Multi-Year Assessment Plan Schedule With Goals – Updated May 2015

Academic Year 2014-15

Activity	Computer Information Systems Learning Outcome	Computer Science Learning Outcome	Mathematics Learning Outcome
ETS Exam (A)	Graduates will have a coherent and broad based knowledge of their discipline. Graduates will be prepared for: • careers that use computer information systems in business, industry, government and the non-profit sector ; and • graduate study in fields related to computer information systems.	Graduates will have a coherent and broad based knowledge of their discipline. Graduates will be prepared for: • careers that use computer science in business, industry, government and the non-profit sector ; and • graduate study in fields related to computer science.	Graduates will have a coherent and broad based knowledge of their discipline. Graduates will be prepared for: • careers that use mathematics in business, industry, government and the non-profit sector ; • graduate study in fields related to mathematics; and • teaching mathematics and computer science at the secondary level.
ETS Substructures and Algorithms Subscore (A)		Students will us the theory of algorithms and computation to solve problems.	
ETS Computer Organization, Architecture and Operating Systems Subscore (A)		Students will analyze the interaction between hardware and software.	
ETS Calculus Subscore (A)			Students will be able to demonstrate a facility with analytical concepts.
ETS Algebra Subscore (A)			Students will be able to demonstrate a facility with algebraic structures.
ETS Applied Subscore (A)			Students will be able to apply their mathematical knowledge to solve problems.
Senior Seminar Oral Presentations (A)	Students will be able to speak about their work with precision, clarity and organization (Oral Communication)	Students will be able to speak about their work with precision, clarity and organization (Oral Communication)	Students will be able to speak about their work with precision, clarity and organization (Oral Communication)
Senior Seminar Activity (A)	Students will be able to understand and create arguments supported by quantitative evidence, and they can clearly communicate those arguments in a variety of formats (Quantitative Reasoning).	Students will be able to understand and create arguments supported by quantitative evidence, and they can clearly communicate those arguments in a variety of formats (Quantitative Reasoning).	Students will be able to understand and create arguments supported by quantitative evidence, and they can clearly communicate those arguments in a variety of formats (Quantitative Reasoning).

Senior Seminar Written Presentations (A)	• Students will be able to write about their work with precision, clarity and organization (Written Communication) • Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand (Information Literacy). • Students will be able to gather relevant information, examine information and form a conclusion based on that information (Critical Thinking).	• Students will be able to write about their work with precision, clarity and organization (Written Communication) • Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand (Information Literacy). • Students will be able to gather relevant information, examine information and form a conclusion based on that information (Critical Thinking).	• Students will be able to write about their work with precision, clarity and organization (Written Communication) • Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand (Information Literacy). • Students will be able to gather relevant information, examine information and form a conclusion based on that information (Critical Thinking).
MTH242 Signature Assignment (A)			Students will be able to write proofs.
CSC 254 Signature Assignment (A)	Students will be able to write correct and robust software.	Students will be able to write correct and robust software.	Students will be able to use technology to solve problems.
CSC 314 Signature Assignment (A)	Students will analyze the interaction between hardware and software.	Students will analyze the interaction between hardware and software.	
MTH 382 Signature Assignment (A)			Students will be able to use technology to solve problems.
CSC 324 Signature Assignment and Rubric to measure teamwork (2)	Students will collaborate effectively in teams.	Students will collaborate effectively in teams.	
CSC 493 Signature Assignment and Rubric (2)		Students will be able to apply their technical knowledge to solve problems.	
MTH 352 Signature Assignment and Rubric to measure teamwork (2)			Students will collaborate effectively in teams.
MTH 444 Signature Assignment and Rubric (2)			Students will be able to write proofs.

