

**Computer Science (Software Engineering and Technical Applications) Criteria for Success (2016-17)**

| Department Learning Outcomes  | Program Learning Outcomes  | Measure  | Criteria for Success   |
|---|--|--|--|
| Graduates will have a coherent and broad based knowledge of their discipline.<br><br>(Teach)  | Students will be able to write correct and robust software.  | CSC 254 Signature Assignment (A)   | 80% of the students should have an average score of at least 2.5 in each of the major areas.   |
|   | Students will use the theory of algorithms and computation to solve problems.  | ETS MFT: Structures and algorithms subscore (A)  | ETS MFT: The department subscore will be at the 65th percentile or higher.   |
|   | Students will analyze the interaction between hardware and software.   | ETS MFT: Computer Organization, Architecture and Operating Systems subscore (A)<br><br>CSC314 Signature Assignment (A)             | ETS MFT: The department subscore will be at the 65th percentile or higher.<br><br>CSC314: 80% of the students should have an average score of at least 70%.  |
| Students will develop characteristics necessary to be effective members of the communities where they work and live.<br><br>(Shape) | Students will be able to apply their technical knowledge and critical thinking to solve problems. (CC: CT)                                   | CSC493 Signature Assignment (2)<br><br>ETS Proficiency Profile: Critical Thinking (A)  | 75% of the students will score at least 70%.<br><br>ETS PP: 85% of the students will be marginal or proficient at Level 2 Reading/Critical Thinking.   |
|   | Students will be able to speak about their work with precision, clarity and organization. (CC: OC)   | Senior Seminar: Oral presentation evaluated by a jury using a rubric (A).  | 80% of the students should have an average score of at least 2.5 in each of the major areas in the department rubric. This translates to 80% of the students being above a 3.5 in the AAC&U rubric.  |
|   | Students will be able to write about their work with precision, clarity and organization. (CC: WC)   | Senior Seminar: Written summary evaluated by a jury using a rubric (A).<br><br>ETS Proficiency Profile: Writing (A)                | 80% of the students should have an average score of at least 2.5 in each of the major areas in the department rubric. This translates to 80% of the students being above a 3.5 in the AAC&U rubric.<br><br>ETS PP: 85% of our students will be marginal or proficient on the Level 2 Writing test. |
|   | Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand. (CC: IL) | Senior Seminar: Written summary evaluated by a jury using the information literacy portion of the departmental writing rubric (A). | 80% of the students should have an average score of at least 2.5 in each of the major areas in the information literacy part of the rubric.  |
|   | Students will collaborate effectively in teams.  | ISS342 Group assignment (2)  | 80% of the students should have an average score of at least 2.5 in each of the major areas.   |
|   | Students will be able to understand and create arguments supported by quantitative evidence. (CC: QR)  | ETS Proficiency Profile: Mathematics (A)   | ETS PP: ETS PP: 95% of the students will be Marginal or Proficient at Level 2.   |

| Department Learning Outcomes  | Program Learning Outcomes  | Measure  | Criteria for Success  |
|---|--|--|---|
| <p>We believe that work is an act of service. Graduates will be prepared to serve a complex world through their technical and professional abilities.</p> <p>(Send)</p> | <p>Graduates will be prepared for careers that use computer science in business, industry, government and the non-profit sector; and graduate study in fields related to computer science.</p> | <p>Overall ETS Score (A)</p> <p>Alumni survey (PR)</p> <ul style="list-style-type: none"> <li>• If you have a job in Computer Science or Information Systems: On a scale of 1 to 5, 1 being outstanding and 5 being poor, how well do you think that the undergraduate Information Systems curriculum at PLNU prepared you for your work in the field?</li> <li>• If you are going to graduate school or went to graduate school: On a scale of 1 to 5, 1 being outstanding and 5 being poor, how well do you think that the undergraduate Information Systems curriculum at PLNU prepared you for graduate school?</li> </ul> | <p>ETS MFT: 50% of our students achieve above the 50th percentile on the exam.</p> <p>Survey: An average response of 2 for each question.</p> |

