Software Engineering MS Course Requirement Worksheet Draft
(Include in Plan of Study)

☐ Thesis: Submit MS Course requirement worksheet, 1 paragraph summary of proposed thesis research area, and a listing of proposed Thesis defense committee members.

☐ Non-Thesis/Coursework: Submit MS Course requirement worksheet

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<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Date</td>
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<td>Prior Degree</td>
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<td>Student ID</td>
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<tr>
<th>Required Units</th>
<th>Semester(s)</th>
<th>Grades</th>
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<tr>
<td>SFWE 507 (3) – Foundations of Software Engineering</td>
<td>Spring</td>
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Additional Core – Select 3 Courses from:
- SFWE 502 (4) – Software DevSecOps (SP)
- SFWE 503 (3) – Software Project Management (F)
- SFWE 504 (3) – Software Requirements Analysis & Test (F24)
- SFWE 505 (3) – Software Architecture & Design (SP25)
- SFWE 506 (3) – Distributed Computing

Technical Computing Electives (Follow One Option)

Emphasis 1: Thesis Option
- Approved Electives (12 units (~4 classes) – see page 2)
- SFWE 910 – Master’s Thesis (6 units)

Emphasis 2: Non-Thesis Option
- Approved Electives (18 units (~6 classes) – see page 2)

TOTAL = 30 minimum

TOTAL (overall, not current) =

*3.0 GPA Required. A grade of C or higher is required for a course to be used to satisfy the degree requirements (A or B for transfer credits).
Approved Technical Computing Graduate Electives ()

*Listed semesters offered are when they are typically offered but subject to change*

- Any SFWE core courses not used to meet the 12-units of Core coursework requirement can also be used as technical electives
- SFWE 501 (3) – SW Assurance *(Spring)*
- SFWE 508 (3) – Data Mining (NEW)
- SFWE 509 (3) – Cloud Computing Principles and Practices (NEW)
- SFWE 510 (3) – Cloud Native Software Engineering (NEW)
- SFWE 511 (3) – Software for Industrial Control Systems (NEW)
- SFWE 512 (3) – Robotics (NEW)
- SFWE 513 (3) – Software Engineering Research Methods (NEW)
- CSE 501 (3) – Operating System Design
- ECE 503 (3) – Probability and Random Processes for Engineering Applications *(Fall)*
- ECE 509 (3) – Cybersecurity Concept, Theory, Practice *(Fall)*
- ECE 513 (3) – Web Development and the IoT *(Fall)*
- ECE 523 (3) – Engineering Applications of Machine Learning and Data Analytics *(Spring)*
- ECE 562 (3) – Computer Architecture and Design *(Spring)*
- ECE 576A (3) – Engineering of Computer Based Systems *(Fall)*
- ECE 576B (3) – Embedded System Design and Optimization *(Spring)*
- ECE 579 (3) – Principles of Artificial Intelligence *(Spring)*
- SIE 533 (3) – Fundamentals of Data Science for Engineers *(Spring)*
- SIE 558 (3) – Model Based Systems Engineering *(Spring)*
- SIE 577 (3) – Introduction to Biomedical Informatics *(Fall, Spring)*

*Other courses may be added at the discretion of the faculty advisor and GSC, or as additional new SFWE courses not listed in section III. New Courses Needed are developed.*

*3.0 GPA Required. A grade of C or higher is required for a course to be used to satisfy the degree requirements (A or B for transfer credits).*