Master of Engineering in Computer Science

Instructions to complete Plan of Study
2023-2024
Purpose of the Plan of Study

• The Plan of Study is a unique and useful tool for graduate students
• The Plan of Study allows a student to plan all of the courses needed to fulfill the degree requirements
• A Plan of Study can also be a helpful way to determine how to fit in additional activities or classes students may wish to participate in

What is a Plan of Study

• The Plan of Study is a document where you specify the courses you have taken plus the courses that you intend to take, that together will help you complete your degree
• The Graduate School approved Plan of Study serves as a “contract” between you and the university about what courses you intend to take to obtain your degree
PLAN OF STUDY

Prepare  Organize  Submit
**TIMELINE**

- MEng CS Students should submit their Plan of Study prior to the last semester of study in the program
- Accelerated students should submit their Plan of Study in their first semester in the program
- International Students in F-1 status must have departmental approved Plan of Study prior to applying for Curricular Practical Training (CPT)

**PROGRAM DOCUMENTS**

- MEng CS Guide provides tips for choosing courses and degree planning
- MEng Concentration Guide provides a list of concentrations and anticipated term offerings of courses in each concentration
- Design Your Degree Worksheet can assist in planning your MEng CS Plan of Study
- MEng CS Plan of Study can be found in the Forms section of CS – Graduate Programs
MEng CS Degree Requirements

### Degree Requirements
- Complete 30 credit hours (10 courses) of coursework
- Maintain a 3.0 GPA or better on the Plan of Study course work
- Maintain an overall CGPA of 3.0 on ALL courses
- All courses on Plan of Study, must be completed with a grade of “C-” or better
- Transfer credits must follow the rules outlined on the CS Administrivia page
- All transfer credits must have earned grades of “B” or better

### Course Requirements
- CS5024: Ethics & Professionalism in CS
- CS5040: Intermediate Data Structures*
- CS5934: Capstone Design
- Three courses in one Concentration:
  - Software Development & Applications
  - Data Analytics & Artificial Intelligence
  - Computer Security
  - Human-Computer Interaction
- Four or Five elective courses (this could include up to 2 courses at 4000 level and one cognate course), depending upon if you were waived for CS5040

*Can be waived if an equivalent course has been completed
REPEATING COURSES

• All courses on the approved Plan of Study, must be completed with a grade of “C-” or better
• Students are required to repeat any courses on an approved Plan of Study in which a grade below “C-” has been earned
• After the course has been repeated, the grade for the first enrollment will be Repeat Graduate (RG)
• Both courses must be listed on the Plan of Study

GPA

• Only the grade earned for the final enrollment of a Repeat Course will receive a letter grade and be calculated in the GPA
• Students must obtain a 3.0 GPA, both overall and for courses on the Plan of Study
• Grades in all courses are calculated into the overall GPA on the transcript
MEng CS Degree CONCENTRATIONS

Software Development & Applications
- Web Application Development
- Mobile Application Development
- Software Engineering
- Software Design and Quality
- User Interface Software
- Software Project Management

Computer Security
- Fundamentals of Information Security
- Network Architecture and Protocols I
- Network Security
- System and Software Security

Data Analytics & Artificial Intelligence
- Introduction to Artificial Intelligence
- Machine Learning I
- Machine Learning II
- Introduction to Deep Learning
- Introduction to Urban Computing

Human-Computer Interaction*
- Usability Engineering
- Models and Theories of HCI
- Social Computing and CSCW
- Virtual Environments
- Information Visualization
- User Interface Software

*ONLY available at the Blacksburg campus
OFFERED FALL/SPRING

• CS5024: Ethics and Professionalism in CS
• CS5040: Intermediate Data Structures
• CS5805: Machine Learning I
• CS5704: Software Engineering
• CS5560: Fundamentals of Info Security
• CS5934: Capstone Project

COURSE OFFERINGS

• Most courses are offered on a regular schedule, either in the fall or spring or summer semesters
• Course offerings are not the same in Blacksburg and Northern Virginia
• Review Virginia Tech Timetable of Classes for each campus for available course offerings for your campus
• Course Overlap – Be aware of courses which have restrictions due to significant overlap

COURSE OFFERING LINKS

• Computer Science Graduate Courses
• Approved Cognate Courses
• Approved 4000 level courses
• Course Overlap
ORGANIZE

DESIGN YOUR DEGREE

• Complete Design your Degree Worksheet
  → Fill in all classes you have taken
• Review Concentration Guide, MEng CS Guide, VT Timetable of Classes & CS Classes
  → Enter courses you plan to take
  → Review program requirements
  → Review Concentration requirements
• Double check the worksheet
• If needed, schedule an appointment with the MEng CS Academic Advisor for course selection and degree planning

