I. Program History

History
The field of Health Informatics is the result of the convergence of information management and information technologies. Health informatics professionals work in operational and management positions throughout the health care industry in such locales as hospitals, clinics, managed care organizations, software vendors and government agencies. This degree option was first offered in Klamath Falls and Portland in fall 2008. Current enrollment is 29. First graduates are on track for spring 2010.

II. Program Purpose

The Management faculty reviewed the program purpose, objectives, and learning outcomes during the fall faculty meeting in September 2009. The faculty reaffirmed the statements below:

Information Technology – Health Informatics Mission Statement:

The Information Technology – Health Informatics Option degree provides students with the foundation necessary to enable them to effectively design, develop, implement, evaluate and manage health care information systems and resources.

Educational Objectives:

(1) The Information Technology – Health Informatics degree program prepares students to contribute to the improvement of health care delivery systems.
(2) The Information Technology – Health Informatics degree program prepares students to adapt to ever-changing industry trends.
(3) The Information Technology – Health Informatics 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 – Health Informatics program consists of the nine core Management Department student learning outcomes as well as four student learning outcomes specific to this program. Upon completion of this program, Information-Technology – Health Informatics 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 information literacy.
7. Demonstrate the ability to communicate effectively.
8. Demonstrate the ability to apply knowledge of business concepts and functions in an integrated manner.
9. Demonstrate the ability to work effectively in teams and/or groups.
10. Demonstrate ability to analyze, design, implement, and support Relational Database Management Systems (RBMS)
11. Analyze business needs with the view to design and implement data networks.
12. Perform the general planning and analysis of business systems that will support the development of modern business information systems (IS).
13. Demonstrate an understanding of the design and use of computerized information systems for use in health care.

III. Assessment Cycle

Assessment schedule
IACBE requires all accredited institutions to complete a full assessment cycle for all IACBE core student learning outcomes (SLOs 1-9) on an annual basis. Program-specific learning outcomes (PSLOs 10-13) will be assessed as follows:
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<tbody>
<tr>
<td>10. Demonstrate ability to analyze, design, implement, and support RBMS.</td>
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<td></td>
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<tr>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>11. Analyze business needs with the view to design and implement data networks.</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>12. Perform the planning and analysis of business systems to support IS.</td>
<td></td>
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<td>X</td>
<td></td>
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<tr>
<td>13. Demonstrate an understanding of the design and use of computerized information systems for use in health care.</td>
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<td>X</td>
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<tr>
<td>a. Analyze health care information technology system adoption &amp; optimization</td>
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<td></td>
<td></td>
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<tr>
<td>b. Utilize electronic health records to enter, store and retrieve patient specific clinical data</td>
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<td>X</td>
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<tr>
<td>c. Create electronic health record template demonstrating use of protocols</td>
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<td>X</td>
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Table 1: Assessment Cycle for Information Technology – Health Informatics PSLOs
IV. 2009-2010 Assessment Activities

The assessment results for the nine core student learning outcomes will be reported separately in the IACBE documents. This report covers PSLOs 12 and 13(a) only per the assessment cycle above.

**PSLO #12: Perform the general planning and analysis of business systems that will support the development of modern business information systems (IS).**

**Direct Assessment:** The faculty assessed this outcome in MIS 312 Systems Analysis I winter 2010 in the online section using the final project. There were 15 students involved in the assessment including a mixture of Portland, online, and Klamath students. All of the students were management department majors with the majority being IT majors. The results of this assessment including the performance criteria are shown in the table below.

<table>
<thead>
<tr>
<th>Performance Criteria</th>
<th>Assessment Method</th>
<th>Measurement Scale</th>
<th>Minimum Acceptable Performance</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Employ SDLC to plan and design IS to meet business needs.</td>
<td>Rating of final project</td>
<td>1-4 Proficiency Scale</td>
<td>80% achieve 3 or 4 rating</td>
<td>93.3% (14/15)</td>
</tr>
<tr>
<td>2. Design an IS that incorporates industry standards and best practices.</td>
<td>Rating of final project</td>
<td>1-4 Proficiency Scale</td>
<td>80% achieve 3 or 4 rating</td>
<td>67.7% (10/15)</td>
</tr>
<tr>
<td>3. Generate system specifications and project plan.</td>
<td>Rating of final project</td>
<td>1-4 Proficiency Scale</td>
<td>80% achieve 3 or 4 rating</td>
<td>75% (12/15)</td>
</tr>
</tbody>
</table>

Table 2: Assessment Results for PSLO #12 in MIS 322

**Strengths:** The students know the systems development life cycle, were able to plan and design the system to meet business needs. This was the major emphasis of the project assigned.
Weaknesses: The faculty observed that students may need more emphasis on the industry standards and best practices.

