Information Technology and Management Assessment Plan for Undergraduate Degrees, 2016-2018 (Revision 2)

Assessment plans for 2016-2018 will adhere to the rubric as defined by the IIT Assessment Report Evaluation Rubric. One program educational objective and six to seven student outcomes will be assessed each term, and all objectives and outcomes will be assessed twice in each three-year cycle. The full list of objectives and outcomes follows beginning on page 3 below. Separate roll-out strategies will be used for the undergraduate and graduate programs. This document addresses the courses in the Undergraduate Program.

Spring 2016:
Program Educational Objectives Assessed: 1
Student Outcomes Assessed: (b), (c), (d), (g), (h), (i), (m), (n)
Student Artifacts: Survey / April 2016 / Evaluation by ITM Curriculum Committee members
131 artifacts collected / Full information is provided in the Information Technology and Management Assessment Report Spring 2016

Courses assessed:

<table>
<thead>
<tr>
<th>Curricular Area</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systems</td>
<td>ITM 301 Introduction to Contemporary Hardware and Operating Systems I</td>
</tr>
<tr>
<td>Software Development</td>
<td>ITM 311 Introduction to Software Development</td>
</tr>
<tr>
<td>IT Management</td>
<td>ITMM 471 Project Management for ITM</td>
</tr>
<tr>
<td>Systems</td>
<td>ITMT 430 System Integration</td>
</tr>
</tbody>
</table>

Fall 2016:
Program Educational Objectives Assessed: 3
Student Outcomes Assessed: (c), (e), (f), (h), (i), (k)
Student Artifacts: Survey / November 2016 / Evaluation by ITM Curriculum Committee
Assignments / December 2016 / Evaluator(s) TBD

Courses assessed:

<table>
<thead>
<tr>
<th>Curricular Area</th>
<th>Course</th>
</tr>
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<tbody>
<tr>
<td>Data Management</td>
<td>ITMD 421 Data Modeling and Applications\</td>
</tr>
<tr>
<td>Networking and Communications</td>
<td>ITMO 440 Introduction to Data Networks and the Internet</td>
</tr>
<tr>
<td>System Security</td>
<td>ITMS 448 Cyber Security Technologies</td>
</tr>
</tbody>
</table>

Spring 2017:
Program Educational Objectives Assessed: 1, 2
Student Outcomes Assessed: (a), (b), (c), (j), (k), (l), (m)
Student Artifacts: Survey / April 2017 / Evaluation by ITM Curriculum Committee
Assignments / May 2017 / Evaluator(s) TBD

Courses assessed:

<table>
<thead>
<tr>
<th>Curricular Area</th>
<th>Course</th>
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<tbody>
<tr>
<td>Web Design and HCI</td>
<td>ITMD 362 Human Computer Interaction and Web Design</td>
</tr>
<tr>
<td>Software Development</td>
<td>ITMD 411 Intermediate Software Development</td>
</tr>
<tr>
<td>Systems</td>
<td>ITMT 430 System Integration</td>
</tr>
</tbody>
</table>
**Fall 2017:**
Program Educational Objectives Assessed: 3
Student Outcomes Assessed: (a), (d), (e), (h), (l), (n)
Student Artifacts: Survey / November 2017 / Evaluation by ITM Curriculum Committee
Assignments / December 2017 / Evaluator(s) TBD

Courses assessed:

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<td>Systems</td>
<td>ITM 301 Hardware and Operating Systems</td>
</tr>
<tr>
<td>Software Development</td>
<td>ITM 311 Introduction to Software Development</td>
</tr>
<tr>
<td>IT Management</td>
<td>ITMM 471 Project Management for ITM</td>
</tr>
</tbody>
</table>

**Spring 2018:**
Program Educational Objectives Assessed: 1
Student Outcomes Assessed: (b), (c), (g), (j), (k), (m)
Student Artifacts: Survey / April 2018 / Evaluation by ITM Curriculum Committee
Assignments / May 2018 / Evaluator(s) TBD

