of those that take the exam as a benchmark of knowledge, in which future employers could look back on. Integrate business core concepts into Information systems courses/assignments.

Senior Case Study (SLO 1,2,3,4,6,7,8 are Assessed)

Criteria n=8	Percentage Met or Exceeded Faculty Expectations
Company Background and statement of the Business Problem or Issue	88%
Analysis	88%
Conclusions	100%

Strengths: Students performed well in all areas of the Case Study Assessment.

Weaknesses: Not enough students to represent a statistically significant sample size.

Action Plans: Phasing out the Application development option, which will eliminate redundancies within our program.

Senior Project (SLO 5,6,7,8 are Assessed)

Performance Criteria	Assessment Method	Measurement Scale	Minimum Acceptable Performance	Results
Project Objective - Identification	Final project	1 – 4 Proficiency Scale	80% achieve 3 or 4 rating	50% (n=6)
Organization Environment - Context	Final project	1 – 4 Proficiency Scale	80% achieve 3 or 4 rating	50% (n=6)
Project Management - Process	Final project	1 – 4 Proficiency Scale	80% achieve 3 or 4 rating	50% (n=6)
Project Completion – Product	Final project	1 – 4 Proficiency Scale	80% achieve 3 or 4 rating	50% (n=6)
Culminating Experience	Final project	1 – 4 Proficiency Scale	80% achieve 3 or 4 rating	100% (n=6)
Written Communication of Results	Final project	1 – 4 Proficiency Scale	80% achieve 3 or 4 rating	33% (n=6)
Oral Communication of Results	Final project	1 – 3 Proficiency Scale	80% achieve rating of 3 on all 6 performance criteria	33% (n=6)

Strengths:

Weaknesses: Students did not perform well on their ability to identify their project problem. Project Management skills were not demonstrated at an acceptable level.

Action Plans: Enhance project management training by pulling out the PM course as a separate and earlier course. Implement across campus senior project teaching, assigning individual advisors to each student. Create a new set of project requirements and teaching methods for senior project candidates. Add another term of the senior project sequence to provide an additional course on selecting a successful project.

Indirect Assessment

PSLO

1. Demonstrate the ability to analyze, design, implement, and support Relational Database Management Systems (RDMS).
2. Analyze business needs with the view to design and implement data networks.
3. Perform the general planning and analysis of business systems that will support the development of modern business information systems (IS).
4. Develop fundamental programming skills and apply those skills to solving business information system problems.

Performance Criteria (PC):

1. Employ SDLC to plan and design IS to meet business needs.
2. Design an IS that incorporates industry standards and best practices.
3. Generate system specifications and project plan.

Survey Question	PC	Assessment Method	Measurement Scale	Minimum Acceptable Performance	Results (KF) n=1	Results (WLV) n=2	Results (DE) n=0
10. I can complete PSLO 1	1	Student rating	1-6 Agreement Scale	80% indicate 5 or 6 rating	100%	100%	n/a
11. I can complete PSLO 2	1	Student rating	1-6 Agreement Scale	80% indicate 5 or 6 rating	100%	100%	n/a
12. I can complete PSLO 3	1 2 3	Student rating	1-6 Agreement Scale	80% indicate 5 or 6 rating	100%	100%	n/a
13. I can complete PSLO 4	1 2 3	Student rating	1-6 Agreement Scale	80% indicate 5 or 6 rating	100%	100%	n/a

Table 3: Assessment Results from Senior Survey

Results from Senior Focus Group

Overall students are pleased with their career prospects and understand the program outcomes. The senior project focus group was facilitated in BUS 478, a course that all seniors in the program are required to take.

Strengths: Students found upper division courses designed for their discipline to be the biggest strength of the program. Students also feel that they are job ready.

Weaknesses: Students mentioned that the program is emphasized too heavily on business courses.

Action Items: Continue efforts to make links between businesses related courses and IT core courses.

V. Summary

The IT program is struggling to obtain quality data from all locations, and with low enrollment continuing to have small sample sizes that drastically affects the quality of our assessment measurements. Re-designing the IT curriculum and outcomes is a current initiative to improve quality and entice enrollment. During the 2013-2014 academic year, program faculty developed a curriculum map based on last year's PSLO recommendation. A proposal for a consolidation of Application development and Systems Analysis has been approved. The expected start date is Fall 15.