Master of Science in Computer Science (MSCS)
New Students Orientation
Fall 2020
Welcome!
Meet Each Other!

1. What is your name?
2. Where is home?
3. Where will you be physically located this fall?
4. What is one fun/interesting thing you did this summer?
Outline

• Department
• Graduate programs
  — MSCS - General
    • Graduate research project
  — Specialization
    • MSCS-SE – Software Engineering
    • MSCS-DS – Data Science
• Preparatory courses (MSCS prerequisites)
• Internships
• Advising and class registration
• Clubs
• Q & A
Computer Science Department

- 20 full-time faculty
- 495 students

Demographics

- White: 29%
- Non-resident: 27%
- Asian/Pacific Islander: 25%
- Two or more races: 7%
- Hispanic: 5%
- Unknown: 4%
- Black: 3%
- Native American: <1%
- Hispanic: 5%
- Unknown: 4%
- Black: 3%
- Native American: <1%

Students

- Undergraduate: 62%
- Graduate: 38%
Graduate Programs

- **MSCS General**
  - Course only option
    - Graduate Seminar (CPSC 5890) + a fourth elective
  - Research project option
    - Two-quarter long supervised research project (CPSC 5990)

- **MSCS-SE**
  - Software Engineering Specialization
  - A two-quarter-long, industry-sponsored capstone project

- **MSCS-DS**
  - Data Science Specialization
  - A one-quarter-long, real world data science capstone project
MSCS-SE & MSCS-DS

• Both specializations have strict sequencing requirements
  – Certain courses must be taken during certain quarters including the first quarter in the fall.

• These requirements are for full-time students who want to finish in five quarters.
MSCS General Degree Requirements
Min. Credits: 45

Required Courses (22 credits)

Choose One (8 credits)

CPSC Electives (15 credits)
MSCS General:
Graduate Research Project Option

• 8 Credits, spanning over two quarters

• Supervised by a project advisor

• Deliverables
  – A technical paper
  – A final presentation

• Standardized procedure
  – Request form (needs dept. approval)
  – MSCS Research Project Guidebook for Faculty and Students
  – URL: https://www.seattleu.edu/scieng/computer-science/projects/grad-research/
MSCS with Specialization in Software Engineering

MSCS-SE
MSCS-Software Engineering Degree Requirements
Min. Credits: 45

Required Courses (40 credits)

One CPSC Elective (5 credits)
MSCS-SE
Software Engineering Project

• Teams of 4 or 5 students

• Industry sponsored, using an agile development process

• Substantial team responsibility for working with sponsor to determine requirements

• Must be taken in two consecutive quarters

• Not expected to be possible to start every quarter
Interested in the Software Engineering Specialization….

• **CPSC 5100 – Fall 2020**
  – You **MUST** register for CPSC 5100 Agile Software Development Requirements in the fall quarter
  – both part-time and full-time
# MSCS-SE: Typical Schedules

## Full-time

<table>
<thead>
<tr>
<th>Year</th>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
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<tr>
<td>1</td>
<td>CPSC 5100</td>
<td>CPSC 5200</td>
<td>CPSC 5210</td>
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## Part-time

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<td>3</td>
<td>SE Project</td>
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MSCS with Specialization in Data Science

MSCS-DS
MSCS-Data Science
Degree Requirements
Min. Credits: 48

Required Courses (43 credits)
- CPSC 5600 Parallel Computing
- CPSC 5340 Text Proc. & Search
- CPSC 5350 Social Media Analytics
- MATH 5315 Mathematical Foundations of Data Science (3)
- CPSC 5305 Intro to Data Science (2)
- CPSC 5310 Machine Learning (5)
- CPSC 5320 Visual Analytics (3)
- CPSC 5330 Big Data Analytics (3)
- Ethics CPSC 5800
- Software Arch. & Design CPSC 5200
- Applied Algorithms CPSC 5610 (AI)
- Systems CPSC 5520 (Distributed Sys)
- Software Development CPSC 5240/5250/5300 /5400/5700

One DS Elective
(5 credits)

Capstone Project (5)
MSCS-DS

• **Categorical Requirements**
  – Applied Algorithms: Must take CPSC 5610 AI
  – Systems: Must take CPSC 5520 Distributed Systems

• **Additional Required Courses**
  – MATH 5315 – Mathematical Foundations of Data Science (3 credits)
  – CPSC 5305 – Intro to Data Science (2 credits)
  – CPSC 5310 – Machine Learning (5 credits)
  – CPSC 5320 – Visual Analytics (3 credits)
  – CPSC 5330 – Big Data Analytics (3 credits)
  – Data Science Elective (5 credits)

• **Project**
  – CPSC 5830 – Data Science Capstone Project
MSCS-DS

- Due to course sequencing and scheduling constraints, **full time students must start in fall**.
- Additional prerequisite:
  - Calculus sequence (needed for the math course)
- Students not in the specialization may choose the following two courses to satisfy a 5-credit elective requirements
  - CPSC 5305 Intro to Data Science (2 credits)
  - CPSC 5320 or 5330 (3 credits)
MSCS-DS: Fall Registration

• **CPSC 5305**: Introduction to Data Science (2 cr.)
• **MATH 5315**: Mathematical Foundations of Data Science (3 cr.)
• Either **CPSC 5520** Distributed Systems or **CPSC 5610** Artificial Intelligence (5 cr.)
## MSCS-DS: Typical Schedules

