

**From:** [noreply@wsu.edu](mailto:noreply@wsu.edu)  
**To:** [curriculum.submit](#)  
**Subject:** 722859 Electrical Engineering and Computer Science Requirements Revise - Revise or Drop Graduate Plan  
**Date:** Thursday, September 29, 2022 2:54:36 PM  
**Attachments:** [2022.09.29.14.49.51.43.FormData.html](#)  
[2022.09.29.14.49.50.15.currentCatalogFile\\_MSSE\\_MajorChanges\\_09\\_29\\_2022.pdf](#)  
[2022.09.29.14.49.50.15.currentCatalogFile1\\_MSSE\\_MajorChanges\\_Justification09\\_27\\_2022.docx](#)

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Noel Schulz has submitted a request for a major curricular change. His/her email address is: [noel.schulz@wsu.edu](mailto:noel.schulz@wsu.edu).

**Requested change:** Revise or Drop Graduate Plan

**Degree:** MS Software Engineering ( Global Campus only) Masters

**Title:** MS Software Engineering ( Global Campus only)

**Requested Effective Date:** Fall 2023

**Dean:** Beyenal, Haluk - Assoc Dean - VCEA - Grad,

**Chair:** Pande, Partha – Director – Electrical Engineering and Computer Science,

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Catalog Subcommittee  
Approval Date

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AAC, PHSC, or GSC  
Approval Date

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Faculty Senate  
Approval Date

**From:** [Pande, Partha Pratim](#)  
**To:** [curriculum.submit](#)  
**Cc:** [Beyenal, Haluk](#)  
**Subject:** Re: 722859 Electrical Engineering and Computer Science Requirements Revise - Revise or Drop Graduate Plan  
**Date:** Thursday, September 29, 2022 3:08:02 PM  
**Attachments:** [image001.png](#)

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I approve this proposal in its current form.



**Partha Pratim Pande, FIEEE**

Director and Professor  
Boeing Centennial Chair in Computer Engineering  
School of EECS, WSU  
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**From:** [curriculum.submit@wsu.edu](mailto:curriculum.submit@wsu.edu) <[curriculum.submit@wsu.edu](mailto:curriculum.submit@wsu.edu)>  
**Date:** Thursday, September 29, 2022 at 2:52 PM  
**To:** Pande, Partha Pratim <[pande@wsu.edu](mailto:pande@wsu.edu)>  
**Cc:** Beyenal, Haluk <[beyenal@wsu.edu](mailto:beyenal@wsu.edu)>  
**Subject:** 722859 Electrical Engineering and Computer Science Requirements Revise - Revise or Drop Graduate Plan

Pande, Partha – Director – Electrical Engineering and Computer Science,

Beyenal, Haluk - Assoc Dean - VCEA - Grad,

Noel Schulz has submitted a request for a major curricular change.

**Requested change:** Revise or Drop Graduate Plan

**Degree:** MS Software Engineering ( Global Campus only) Masters

**Title:** MS Software Engineering ( Global Campus only)

**Requested Effective Date:** Fall 2023

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Both Chair and Dean approval is required to complete the submission process. Please indicate that you have reviewed the proposal by highlighting one of the statements below and **reply all** to this email. ([curriculum.submit@wsu.edu](mailto:curriculum.submit@wsu.edu).)  
[Details of major change requested can be found in the attached supplemental documentation]

**From:** [Beyenal, Haluk](#)  
**To:** [Pande, Partha Pratim](#); [curriculum.submit](#)  
**Subject:** RE: 722859 Electrical Engineering and Computer Science Requirements Revise - Revise or Drop Graduate Plan  
**Date:** Thursday, September 29, 2022 3:25:27 PM  
**Attachments:** [image002.png](#)  
[image001.png](#)

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I approve.



**HALUK BEYENAL**

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Associate Dean for Research and Graduate Studies  
Associate editor: Frontiers – Microbiotechnology, Ecotoxicology and Bioremediation. Editorial board: Scientific Reports, Biofouling  
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**From:** Pande, Partha Pratim <[pande@wsu.edu](mailto:pande@wsu.edu)>  
**Sent:** Thursday, September 29, 2022 3:08 PM  
**To:** [curriculum.submit](#) <[curriculum.submit@wsu.edu](mailto:curriculum.submit@wsu.edu)>  
**Cc:** Beyenal, Haluk <[beyenal@wsu.edu](mailto:beyenal@wsu.edu)>  
**Subject:** Re: 722859 Electrical Engineering and Computer Science Requirements Revise - Revise or Drop Graduate Plan

I approve this proposal in its current form.



**Partha Pratim Pande, FIEEE**

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**From:** [curriculum.submit@wsu.edu](mailto:curriculum.submit@wsu.edu) <[curriculum.submit@wsu.edu](mailto:curriculum.submit@wsu.edu)>  
**Date:** Thursday, September 29, 2022 at 2:52 PM  
**To:** Pande, Partha Pratim <[pande@wsu.edu](mailto:pande@wsu.edu)>

## ***Major changes for the Online M.S. SE program – Justifications***

The proposed major changes for the Online M.S. in Software Engineering program are four-fold:

### **1. Changes in the capstone requirement:**

According to the current capstone requirement “*The students must pass the required courses (CPT\_S 581 Software Maintenance, CPT\_S 583: Software Quality, and CPT\_S 582: Software Testing) with a grade of B or higher.*”

Since “capstone” refers to the culminating student experience, students should take at least one of the capstone courses during the last semester of their study. However, since we can’t offer all online courses every semester, students may need to take them before their final semester. This issue was discussed with the Graduate School staff and based on their suggestion we are proposing to change the “capstone requirement” as follows:

“Students will take four credits of ‘CPT\_S 702 - Master's Special Problems, Directed Study, and/or Examination’ course and at least two of those credits will be during their final semester.” This course is set to be offered every semester.

