

Master of Science in Computer Science (MSCS)

Orientation

Sept. 17, 2012

Master of Science in Computer Science (MSCS)

- A 2-year old yet strong graduate program
 - Provides advanced study in CS for students with a substantial background in the discipline
 - The first class started in Fall 2010
- Classes are offered at late afternoons and evenings on weekdays, serving both
 - Full-time students (complete in 5 quarters)
 - Part-time students (complete in 3 years)

MSCS Program Prerequisites

- Four prerequisite courses
 - CPSC 310 Algorithms
 - CPSC 320 Object-Oriented Design
 - CPSC 341 OS & Networks
 - CPSC 370 Databases
- You have been granted *conditional admission* if one or more of these prerequisites were not met
 - Must complete the prerequisites with *a grade of B- or better* within the first year
 - You may need to pick up other things beyond the content of these courses in order to succeed in other courses.
 - For example, we aren't going to teach you C++ anywhere.

MSCS Program Prerequisites

- Availability of prerequisite courses
 - CPSC 310 Algorithms is offered in Spring
 - CPSC 320 Object-Oriented Design is offered in Fall and Winter
 - CPSC 341 OS & Networks is offered in Fall and Spring
 - CPSC 370 Databases is offered in Winter
 - Can take an online algorithm course “Udacity CS215” (<http://www.udacity.com/view#Course/cs215/CourseRev/1/Unit/3001/Nugget/6001>) to satisfy the prerequisite CPSC 310.
 - Need submit a certificate to the department as evidence of completion. The certificate must be “Certificate of Accomplishment” or above.

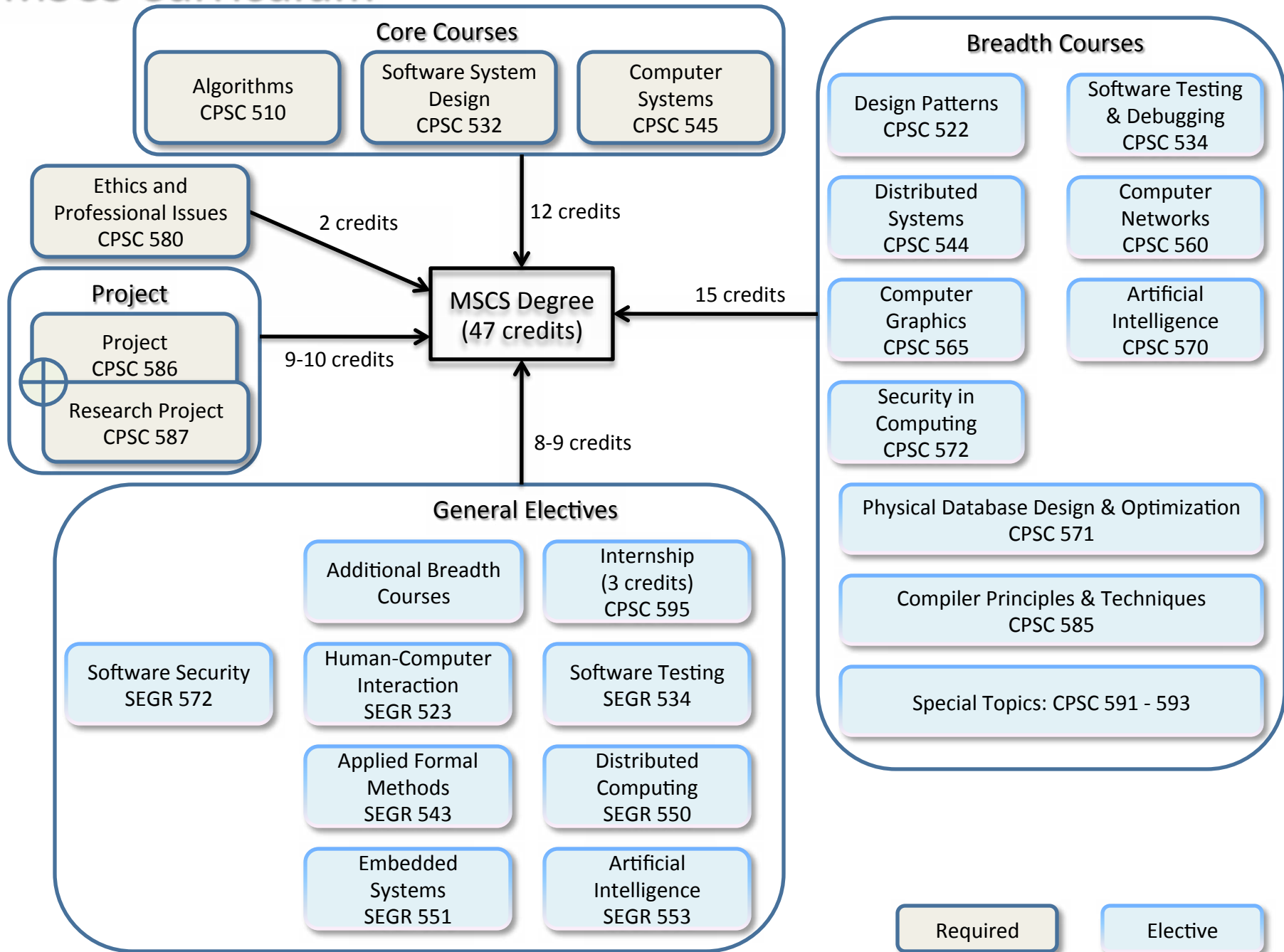
Course Dependency

- MSCS core courses depend on their prerequisites
 - CPSC 510 depends on CPSC 310
 - CPSC 532 depends on CPSC 320
 - CPSC 545 depends on CPSC 341
- Some MSCS electives may also have prerequisite courses
 - Always talk to your advisor before class registration!

MSCS Curriculum

- Balanced curriculum
 - 47 credits for degree
 - Theoretic foundations + Practical applications
- Breadth (a wide range of topics)
 - Algorithms and theory of computation, operating systems, networks, artificial intelligence, distributed computing, graphics, security, ...
- Depth (in chosen area of concentration)
 - Graduate projects & electives

MSCS Curriculum



General Electives

- A maximum of 3 credits used as General Electives
 - CPSC 595 Internship
 - Generally, not applicable for students who are full-time employees
 - OR CPSC 596 Independent Study
 - OR CPSC 599 Directed Research

MSE Electives as General Electives

- Some MSE electives can be used as MSCS general electives:
 - SEGR 523 Human-Computer Interaction
 - SEGR 534 Software Testing
 - SEGR 543 Applied Formal Methods
 - SEGR 550 Distributed Computing
 - SEGR 551 Embedded Systems
 - SEGR 553 Artificial Intelligence
 - SEGR 572 Software Security
- Caution
 - MSE electives are **3-credit** courses
 - MSCS electives are **5-credit** courses
 - Up to **9 MSE credits** can be used as MSCS General Electives

What Classes to Take?

- Talk to your advisor before class registration!
 - Dr. Larson this quarter
 - Dr. Zhu thereafter



MSCS - Graduate Projects

- Choice of two types of projects
 1. Software implementation projects
 - Enhance programming skills
 - Hands-on experience in system design and implementation
 2. Research projects
 - Conduct research in a specific topic
 - Result in a technical paper suitable for publication
 - Preparation for research careers or Ph.D. study
- Supervised by a faculty member
- 9 – 10 credits
- Span 2 – 3 quarters
- General rule: cannot start your project until completing the 3 core courses

International Students

- Must maintain a full-time status (a minimum of 9 credits) except for the graduating quarter

A Few More ...

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