A – means that the measure is done annually

2 – means that the measure done every two years

PR – means that the measure done every six years as part of Program Review

### Information Systems Curriculum Criteria for Success - MICS (2016-17)

| Department Learning Outcomes  | Program Learning Outcomes   | Measure  | Criteria for Success   |
|---|---|--|--|
| Graduates will have a coherent and broad based knowledge of their discipline.<br><br>(Teach)  | Students will be able to write correct and robust software.   | MICS: CSC252/CSC254 Signature Assignment (A)   | MICS: 80% of the students should have an average score of at least 2.5 in each of the major areas.   |
|   | Students will analyze the interaction between hardware and software.  | MICS: CSC314 Signature Assignment (A)  | MICS: CSC314: 80% of the students should have an average score of at least 7.  |
|   | Students will demonstrate general knowledge of theories and practices in the core areas of business.  | FSB: Peregrine Comprehensive Exam (A)  | FSB: At or above the average total score of comparative ACBSP schools.   |
| Students will develop characteristics necessary to be effective members of the communities where they work and live.<br><br>(Shape) | Students will critically analyze and apply business knowledge to solve complex business situations. (CC: CT)  | FSB: CAPSIM COMP-XM Simulation Results – Balanced Score Card through 4 years<br><br>FSB: CAPSIM COMP-XM Simulation Results – Balanced Score Card through 4 years | FSB: Score above 70th percentile on the national COMP-XM Simulation Results<br><br>FSB: Score above 55th percentile on the national COMP-XM Board Query Results  |
|   | Students will be able to apply their technical knowledge and critical thinking to solve problems. (CC: CT)  | MICS: ISS414 Signature Assignment (2)<br><br>MICS: ETS Proficiency Profile: Critical Thinking (A)  | MICS: 80% of the students should have an average score of at least 2.5 in each of the major areas.<br><br>MICS: ETS PP: 85% of the students will be marginal or proficient at Level 2 Reading/Critical Thinking.   |
|   | Students will demonstrate effective business communication through both written and verbal means  | MICS: Internship Paper (A)<br><br>MICS: Video Cover Letter (A)   | MICS: 75% of students will score at least a 3.0 or higher on a 4.0 scale on Final Internship Research Report<br><br>MICS: 75% of students will score at least a 3.0 or higher on a 4.0 scale on Video Cover Letter (starting 2017-18)  |
|   | <i>(a) Students will be able to speak about their work with precision, clarity and organization. (CC: OC)</i>   | MICS: Senior Seminar: Oral presentation evaluated by a jury using a rubric (A).  | MICS: 80% of the students should have an average score of at least 2.5 in each of the major areas in the department rubric. This translates to 80% of the students being above a 3.5 in the AAC&U rubric.  |
|   | <i>(b) Students will be able to write about their work with precision, clarity and organization. (CC: WC)</i>   | MICS: Senior Seminar: Written summary evaluated by a jury using a rubric (A).<br><br>MICS: ETS Proficiency Profile: Writing (A)                                  | MICS: 80% of the students should have an average score of at least 2.5 in each of the major areas in the department rubric. This translates to 80% of the students being above a 3.5 in the AAC&U rubric.<br><br>MICS: ETS PP: 85% of our students will be marginal or proficient on the Level 2 Writing test. |
|   | <i>(c) Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand. (CC: IL)</i> | MICS: Senior Seminar: Written summary evaluated by a jury using the information literacy portion of the departmental writing rubric (A).                         | MICS: 80% of the students should have an average score of at least 2.5 in each of the major areas in the information literacy part of the rubric.  |

| Department Learning Outcomes   | Program Learning Outcomes   | Measure  | Criteria for Success  |
|--|---|--|---|
| Students will develop characteristics necessary to be effective members of the communities where they work and live.<br><br>(Shape)                              | Students will collaborate effectively in teams.   | MICS: ISS342 Group assignment (2)<br><br>FSB: CAPSIM COMP-XM Simulation (Team Assignment) Results<br><br>FSB:CAPSIM COMP-XM Knowledge of Team Module Results<br><br>FSB: CAPSIM COMP-XM Peer Evaluation Module Results   | MICS: 80% of the students should have an average score of at least 2.5 in each of the major areas.<br><br>FSB: Average team score will be above 75th percentile on the national Capstone Simulation<br><br>FSB: Average student score will be above the 75th percentile on the COMP-XM Knowledge of Teamwork Module<br><br>FSB: Average student score will be a 4.5 or higher on a 5.0 scale in both areas of the Capstone Peer Evaluation Module |
|  | Students will be able to understand and create arguments supported by quantitative evidence.<br>(CC: QR)  | MICS: ETS Proficiency Profile: Mathematics (A)   | MICS: ETS PP: ETS PP: 95% of the students will be Marginal or Proficient at Level 2.  |
|  | Students will formulate decisions informed by ethical attitudes and values.   | FSB: CAPSIM COMP-XM Ethics Module Results  | FSB: Average student score will be above the 55th percentile on the national COMP-XM Ethics Module  |
| We believe that work is an act of service. Graduates will be prepared to serve a complex world through their technical and professional abilities.<br><br>(Send) | Graduates will be prepared for careers that use information systems in business, industry, government and the non-profit sector; and graduate study in fields related to information systems. | MICS: ETS MFT Computer Science Score (A)<br>We will be switching to the Peregrine Information Systems test (once it is completed) (A)<br><br>MICS: Internship Supervisor Evaluations (A)<br><br>MICS: Alumni survey (PR) <ul style="list-style-type: none"> <li>If you have a job in Computer Science or Information Systems: On a scale of 1 to 5, 1 being outstanding and 5 being poor, how well do you think that the undergraduate Information Systems curriculum at PLNU prepared you for your work in the field?</li> <li>If you are going to graduate school or went to graduate school: On a scale of 1 to 5, 1 being outstanding and 5 being poor, how well do you think that the undergraduate Information Systems curriculum at PLNU prepared you for graduate school?</li> </ul> | MICS: MFT: 50% of our students achieve above the 25th percentile on the exam.<br><br>MICS: Internship: 80% of the students will have an average score of 2.5 or higher on key elements<br><br>MICS: Survey: An average response of 2 for each question.   |

