



MS/COMPUTER SCIENCE WORKSHEET

November 2016

Name: _____

Phone: (day) _____ (evening) _____

UID: _____

Pace E-Mail: _____

BRIDGE COURSES

An entering student with limited or no previous background in the field of computer science or programming may be required to take up to 9 credits of prerequisite bridge coursework. A student with a baccalaureate in computer science should be able to waive these prerequisites. Bridge Course do NOT count toward the degree; grades earned however are computed into the student's QPA.

| | | Credits | Grade | Semester |
|--------|--|---------|-------|----------|
| CS 502 | Fundamental Computer Science I Using Java | 3 | _____ | _____ |
| CS 504 | Fundamental Computer Science II Using Java | 3 | _____ | _____ |
| CS 506 | Computer Systems and Concepts | 3 | _____ | _____ |

CORE REQUIREMENTS (12 credits)

| | | | | |
|--------|--|---|-------|-------|
| CS 608 | Algorithms and Computing Theory | 3 | _____ | _____ |
| CS 610 | Introduction to Parallel and Distributed Computing | 3 | _____ | _____ |
| CS 612 | Concepts and Structures in Internet Computing | 3 | _____ | _____ |
| CS 623 | Database Management Systems | 3 | _____ | _____ |

CONCENTRATION OPTIONS OR FREE ELECTIVES (9 credits) – See page 2 for specific course offerings

A student may choose to pursue a focused in-depth concentration in a specific area consisting of a three course sequence for a total of 9 credits. Suggested concentrations include:

- Artificial Intelligence
- Mobile Computing
- Internet Computing
- Network Security

COMPUTER SCIENCE ELECTIVES (3-12 credits) – See page 2 for complete listing

- *Students pursuing a 9-credit concentration may select **one** elective from any of the concentration courses outside of their individual concentration or from those listed below for a total of 3 credits, provided course prerequisites are met.*
- *Students who elect not to pursue an in-depth concentration, may choose individual courses contained within the suggested concentrations and from among the courses listed below for a total of 12 credits, provided course prerequisites are met.*

CAPSTONE PROJECT (6 credits)

Students are required to select one of the following options. Pursuing a thesis require to work on a research project under the supervision of a professor.

| | | | | |
|---------------|-----------------------------------|---|-------|-------|
| CS 691/CS 692 | Computer Science Project I and II | 6 | _____ | _____ |
| -or- | | | | |
| CS 693/CS 694 | Thesis I and II | 6 | _____ | _____ |

Total Credits 30

REMARKS (waivers, special conditions, etc):

Program Adviser/Date



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CONCENTRATION OPTIONS

Artificial Intelligence

| | | | | |
|--------|-------------------------|---|-------|-------|
| CS 619 | Data Mining | 3 | _____ | _____ |
| CS 627 | Artificial Intelligence | 3 | _____ | _____ |
| CS 655 | Pattern Recognition | 3 | _____ | _____ |

Mobile Computing

| | | | | |
|--------|--|---|-------|-------|
| CS 639 | Mobile Application Development | 3 | _____ | _____ |
| CS 641 | Mobile Web Content and Development | 3 | _____ | _____ |
| CS 643 | Mobile Innovations for Global Challenges | 3 | _____ | _____ |

Internet Computing

| | | | | |
|--------|---|---|-------|-------|
| CS 624 | Application Development w/.NET and Web Services | 3 | _____ | _____ |
| CS 641 | Mobile Web & Content | 3 | _____ | _____ |
| CS 644 | Web Computing | 3 | _____ | _____ |

Network Security

| | | | | |
|--------|--------------------------------------|---|-------|-------|
| CS 634 | Computer Networking and the Internet | 3 | _____ | _____ |
| CS 653 | Cryptography and Computer Security | 3 | _____ | _____ |
| CS 654 | Security in Computer Networking | 3 | _____ | _____ |

COMPUTER SCIENCE ELECTIVES

| | | | | |
|---------|--|-----|-------|-------|
| CS 600 | Independent Study | 1-4 | _____ | _____ |
| CS 607 | Simulation and Computer Network Analysis | 3 | _____ | _____ |
| CS 611 | Principles of Programming Languages | 3 | _____ | _____ |
| CS 617 | Game Programming | 3 | _____ | _____ |
| CS 620 | XML Application Development | 3 | _____ | _____ |
| CS 628 | Automata and Computability | 3 | _____ | _____ |
| CS 629 | Computer Graphics | 3 | _____ | _____ |
| CS 632V | Introduction to Big Data Analytics | 3 | _____ | _____ |
| CS 633 | Data Communications and Networks | 3 | _____ | _____ |
| CS 636 | Optical Communications and Networks | 3 | _____ | _____ |
| CS 637 | Wireless Communications | 3 | _____ | _____ |
| CS 648 | UNIX/Linux Programming | 3 | _____ | _____ |
| CS 657 | Windows System Programming | 3 | _____ | _____ |
| CS 659 | Human Computer Interaction | 3 | _____ | _____ |
| CS 660 | Mathematical Foundations of Analytics | 3 | _____ | _____ |
| CS 663 | Human Factors and Usability Metrics | 3 | _____ | _____ |

*Note: Students may also select **one** elective (graduate course) from outside the computer science curriculum provided they have the necessary prerequisites and permission of their adviser or the department chairperson.*

Total Concentration / Electives Credits _____