

Student Learning Outcomes Library

Office of Assessment & Accreditation

Indiana State University

MA/MS Computer Science

Spring 2020

Top of Form

Bottom of Form

Outcome	Related Foundational Studies or Graduate Goal
Reinforce Core CS Skills—One objective of the master’s program is to reinforce the core CS skills that students become proficient at as undergraduates. If there are any deficiencies in students’ core CS skills, these should be removed by the time a student graduates from the master’s program. See the Program Educational Objectives and Learning Outcomes for the undergraduate program for more details.	
Algorithms and Analysis—The second main objective is that students have more specialized knowledge of algorithms and analysis than that expected of undergraduate students.	
2.1 Algorithms: Students are exposed to a wider variety of algorithm techniques than in the undergraduate program, including a more detailed look at linear programming, randomized algorithms, and the computational complexity of intractable problems. Students gain experience programming a wider variety of algorithms and should be proficient at analyzing new problems in light of the techniques they have learned.	
2.2 Large Software Projects: Students gain experience working on large software projects, using libraries and techniques that are more on the cutting edge of present	

research. Students should be proficient at working on large software projects.	
2.3 Independent Research: Students should be proficient at independently researching the best algorithms for a given problem, understanding the state-of-the-art algorithms, and programming or using existing tools to solve the problem.	
Professional, Interpersonal, and Writing Skills—Another objective of the program is that the students develop professional, interpersonal, and writing skills.	
3.1 Working in a Group: Students should have had some experience working on a programming project in a group setting.	
3.2 Presentation Skills: Students should have given presentations in some of their classes and should be aware of and have mastered basic presentation skills.	
3.3 Writing Skills: Students should have experience writing a technical research paper. Students should be knowledgeable in the standard formatting and style for such papers.	