Computer Science MS Project

CSCI-788 Section 01
Prof. Matthew Fluet

MoWeFri 11:15am – 12:05pm
GOL-1445 / Synchronous Zoom

COVID-19 Reminders:
▶ Wear a mask (covering nose and mouth)
▶ Choose an available seat (spread out, obey “do not sit” designations)
   ▶ Seat chosen today will be assigned to you for remainder of semester
▶ Complete location check-in (QR code)
▶ No food or drink during class
Computer Science MS Project

Introduction and Overview
Course Description

*Project capstone of the Master’s Degree Program.* Students select from a set of possible projects and confirm that they have a project advisor. Students enroll in a required colloquium component that meets weekly, during which they present information, related to their projects. Projects culminate with delivery of a final report and participation in a poster session evaluated by faculty of the Department of Computer Science.

Official Prerequisite

- Student in COMPSCI-MS or COMPSCI-BS/MS program
- Approval of Graduate Coordinator
Welcome to CSCI-788: Computer Science MS Project

Who am I?

▶ Prof. Matthew Fluet
▶ Course instructor (not your faculty project advisor)

Who are you?

▶ A final semester COMPSCI-MS or COMPSCI-BS/MS student
▶ Attendance
Today

- Course Logistics
- Purpose of MS Project and Colloquium Course
- Requirements
Course Logistics

Websites

▶ https://www.cs.rit.edu/~mtf/teaching/20201/msp
▶ syllabus, schedule, notes, assignment guidelines, resources
▶ https://mycourses.rit.edu/d2l/home/847145
▶ Zoom recordings, assignment submissions, surveys, grades
▶ Note: use “CSCI.788.01 - Computer Science MS Project” and ignore “CSCI.766.01CX - Computer Science MS Project” (registrar assigned groups for Blended ABA-S instruction mode)
Course Logistics

Instructor: Matthew Fluet

- E-mail: mtf@cs.rit.edu
- Virtual Office Hours: https://rit.zoom.us/my/mtfvcs
  - Mon. 3:00pm–4:00pm
  - Wed. 10:00am–11:00am
  - Wed. 3:00pm–4:00pm
  - Fri. 10:00am–11:00am
CSCI-788 Computer Science MS Project

What is this course about?

- Completing your capstone project for your MS in CS
CSCI-788 Computer Science MS Project

What is this course about?

- Completing your capstone project for your MS in CS

You must have a capstone project and a faculty advisor to complete.
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- Completing your capstone project for your MS in CS

You must have a capstone project and a faculty advisor to complete.

Who already has a capstone project and a faculty advisor? (show of hands (in class and on Zoom))
Capstone Project and Faculty Advisor

Most essential requirement of the course!

Find a capstone project and a faculty advisor, who will
▶ define scope of project
▶ define milestones for completion of project
▶ monitor and evaluate your progress
▶ assign 65% of your course grade

(Note: I am not your faculty advisor; I am the course instructor.)

**Note:** Students without a capstone project topic and faculty advisor by August 25 (Tuesday of Week 2) will be withdrawn from the course.

Submit via “Capstone Project and Faculty Advisor” myCourses survey.
Finding a Capstone Project and Faculty Advisor

If you do not yet have a confirmed capstone project and faculty advisor:

▶ Look at project proposals in CS - Capstone Projects (myCourses)
  https://mycourses.rit.edu/d2l/home/675314
  (Note: Not associated with the 2021 Fall semester; use “All” tab on myCourses homepage.)

▶ Look at faculty profiles and research interests

▶ Contact faculty from past classes

▶ Last resort: contact Graduate Coordinator or advisor

Remember:
Submit capstone project topic and faculty advisor via “Capstone Project and Faculty Advisor” myCourses survey by 5:00pm on August 25 (Tuesday of Week 2).
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Capstone Activities

Assuming you have a capstone project and faculty advisor, this course will support you through the completion of the project:

▶ Most effort will be independent work on your capstone project supervised by your faculty advisor
  ▶ Weekly meetings with your faculty advisor recommended
▶ CS MS Capstone course activities
  ▶ Some lectures (e.g., scientific method, general guidance on final reports and posters)
  ▶ Some readings
  ▶ Student presentations (with peer feedback)
  ▶ Peer review (of final reports and posters)
▶ Poster session
  ▶ Prepare a poster and a 5min audio description
  ▶ Evaluted by faculty of the Department of Computer Science
Capstone Activities

CS MS Capstone course activities

▶ Some lectures (e.g., scientific method, general guidance on final reports and posters)
▶ Some readings
▶ Student presentations
▶ Peer review (of final reports and posters)
▶ **Student attendance required**
  ▶ Unexcused absences will be reported to the Graduate Coordinator and may result in a grade penalty.