The CPT\_S 702 capstone course extends the students’ knowledge and understanding of fundamental software engineering concepts and provides students the opportunity to demonstrate their depth and breadth of understanding of what they learned throughout the program. Students will work under the guidance of a committee of software engineering faculty.

The revised capstone requirement is aligned with the requirements of other non-thesis M.S. programs offered by the School of EECS.

### **2. Removing E\_M 522 from Advanced Course requirements**

In order to accommodate the additional credits of CPT\_S 702, we propose to remove E\_M 522 from the degree requirements. E\_M 522 is not a major course for Software Engineering discipline; it aims to provide the soft skills for managing teams and effective supervision in business and technical environments.

We sought feedback from all our Software Engineering faculty about removing this requirement and it was approved with the unanimous faculty vote.

### **3. Changes in Elective Courses**

The elective online course options may change from year to year based on the availability of faculty who teach them. Online M.S. SE program accepts “*any 500-level course in Software Engineering, Computer Science, Computer Engineering, or Math as elective credit.*”

To provide more flexibility and avoid confusions in advising, we removed the list of graduate (500-level) elective courses.

However, we included the list of the eligible undergraduate (400-level) courses, i.e., “CPT\_S 415 – Big Data” and “CPT\_S 451 – Introduction to Database Systems”. These courses are offered regularly every year.

### **4. Total number of credits for the program**

The total number of credits required by the program is increased from 30 to 31 due to the modified capstone requirement.

#### ***Other modifications include:***

We included a summary of the additional course requirements and limitations on the non-graduate, transfer, and directed-study credits allowed for the Online M.S. in Software Engineering program (please see the text added in the beginning of the “revised program of study”). These are explicitly listed in the course requirements for consistency with other EECS Non-thesis M.S. programs offered by the School of EECS.

In addition, we corrected a typo in the “Core Courses”. The course number for the “Software Requirements” should be CPT\_S 484 instead of CPT\_S 584. There is no WSU course with course number CPT\_S 584.

## Online M.S. in Software Engineering – Major Changes:

### Course Requirements

Students in the Online M.S. in Software Engineering program must complete the following coursework for their Program of Study:

- 30 31 total credits – minimum
  - 27 graded credits – minimum
    - 9 non-graduate (400-level) credits – maximum
    - 6 transferred credits – maximum
    - 3 Directed Study credits (CPT S 595) – maximum
  - 4 CPT S 702 credits – minimum
- Any undergraduate coursework assigned to the student to make up for undergraduate deficiencies at the time of admission may not be used toward the student's degree.

### Core Courses - 9 credits

- CPT\_S 584 484: Software Requirements
- CPT\_S 582: Software Testing
- CPT\_S 587: Software Design and Architecture

### Advanced Courses - 12 13 credits

- CPT\_S 581: Software Maintenance
- CPT\_S 583: Software Quality
- ~~E M 522: Leadership, Supervision and Management~~
- E M 564: Project Management
- CPT S 702: Master's Special Problems, Directed Study, and/or Examination (4 credits)

### Elective Courses - 9 credits taken from the courses listed below

- CPT\_S 415: Big Data
- CPT S 451: Introduction to Database Systems
- E M 522: Leadership, Supervision and Management
- ~~CPT\_S 515: Advanced Algorithms~~
- ~~CPT\_S 540: Artificial Intelligencess~~
- ~~CPT\_S 570: Machine Learning~~
- ~~CPT\_S 580: Advanced Databases~~
- CPT\_S 527: Computer Security OR  
any other 500-level course in Software Engineering, Computer Science, Computer Engineering, or Math

Students are required to satisfy the Capstone Requirement: The students must pass the required courses (Core and Advanced courses listed above) with a grade of B or higher.

### ***Final Examination***

There is no final exam requirement for the Online M.S. in Software Engineering program.

The student must file an Application for Degree form with the Graduate School on or before the deadline date specified by the Graduate School; this is an online process and submission.

The final examination should be scheduled during their last semester. The scheduling form must be submitted to the Graduate Program Coordinator a minimum of three weeks in advance of the examination date. In the case of the written exam detailed below, the scheduling form will denote a Ballot Meeting that the student does not need to attend. Note that the student must be enrolled in a minimum of two CPT S 702 credits during the final exam semester.

The final exam consists of a portfolio of representational projects from the student's Master's course work, a resume/CV, a LinkedIn profile, and a brief response to an assigned paper. The committee will assign a research paper related to the student's degree program, together with a specific set of questions. The student will be asked to write a 5-page report (in scientific format) that addresses the questions and submit it to the committee before the date determined on the exam scheduling form. The committee will then grade the entire final project to determine a Pass/Fail grade and forward the signed examination ballots to the Graduate School.