MEEng CS PLAN OF STUDY

• All courses must have a grade of C- or better
• You must maintain a GPA of 3.0
• Maximum of 10 courses on Plan of Study
• GRAD5944 for CPT does not count toward the 10 class requirement
• Transfer and Accelerated UG/GR double-counted classes are ONY listed in the Transfer Courses section
• Courses can only be listed ONCE on a POS
ORGNIZE

- Enter Last/Family Name
- Enter First/Given Name
- Enter Estimated Graduation Term (Fall/Spring/Summer and Year)
- Enter Last 4 of VT ID #
- Enter VT Email Address
- Choose Campus
- Check if you are an Accelerated UG/G Student
**ENTER MEng REQUIREMENTS**

- Enter MEng Requirements
  - Check CS5040 Waived at admission if appropriate
  - You can take CS5040 for credit even if it was waived
- Enter Semester (Fall/Spring/Summer)
- Enter Calendar Year course was taken or you intend to take
- Enter Credits for course

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### MEng Requirements

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Semester</th>
<th>Year</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CS5040</td>
<td>Intermediate Data Structures*</td>
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<td><a href="#">Waived at admission</a></td>
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<td><a href="#">Approved waiver request</a></td>
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*CS 5040 requirement can be waived by departmental approval (to be replaced by another course at the 5000 or 6000-level), if an equivalent course has been completed previously.*

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<td>Capstone Project</td>
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**ENTER CONCENTRATION COURSES**

- Enter Concentration Area
- Enter Course Number
- Enter Course Name
- Enter Semester (Fall/Spring/Summer)
- Enter Calendar Year course was taken or you intend to take
- Enter credits for course
CS Courses at 5000 level and above. Excluding CS 5894, 5904, 5944, 5994, and 7994.
List courses in chronological order by term.

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ENTER 5000 LEVEL COURSES

- Enter Course Number
- Enter Course Name
- Enter Semester (Fall/Spring/Summer)
- Enter Calendar Year course was taken or you intend to take
- Enter Credits for course
ENTER 4000 LEVEL COURSES

- Maximum of six credits at the 4000 level
- Enter Course Number
- Enter Course Name
- Enter Semester (Fall/Spring/Summer)
- Enter Calendar Year course was taken or you intend to take
- Enter Credits for course
**ENTER APPROVED COGNATE COURSE**

- Maximum of three credits
- Enter Course Number
- Enter Course Name
- Enter Semester (Fall/Spring/Summer)
- Enter Calendar Year course was taken or you intend to take
- Enter Credits for course
Enter GRAD5944 for CPT

- For International Students ONLY
- Enter Semester (Fall/Spring/Summer) of internship
- Enter Calendar Year of internship
- Zero Credits
### Transfer Courses

<table>
<thead>
<tr>
<th>VT Course Number, Name or Area</th>
<th>Original Course Number, Name, University</th>
<th>Semester</th>
<th>Year</th>
<th>Credits</th>
</tr>
</thead>
</table>

**ENTER TRANSFER COURSES**

- Accelerated students list classes from Accelerated UG/GR Form
- List Graduate transfer classes
- Enter Course Number
- Enter Course Name
- Enter Semester (Fall/Spring/Summer)
- Enter Calendar Year course was taken or you intend to take
- Enter Credits for course
ENTER NAME, SIGN AND DATE

- Enter Name
- Sign Plan of Study
- Enter Date
- Email Plan of Study to Alexis L. Snyder (asnyder017@vt.edu) for signature approval
- Submit academic advisor approved Plan of Study to [CS Graduate Form Submission Portal](#)
PLAN OF STUDY - Review

- Review Plan of Study for errors
- Ensure all information is correct
- List Transfer & UG/GR courses in Transfer Courses section ONLY
- You may only list 10 courses on Plan of Study
- If you are pursuing a CPT/Internship then GRAD5944 will be the 11th course on your Plan of Study
- Department approved Plan of Study required for application for CPT/Internship

SUBMIT

- Email POS to Alexis L. Snyder for approval
- Submit the Plan of Study to the CS Graduate Program Form Submission Portal
- The Plan of Study can take two to four weeks to receive Graduate School Approval
- Please plan accordingly
- The Graduate School cannot expedite a Plan of Study or Student Forms
QUESTIONS:

What if I change my courses after submitting the Plan of Study?

• You must complete a Plan of Study Change Request and submit to the CS Graduate Form Submission Portal
• Submit form in a timely manner
• Graduate school does not expedite forms

ADVISING:

• If you have questions regarding classes and degree planning, schedule an appointment with Alexis L. Snyder, MEng CS Academic Advisor through Navigate