Courses assessed:

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<td>Web Design and HCI</td>
<td>ITMD 362 Human Computer Interaction and Web Design</td>
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<td>ITMD 421 Data Modeling and Applications</td>
</tr>
<tr>
<td>Systems</td>
<td>ITMT 430 System Integration</td>
</tr>
</tbody>
</table>

**Fall 2018:**
Program Educational Objectives Assessed: 2
Student Outcomes Assessed: (c), (f), (i), (k), (m), (n)
Student Artifacts: Survey / November 2018 / Evaluation by ITM Curriculum Committee
Assignments / December 2018 / Evaluator(s) TBD

Courses assessed:

<table>
<thead>
<tr>
<th>Curricular Area</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software Development</td>
<td>ITMD 411 Intermediate Software Development</td>
</tr>
<tr>
<td>Networking and Communications</td>
<td>ITMO 440 Introduction to Data Networks and the Internet</td>
</tr>
<tr>
<td>System Security</td>
<td>ITMS 448 Cyber Security Technologies</td>
</tr>
</tbody>
</table>
The following program education objectives will be evaluated for HLC and ABET accreditation purposes:

<table>
<thead>
<tr>
<th>Program Educational Objective</th>
<th>Required Courses Supporting the Objective</th>
</tr>
</thead>
</table>
| 1. Problem solve and create innovative answers to provide technology solutions for the problems of business, industry, government, non-profit organizations, and individuals. | ITMD 411 Intermediate Software Development  
ITMD 421 Data Modeling & Applications  
ITMT 430 Systems Integration  
IPRO 3/497 Interprofessional Project  
(Not assessed by the department)                                                                                                                                                                |
| 2. Perform requirements analysis, design and administration of computer and network-based systems conforming to policy and best practices, and monitor and support continuing development of relevant policy and best practices as appropriate. | ITM 311 Introduction to Software Development  
ITMD 362 Human-Computer Interaction and Web Design  
ITMO 440 Introduction to Data Networking & the Internet  
ITMO 456 Introduction to Open Source Operating Systems  
(Not included in assessment cycle as role is very narrow)  
ITMS 448 Cyber Security Technologies  
ITMT 430 Systems Integration                                                                                                                                                                    |
| 3. Apply current technical and mathematical concepts and practices in the core information technologies and recognize the need to engage in continuing professional development. | ITMD 411 Intermediate Software Development  
ITMD 421 Data Modeling & Applications  
ITMM 471 Project Management for ITM  
ITMO 440 Introduction to Data Networking & the Internet  
ITMT 430 Systems Integration                                                                                                                                                                    |

The following student outcomes will be evaluated for ABET accreditation purposes:

