

Computer Science MS program
Degree Requirements Check Sheet
(Fall 15 – Spring 18)

Name: _____ ID: 800_____ First semester of enrollment: () Spring () Fall 20_____

General requirements:

- 30 graduate credit hours, which may optionally include 6 hours of thesis, with GPA at least 3.0.
- At least 18 hours must be from the Department of Computer Science.
- At least 24 hours must be from the College of Computing and Informatics.
- At least 15 hours must be 6000 level or above courses.
- A maximum of 6 hours of graduate credit may be transferred from other institutions.

Core subject requirements:

All students must take THREE courses from the Core Category.

The following two courses are required:

ITCS 6112 Software System Design and Implementation

ITCS 6114 Algorithms & Data Structures

Date taken

Grade

The third course may be selected from:

ITCS 5102 Survey of Programming Languages

ITCS 6182 Computer System Architecture

The three courses taken to satisfy the core requirement must each be passed with an “A” or a “B” grade.

Breadth requirements:

All students must take three courses, each from a different Course Category, to satisfy the breadth requirements. The courses must be listed below. The course categories are:

Data Science and Management

ITCS 6100 Big Data Analytics for Competitive Advantage

ITCS 6155 Knowledge Based Systems

ITCS 6157 Visual Databases

ITCS 6160 Database Systems

ITCS 6161 Advanced Topics in Database Systems

ITCS 6162 Knowledge Discovery in Databases

ITCS 6163 Data Warehousing

ITCS 6190 Cloud Computing for Data Analysis

ITCS 6265 Advanced Topics in Knowledge Discovery in Databases

Date taken

Grade

Networked Systems

ITCS 5145 Parallel Computing

ITCS 5146 Grid Computing

ITCS 6132 Modeling & Analysis of Communication Networks

ITCS 6166 Computer Networks

ITCS 6167 Advanced Networking Protocols

ITCS 6168 Wireless Communications

Visualization and Computer Graphics

- ITCS 5121 Information Visualization
- ITCS 5122 Visual Analytics
- ITCS 5123 Visualization and Visual Communication
- ITCS 6120 Computer Graphics
- ITCS 6124 Illustrative Visualization
- ITCS 6126 Large Scale Information Visualization
- ITCS 6127 Real-time Rendering Engines
- ITCS 6128 3D Display and Advanced Interfaces
- ITCS 6140 Data Visualization

Intelligent & Interactive Systems

- ITCS 5152 Computer Vision
- ITCS 6050 Topics in Intelligent Systems
- ITCS 6111 Evolutionary Computation
- ITCS 6125 Virtual Environments
- ITCS 6134 Digital Image Processing
- ITCS 6150 Intelligent Systems
- ITCS 6151 Intelligent Robotics
- ITCS 6152 Robot Motion Planning
- ITCS 6156 Machine Learning
- ITCS 6158 Natural Language Processing
- ITCS 6267 Intelligent Information Retrieval
- ITCS 6500 Complex Adaptive Systems

Applications

- ITCS 5133 Numerical Computation Methods and Analysis
- ITCS 5180 Mobile Application Development
- ITCS 5230 Introduction to Game Design and Development
- ITCS 5231 Advanced Game Design and Development
- ITCS 5232 Game Design and Development Studio
- ITCS 5235 Game Engine Construction
- ITCS 5236 Artificial Intelligence for Computer Games
- ITCS 5237 Audio Processing for Entertainment Computing
- ITCS 6153 Neural Networks
- ITCS 6159 Intelligent Tutoring Systems
- ITCS 6165 Coding and Information Theory
- ITCS 6222 Biomedical Signal Processing
- ITCS 6224 Biomedical Image Processing
- ITCS 6226 Bioinformatics
- ITCS 6228 Medical Informatics

Information Security and Privacy

- ITIS 5221 Secure Web Application Development
- ITIS 5250 Computer Forensics
- ITIS 6140 Software Testing and Quality Assurance
- ITIS 6150 Software Assurance
- ITIS 6167 Network and Information Security
- ITIS 6200 Principles of Information Security and Privacy (required for the security concentration)

- ITIS 6210 Access Control and Security Architecture
- ITIS 6220 Data Privacy
- ITIS 6230 Information Infrastructure Protection
- ITIS 6240 Applied Cryptography
- ITIS 6250 Open Source Security Systems
- ITIS 6362 Information Technology Ethics, Policy, and Security
- ITIS 6420 Usable Security and Privacy

Concentration:

All students must form a concentration - three related courses (9 hours) approved by the advisor, at least two must be ITCS courses except for Information Security and Privacy concentration. One course used for a breadth requirement can also be used for the concentration. Six hours of thesis can be used towards the concentration requirement.

Area: _____

Courses:

_____	_____
_____	_____
_____	_____

The three courses taken to satisfy the concentration requirement must each be passed with an “A” grade or a “B” grade. In addition, a written study report on a subject in the area must be submitted to and be approved by the academic advisor to complete the concentration requirement.

Written Study Report Title: _____

Electives to complete 30 hours:

_____	_____
_____	_____

Student Signature: _____

Date: _____

Academic Advisor Signature: _____

Date: _____