### Full-time

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<td>CPSC 5305 (2 cr)</td>
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<td>CPSC 5320 (3 cr)</td>
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<td></td>
<td>CPSC 5520 or 5610</td>
<td>SW Development</td>
<td>CPSC 5330 (3 cr)</td>
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<td>CPSC 5200</td>
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<td>2</td>
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Preparatory Courses / MSCS Prerequisites

• 6 graduate certificate courses (3 credits each)
  – CPSC 5011 Object-Oriented Concepts
  – CPSC 5021 Database Systems
  – CPSC 5031 Data Structures & Algorithms
  – CPSC 5041 Computing Systems Principles I
  – CPSC 5042 Computing Systems Principles II
  – CPSC 5051 Fundamentals of Software Engineering

**Conditional admission:** Must complete the required prerequisite(s) with *a grade of B or better* within the first year
Internships

• How many credits you can register?
  – 1 credit: at least 100 hours per quarter, working part-time (max of 20 hours/week)
  – 2 credits: at least 150 hours per quarter, working part-time (max of 20 hours/week)
  – 3 credits: at least 200 hours per quarter, working full-time (max of 40 hours/week)

International students must maintain full-time status except during vacation quarters
Internships

• Before starting your internship
  – Identify a faculty sponsor/advisor
  – Submit the following docs to the department for approval
    • Internship offer letter
    • Internship request form (CPSC 5950 Internship) for course registration
    • CPT support letter/form for international students
Internships

• After starting your internship
  – Internship Weekly Report
  – Project Agreement Form
  – Project Completion Form
  – Intern Evaluation Form

*All are required to receive credit(s) for your internship!*

• Internship Guidebook
  – URL: [https://www.seattleu.edu/scieng/computer-science/student-resources/internships/](https://www.seattleu.edu/scieng/computer-science/student-resources/internships/)
Advising

• Meet with your advisor each quarter
  – Discuss your programs of study
  – Course selection & schedule planning

• my.seattleu.edu online tool
  – Program evaluation
  – Search for courses + Registration
  – Create an academic plan
    • Must submit plan to advisor for approval at least once
Registration

• Check my.seattleu.edu for registration time
• Register as soon as possible after your registration time
• If you are unable to get into a class, please fill out the WISE (waitlist) form that is available from the CS webpage.
Academic Performance, Probation & Dismissal

• Will be on **probation** with cumulative and/or term GPA is < **3.0**
• Immediate actions
  – Review your schedule with your advisor to make any necessary changes to your course load.
  – Review university policies regarding progression and course repeats
  – Arrange to meet with an advisor in the S&E Advising Center
• Conditions for removal from probation
  – You must earn a term GPA ≥ **3.0**
  – You must earn no grade below **B**
• Failure to improve academic performance including violation of probation conditions could ultimately lead to **dismissal**
Other Academic Regulations

- Must attain a grade of **C or better** in all courses
  - Courses graded **C- or below** must be repeated
  - Graduate projects & CPSC 5890 Seminar requires **B- or better**!
- Must maintain a Cumulative GPA of **3.0 or better**
- SU has an academic honesty code
  - See SU Graduate Bulletin of Information
- You must apply for graduation
- 6 Year Limit
  - All degree requirements must be completed within six years after course work is begun
International Students

• Must maintain a full-time status (a minimum of 6 credits) except for the graduating quarter
• All international students can work on-campus for a maximum of 20 hours per week
• International Student Center hold for registration
• New MSCS student must contact ISC before class registration
• Main contact: ISC
Fellowships & Scholarships

• Office of Fellowships
  – https://www.seattleu.edu/fellowships/

• Student Financial Services
  – https://www.seattleu.edu/sfs/
Women in Tech

@ GHC

SEATTLEU
SU ACM COMMUNITY HOURS
COME PLAY GAMES, DO HOMEWORK, OR SOLVE HACKER RANK PROBLEMS
CS LOUNGE (ENG 408) EVERY FRIDAY 2PM TO 4PM

SEATTLEU
Twitter Tech Talk!
Charlie Carson, a Software Engineer from Twitter, will talk to us about:
- Experience of working at Microsoft vs working at Twitter
- Big vs small teams
- Cloud services vs box products
- Monolithic vs microservices
- Open source stack vs Microsoft stack
- Twitter’s Distributed GPUs Storage Systems

FREE SUBWAY
ENG 401 Thursday, April 6, 12:30PM - 1:30PM
RSVP at: http://sucs.club/twitter

Computer Science Department
Fall Mentorship Event
WHO: All First Year Computer Science Students
WHAT: Fall Mentorship Social + Pizza
WHEN: Tuesday – 11/12/2019 – 12:30-1:20pm
WHERE: Engr 401 (CS Lounge)

SEATTLEU

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CodeRank: Programming Competition

CS INTERVIEW PREP NIGHT
- Five teams of 2-3 to work on your choice of Mock Interview / LeetCode questions
- We will have a CS mentor, Jamie Habegger, to aid teams on problems
- Senior ACM representative, Link Nguyen, will be hosting a resume review and behavioral interview tips workshop
- Snacks will be provided

FEB 1, 6-8 PM, ENGR 401
Questions? Contact mohmed5@seattleu.edu
Center for Science and Innovation
Fall 2021
Contact Us!

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MSCS Advisor

Prof. Oh
CSFD Program Director
MSCS Advisor

Prof. Hanks
MSCS-DS Advisor

Prof. LeBlanc
MSCS-SE Advisor

Sarah Cannon
Sr. Admin Assistant
CS Department

Prof. Roshandel
Chair