<table>
<thead>
<tr>
<th>Student Outcomes</th>
<th>Required Courses Supporting the Outcome</th>
</tr>
</thead>
</table>
| (a) An ability to apply knowledge of computing and mathematics appropriate to the program’s student outcomes and to the discipline | ITM 311 Introduction to Software Development  
ITM 312 Introduction to Systems Software Programming  
ITMO 440 Introduction to Data Networking & the Internet  
ITMT 430 Systems Integration                                                                                                                                                                    |
| (b) An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution | ITM 311 Introduction to Software Development  
ITM 312 Introduction to Systems Software Programming  
ITMD 361 Fundamentals of Web Development  
ITMD 362 Human-Computer Interaction and Web Design  
ITMD 411 Intermediate Software Development  
ITMD 421 Data Modeling & Applications  
ITMO 440 Introduction to Data Networking & the Internet  
ITMS 448 Cyber Security Technologies  
ITMT 430 Systems Integration                                                                                                                                                                    |
<table>
<thead>
<tr>
<th>Student Outcomes</th>
<th>Required Courses Supporting the Outcome</th>
</tr>
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</table>
| (c) An ability to design, implement, and evaluate a computer-based system,      | ITM 301 Intro to Contemp Operating Systems & Hardware I  
ITM 311 Introduction to Software Development  
ITM 312 Introduction to Systems Software Programming  
ITMD 361 Fundamentals of Web Development  
ITMD 362 Human-Computer Interaction and Web Design  
ITMD 411 Intermediate Software Development  
ITMD 421 Data Modeling & Applications  
ITMO 440 Introduction to Data Networking & the Internet  
ITMO 456 Introduction to Open Source Operating Systems  
ITMS 448 Cyber Security Technologies  
ITMT 430 Systems Integration                                                        |
| process, component, or program to meet desired needs                              | (d) An ability to function effectively on teams to accomplish a common goal                                |
|                                                                                 | ITMD 362 Human-Computer Interaction and Web Design  
ITMM 471 Project Management for ITM  
ITMS 448 Cyber Security Technologies  
ITMT 430 Systems Integration  
IPRO 397/497 Interprofessional Project                                               |
|                                                                                 | (e) An understanding of professional, ethical, legal, security and social issues and responsibilities     |
|                                                                                 | ITM 301 Intro to Contemp Operating Systems & Hardware I  
ITM 311 Introduction to Software Development  
ITM 312 Introduction to Systems Software Programming  
ITMD 361 Fundamentals of Web Development  
ITMD 421 Data Modeling & Applications  
ITMM 471 Project Management for ITM  
ITMO 456 Introduction to Open Source Operating Systems  
ITMS 448 Cyber Security Technologies  
ITMT 430 Systems Integration  
IPRO 397/497 Interprofessional Project                                               |
|                                                                                 | (f) An ability to communicate effectively with a range of audiences                                       |
|                                                                                 | ITM 301 Intro to Contemp Operating Systems & Hardware I  
ITMD 361 Fundamentals of Web Development  
ITMD 362 Human-Computer Interaction and Web Design  
ITMM 471 Project Management for ITM  
ITMS 448 Cyber Security Technologies  
IPRO 397/497 Interprofessional Project                                               |
|                                                                                 | (g) An ability to analyze the local and global impact of computing on individuals, organizations, and    |
|                                                                                 | society                                                                                                 |
|                                                                                 | ITMT 430 Systems Integration  
IPRO 397/497 Interprofessional Project                                               |
|                                                                                 | (h) Recognition of the need for and an ability to engage in continuing professional development          |
|                                                                                 | ITM 301 Intro to Contemp Operating Systems & Hardware I  
ITM 311 Introduction to Software Development  
ITMD 411 Intermediate Software Development  
ITMD 421 Data Modeling & Applications  
ITMM 471 Project Management for ITM  
ITMO 440 Introduction to Data Networking & the Internet  
ITMT 430 Systems Integration  
IPRO 397/497 Interprofessional Project                                               |
<table>
<thead>
<tr>
<th>Student Outcomes</th>
<th>Required Courses Supporting the Outcome</th>
</tr>
</thead>
</table>
| (i) An ability to use current techniques, skills, and tools necessary for computing practice. | ITM 301 Intro to Contemp Operating Systems & Hardware I  
ITM 311 Introduction to Software Development  
ITM 312 Introduction to Systems Software Programming  
ITMD 361 Fundamentals of Web Development  
ITMD 411 Intermediate Software Development  
ITMD 421 Data Modeling & Applications  
ITMO 440 Introduction to Data Networking & the Internet  
ITMO 456 Introduction to Open Source Operating Systems  
ITMS 448 Cyber Security Technologies  
ITMT 430 Systems Integration |
| (j)(1) An ability to use and apply current technical concepts and practices in the core information technology of human computer interaction | ITMD 362 Human-Computer Interaction and Web Design  
ITMT 430 Systems Integration |
| (j)(2) An ability to use and apply current technical concepts and practices in the core information technology of information management. | ITMD 421 Data Modeling & Applications  
ITMT 430 Systems Integration |
| (j)(3) An ability to use and apply current technical concepts and practices in the core information technology of programming. | ITM 311 Introduction to Software Development  
ITM 312 Introduction to Systems Software Programming  
ITMD 411 Intermediate Software Development  
ITMT 430 Systems Integration |
| (j)(4) An ability to use and apply current technical concepts and practices in the core information technology of networking. | ITMO 440 Introduction to Data Networking & the Internet  
ITMO 456 Introduction to Open Source Operating Systems  
ITMT 430 Systems Integration |
| (j)(5) An ability to use and apply current technical concepts and practices in the core information technology of web systems and technologies. | ITMD 361 Fundamentals of Web Development  
ITMD 362 Human-Computer Interaction and Web Design  
ITMT 430 Systems Integration |
| (k) An ability to identify and analyze user needs and take them into account in the selection, creation, evaluation and administration of computer-based systems. | ITM 311 Introduction to Software Development  
ITM 362 Human-Computer Interaction and Web Design  
ITMD 411 Intermediate Software Development  
ITMD 421 Data Modeling & Applications  
ITMM 471 Project Management for ITM  
ITMO 440 Introduction to Data Networking & the Internet  
ITMO 456 Introduction to Open Source Operating Systems  
ITMT 430 Systems Integration |
| (l) An ability to effectively integrate IT-based solutions into the user environment. | ITM 301 Intro to Contemp Operating Systems & Hardware I  
ITMD 362 Human-Computer Interaction and Web Design  
ITMT 430 Systems Integration |
Student Outcomes | Required Courses Supporting the Outcome
---|---
(m) An understanding of best practices and standards and their application. | ITM 301 Intro to Contemp Operating Systems & Hardware I  
ITM 311 Introduction to Software Development  
ITM 312 Introduction to Systems Software Programming  
ITM 361 Fundamentals of Web Development  
ITM 362 Human-Computer Interaction and Web Design  
ITM 411 Intermediate Software Development  
ITM 421 Data Modeling & Applications  
ITMM 471 Project Management for ITM  
ITMO 456 Introduction to Open Source Operating Systems  
ITMS 448 Cyber Security Technologies  
ITMT 430 Systems Integration
(n) An ability to assist in the creation of an effective project plan. | ITMM 471 Project Management for ITM  
ITMS 448 Cyber Security Technologies  
ITMT 430 Systems Integration  
IPRO 397/497 Interprofessional Project