Actions: Faculty do not feel that there are any programmatic problems that require significant action. However, the instructor will give more specific direction in project expectations on industry standards and best practices referring students to information in the textbook.

Indirect Assessment: The faculty indirectly assessed this outcome spring 2010. Seniors completed a senior survey and attended a focus group session. Both the survey and the focus group asked students to rate how well the Information Technology – Health Informatics program taught the program-specific student learning outcomes and corresponding competencies. The survey questions were not specific to the PSLO or performance criteria. There were 8 IT students from both Klamath and Portland campuses who participated in the survey. The survey questions, results, and the corresponding performance criteria are shown in the table below.

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.

<table>
<thead>
<tr>
<th>Survey Question</th>
<th>PC</th>
<th>Assessment Method</th>
<th>Measurement Scale</th>
<th>Minimum Acceptable Performance</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I can create a data model.</td>
<td>1</td>
<td>Student rating</td>
<td>1-4 Proficiency Scale</td>
<td>80% achieve 3 or 4 rating</td>
<td>100%</td>
</tr>
<tr>
<td>2. I can create a business process model.</td>
<td>1</td>
<td>Student rating</td>
<td>1-4 Proficiency Scale</td>
<td>80% achieve 3 or 4 rating</td>
<td>85.7%</td>
</tr>
<tr>
<td>3. I can use systems modeling tools to analyze, design and implement an IS.</td>
<td>1 2 3</td>
<td>Student rating</td>
<td>1-4 Proficiency Scale</td>
<td>80% achieve 3 or 4 rating</td>
<td>85.7%</td>
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Table 3: Assessment Results for PSLO #12 from Senior Survey
Upon review of the results of the senior survey for the questions that correspond to PSLO #12, faculty observed that student’s perception of their ability is congruent with their performance as found in the MIS 312 Business Systems Analysis I. However, open comments from the senior survey and student responses from the focus group seem to indicate some suggested program improvements in the following areas:

- More hands-on and practical application in IT courses.
- Greater emphasis on current software.
- Greater selection of IT electives.
- Better connection and sequencing between courses in the IT curriculum.
- Better connection between IT curriculum and industry demands.
- Allow option of an internship in lieu of the senior project.

The current IT graduates have experienced turnover in IT faculty which has lead to much of their frustration with the IT programs. Many of their IT courses have been taught by adjunct faculty or through some kind of distance delivery over the past two years. The management department has been activity seeking qualified IT faculty to fill two vacant positions, but failed searches have left these positions unfilled for two years.

**PSLO #13: Demonstrate an understanding of the design and use of computerized information systems for use in health care.**

- (a) Analyze health care information technology system adoption and optimization.

**Direct Assessment:** The faculty assessed this outcome in MIS 345 (3 students), MIS 225 (5 students) and MIS 357 (8 students) winter 2010. The results of these assessments including the performance criteria are shown in the table below.

<table>
<thead>
<tr>
<th>Performance Criteria</th>
<th>Assessment Method</th>
<th>Measurement Scale</th>
<th>Minimum Acceptable Performance</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Analyze health care IT system adoption.</td>
<td>Rating of lab assignment</td>
<td>1-4 Proficiency Scale</td>
<td>75% achieve 3 or 4 rating</td>
<td>81.3% (13/16)</td>
</tr>
<tr>
<td>2. Analyze health care IT system optimization.</td>
<td>Rating of lab assignment</td>
<td>1-4 Proficiency Scale</td>
<td>75% achieve 3 or 4 rating</td>
<td>81.3% (13/16)</td>
</tr>
</tbody>
</table>

Table 4: Assessment Results for PSLO #13(a) in MIS 445
Student performance as rated by faculty is well above the minimum acceptable performance. No further action required.

**Indirect Assessment:** The faculty attempted to indirectly assess this outcome spring 2010. Seniors were asked to complete a senior survey and attended a focus group session. Both the survey and the focus group asked students to rate how well the Information Technology – Health Informatics program taught the program-specific student learning outcomes and corresponding competencies. This year there is only one graduate and this student did not respond to the survey or attend the focus group.

V. **Summary of Student Learning**

The top priority for the IT programs is to bring in qualified IT faculty to restore the balance on the Klamath Falls campus. Currently two new IT faculty (one of which has a health informatics background) have accepted offers to fill these positions beginning fall 2010. The chair of the management department along with the IT faculty will review the student feedback during the fall convocation assessment meeting. The IT faculty will also review IT program student learning outcomes and the corresponding criteria, mapping these criteria to the curriculum. Plans will be made to assess performance criteria in all three locations: Klamath campus, Portland campus and online. Further review of the IT curriculum will be done spring of 2011 following assessment activities for 2010-11.

VI. **Changes Resulting from Assessment**

Not applicable this year.