A – means that the measure is done annually

2 – means that the measure done every two years

PR – means that the measure done every six years as part of Program Review

### Mathematics Curriculum Criteria for Success (2016-17)

| Department Learning Outcomes  | Program Learning Outcomes  | Measure  | Criteria for Success   |
|---|--|--|--|
| Graduates will have a coherent and broad based knowledge of their discipline.<br><br>(Teach)  | Students will be able to demonstrate facility with analytical concepts.  | ETS MFT: Calculus subscore (A)   | ETS MFT: The department subscore will be at the 50th percentile or higher  |
|   | Students will be able to write proofs.   | MTH242 (A), MTH424 (2) and MTH444 (2) Signature Assignments  | 80% of the students to score a 2.5 or higher (on a scale of 1-4) in each of the four areas: statement of the problem, logic, symbolism, and justification.   |
|   | Students will be able to demonstrate facility with algebraic structures.   | ETS MFT: Algebra subscore (A)  | ETS MFT: The department subscore will be at the 50th percentile or higher  |
| Students will develop characteristics necessary to be effective members of the communities where they work and live.<br><br>(Shape) | Students will be able to apply their mathematical knowledge and critical thinking to solve problems. (CC: CT)  | ETS MFT: Applied subscore (A)<br><br>ETS Proficiency Profile: Critical Thinking (A)  | ETS MFT: The department subscore will be at the 50th percentile or higher<br><br>ETS PP: 85% of the students will be marginal or proficient at Level 2 Reading/Critical Thinking.  |
|   | Students will be able to use technology to solve problems.   | MTH383 Signature Assignment (2)  | MTH383: 80% of the students should have an average score of at least 2.5 in each of the major areas.   |
|   | Students will be able to speak about their work with precision, clarity and organization. (CC: OC)   | Senior Seminar: Oral presentation evaluated by a jury using a rubric (A).  | 80% of the students should have an average score of at least 2.5 in each of the major areas in the department rubric. This translates to 80% of the students being above a 3.5 in the AAC&U rubric.  |
|   | Students will be able to write about their work with precision, clarity and organization. (CC: WC)   | Senior Seminar: Written summary evaluated by a jury using a rubric (A).<br><br>ETS Proficiency Profile: Writing (A)                | 80% of the students should have an average score of at least 2.5 in each of the major areas in the department rubric. This translates to 80% of the students being above a 3.5 in the AAC&U rubric.<br><br>ETS PP: 85% of our students will be marginal or proficient on the Level 2 Writing test. |
|   | Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand. (CC: IL)   | Senior Seminar: Written summary evaluated by a jury using the information literacy portion of the departmental writing rubric (A). | 80% of the students should have an average score of at least 2.5 in each of the major areas in the information literacy part of the rubric.  |
|   | Students will collaborate effectively in teams.  | MTH352 Group assignment (2)<br>Group rubric/questionnaire  | 80% of the students should have an average score of at least 2.5 in each of the major areas.   |
|   | Students will be able to understand and create arguments supported by quantitative evidence. (CC: QR)<br><br><i>Note this happens throughout all classes in a mathematics program.</i> | ETS Proficiency Profile: Mathematics (A)   | ETS PP: ETS PP: 95% of the students will be Marginal or Proficient at Level 2.   |

| Department Learning Outcomes  | Program Learning Outcomes  | Measure  | Criteria for Success  |
|---|--|--|---|
| <p>We believe that work is an act of service. Graduates will be prepared to serve a complex world through their technical and professional abilities.</p> <p>(Send)</p> | <p>Graduates will be prepared for careers that use mathematics in business, industry, government and the non-profit sector; graduate study in fields related to mathematics; and teaching mathematics and computer science at the secondary level.</p> | <p>Overall ETS Score (A)</p> <p>Alumni survey (PR)</p> <ul style="list-style-type: none"> <li>• If you have a job in Computer Science or Information Systems: On a scale of 1 to 5, 1 being outstanding and 5 being poor, how well do you think that the undergraduate Information Systems curriculum at PLNU prepared you for your work in the field?</li> <li>• If you are going to graduate school or went to graduate school: On a scale of 1 to 5, 1 being outstanding and 5 being poor, how well do you think that the undergraduate Information Systems curriculum at PLNU prepared you for graduate school?</li> </ul> <p>Fieldwork for Prospective Teachers (A)</p> | <p>ETS MFT: 50% of our students achieve above the 50th percentile on the exam.</p> <p>Survey: An average response of 2 for each question.</p> <p>Fieldwork: 80% of the students will have an average score of 2.5 or higher</p> |

A – means that the measure is done annually

2 – means that the measure done every two years

PR – means that the measure done every six years as part of Program Review