▶ Schedule:
  https://www.cs.rit.edu/~mtf/teaching/20201/msp/schedule.html
Capstone Activities

CS MS Capstone course activities

► Some lectures (e.g., scientific method, general guidance on final reports and posters)
  ► 1/2 in person, 1/2 synchronous Zoom
Capstone Activities

CS MS Capstone course activities

▷ Some readings

▷ *Writing for Computer Science (3rd edition)*, Justin Zobel
  https://albert.rit.edu/record=b3372474~S3
  (RIT Library e-book (PDF and EPUB))

▷ Although some portions of the book are written for students undertaking an MS thesis or PhD dissertation with significant research, much of the book is relevant to communicating computer science activities.

▷ asynchronously on some “no class meeting” days
Capstone Activities

CS MS Capstone course activities

- Student presentations
  - Track progress
  - Practice communication skills
  - Peer evaluation
  - Build sense of community (especially important this semester!)

- Audience: 1/2 in person, 1/2 synchronous Zoom
- Presenter: most in person, some via Zoom
- Project Description (Weeks 3 - 4)
  - Milestone 1 (Weeks 5 - 6)
  - Milestone 2 (Weeks 8 - 9)
  - Milestone 3 (Weeks 12 - 13)
- Guidelines for each presentation on course website
Capstone Activities

CS MS Capstone course activities

▶ Peer review (of final reports and posters)
  ▶ Early feedback
  ▶ Build sense of community (especially important this semester!)

▶ synchronous Zoom with Breakout Rooms
▶ Final Report - Section Draft (Week 11)
  Poster - Draft (Week 14)
  Poster - Transcript Draft (Week 15)
▶ Guidelines for each submission on course website
Capstone Activities

CS MS Capstone course activities

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▶ Schedule:
  https://www.cs.rit.edu/~mtf/teaching/20201/msp/schedule.html
▶ Note that not all class meetings are used
Flex Options

Course is being offered with both the Online Flex and Full Flex options.

- choose to complete all course requirements online either for the entire semester (Online Flex) or as needed throughout the semester (Full Flex)
- expected to attend class meetings synchronously using Zoom (includes giving presentations)
- contact me (at any time during the semester) if you wish to select one of these options
Grades

Final grade determined jointly by faculty advisor, course instructor, and CS faculty.

- 45% — Final Report (by faculty advisor)
- 15% — Poster Session (by CS faculty feedback)
- 20% — Milestone Deliverables ($\times$ 3; by faculty advisor)
- 20% — Colloquium (by course instructor)
  - 60% — Presentations ($\times$ 4)
  - 20% — Participation and Feedback (in class)
  - 20% — Homeworks

Note: Final report is most significant component of course grade. (But, cannot produce a quality final report without consistent and significant work throughout semester.)

Except for truly exceptional circumstances, no Incompletes will be given as the course grade.
Important Notes

- CSCI-788 is like any other: grade for capstone project will be the grade given in this class.
- Primary focus should be completing your capstone project to the satisfaction of your faculty advisor.
- Colloquium components support you and other students, but should not overshadow your independent work on capstone project.
- Course guides you through the completion of your capstone project, supported by your faculty advisor, myself, and your fellow classmates.
- By the end of the course, you will have completed your capstone project.
Penultimate Thoughts for Today

Master of _______ in Computer _______

What is “science”?
Science is a systematic enterprise that builds and organizes knowledge in the form of testable explanations and predictions about the universe. (https://en.wikipedia.org/wiki/Science)

Zobel’s steps involved in doing a research project:
▶ formulate a precise question
▶ development of a detailed understanding
▶ gathering of evidence
▶ linking question and evidence with argument
▶ description of work in a publication
Penultimate Thoughts for Today

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- formulate a precise question  
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- linking question and evidence with argument  
- description of work in a publication
Next steps

Remember: Submit capstone project topic and faculty advisor via “Capstone Project and Faculty Advisor” myCourses survey by 5:00pm on August 25 (Tuesday of Week 2). (Otherwise will be dropped from the course.)

▶ Include a brief (1 - 2 paragraph) description
▶ Faculty advisor will be contacted to confirm the capstone project

Schedule:
▶ Friday (no class): Read WfCS Chs. 1, 2, 3, and 4
▶ Monday (no class): Read WfCS Chs. 5, 12, and 16
▶ Wednesday (class: A Zoom / B in person): Scientific Method
▶ Friday (no class): Work on Project Description Presentations
▶ Weeks 3 - 4 (class): Project Description Presentations
(Project Description Presentation due Monday (Aug. 31 @ 8:00AM))