Survey drafting and data collection staff:
Amber Chattalier, ITM Department Manager  
Angela Jarka, ITM Assistant Department Coordinator

Assessment Evaluators:

*ITM Curriculum Committee*

The Curriculum Committee evaluates Survey Artifacts and makes recommendations based on evaluations of all assessment artifacts. All full-time faculty members are voting members of the committee should they elect to participate.

**Chair:** Ray Trygstad, ITM Associate Chair and Industry Professor  
**Members:** Jeremy Hajek, Industry Associate Professor  
Louis F. McHugh IV, SAT Computer Systems Manager and Adjunct Industry Associate Professor  
Thomas “T.J.” Johnson, Adjunct Industry Professor  
Sheik “Sam” Shamsuddin, Adjunct Industry Professor; College of DuPage Professor and Computer Information System Program Coordinator

**Faculty:** C. Robert Carlson, ITM Chair and Professor  
Karl Stolley, Associate Professor (joint appointment)  
Adarsh Arora, Coleman Entrepreneur-in-Residence and Industry Professor  
William Lidinsky, Interim Director, Center for Cyber Security and Forensics Education and Industry Professor  
James Pappademas, Industry Professor  
Yong Zheng, Senior Lecturer

All full-time faculty members may be appointed as assessment evaluators for Assignment Artifacts. Appointments will be made at the beginning of each term in which assignments will be assessed, and the Assessment Plan will be updated to reflect these appointments.