Other:

MTH213 Assessment (Liberal Studies) (A)	Students will be able to: 1. Demonstrate a facility with operations on the integers (1c, 1d) 2. Demonstrate a facility with operations on the rational numbers (1c, 1d) 3. Apply concepts from number theory to solve problems (1b, 1c, 1d)
MTH223 Assessment (Liberal Studies) (A)	Students will be able to: 1. Construct geometric figures using a compass and straight edge (1c, 1d) 2. Compute area and volume (1d, 1d) 3. Use probability and statistics to solve problems (1b, 1c, 1d)
GE: MTH144, MTH164, MTH303 Assessment (Random Samples) (A)	A. Students will demonstrate effective written and oral communication skills, both as individuals and in groups. 1. Students will be able to formulate a mathematical model from a verbal description of a problem. B. Students will use quantitative analysis, qualitative analysis, and logic skills to address questions and solve problems. 2. Students will be able it solve non-routine problems using logic and quantitative techniques. 3. Students will be able to construct solutions to problems using computational techniques.

Academic Year 2015-16

Activity	Computer Information Systems Learning Outcome	Computer Science Learning Outcome	Mathematics Learning Outcome
ETS Exam (A)	Graduates will have a coherent and broad based knowledge of their discipline. Graduates will be prepared for: • careers that use computer information systems in business, industry, government and the non-profit sector ; and • graduate study in fields related to computer information systems.	Graduates will have a coherent and broad based knowledge of their discipline. Graduates will be prepared for: • careers that use computer science in business, industry, government and the non-profit sector ; and • graduate study in fields related to computer science.	Graduates will have a coherent and broad based knowledge of their discipline. Graduates will be prepared for: • careers that use mathematics in business, industry, government and the non-profit sector ; • graduate study in fields related to mathematics; and • teaching mathematics and computer science at the secondary level.
ETS Substructures and Algorithms Subscore (A)		Students will us the theory of algorithms and computation to solve problems.	
ETS Computer Organization, Architecture and Operating Systems Subscore (A)		Students will analyze the interaction between hardware and software.	
ETS Calculus Subscore (A)			Students will be able to demonstrate a facility with analytical concepts.
ETS Algebra Subscore (A)			Students will be able to demonstrate a facility with algebraic structures.
ETS Applied Subscore (A)			Students will be able to apply their mathematical knowledge to solve problems.
Senior Seminar Oral Presentations (A)	Students will be able to speak about their work with precision, clarity and organization (Oral Communication)	Students will be able to speak about their work with precision, clarity and organization (Oral Communication)	Students will be able to speak about their work with precision, clarity and organization (Oral Communication)
Senior Seminar Activity (A)	Students will be able to understand and create arguments supported by quantitative evidence, and they can clearly communicate those arguments in a variety of formats (Quantitative Reasoning).	Students will be able to understand and create arguments supported by quantitative evidence, and they can clearly communicate those arguments in a variety of formats (Quantitative Reasoning).	Students will be able to understand and create arguments supported by quantitative evidence, and they can clearly communicate those arguments in a variety of formats (Quantitative Reasoning).

Senior Seminar Written Presentations (A)	• Students will be able to write about their work with precision, clarity and organization (Written Communication) • Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand (Information Literacy). • Students will be able to gather relevant information, examine information and form a conclusion based on that information (Critical Thinking).	• Students will be able to write about their work with precision, clarity and organization (Written Communication) • Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand (Information Literacy). • Students will be able to gather relevant information, examine information and form a conclusion based on that information (Critical Thinking).	• Students will be able to write about their work with precision, clarity and organization (Written Communication) • Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand (Information Literacy). • Students will be able to gather relevant information, examine information and form a conclusion based on that information (Critical Thinking).
MTH242 Signature Assignment (A)			Students will be able to write proofs.
CSC 254 Signature Assignment (A)	Students will be able to write correct and robust software.	Students will be able to write correct and robust software.	Students will be able to use technology to solve problems.
CSC 314 Signature Assignment (A)	Students will analyze the interaction between hardware and software.	Students will analyze the interaction between hardware and software.	
MTH 382 Signature Assignment (A)			Students will be able to use technology to solve problems.
ISS 414 Signature Assignment (2)	Students will be able to apply their technical knowledge to solve problems. Students will use information management as a tool to support decision making in business environments.		
MTH 424 Signature Assignment (2)			Students will be able to write proofs.
Alumni Survey (5) – Preparation for 2016-17 Program Review	Graduates will be prepared for: • careers that use computer information systems in business, industry, government and the non-profit sector ; and • graduate study in fields related to computer information systems.	Graduates will be prepared for: • careers that use computer science in business, industry, government and the non-profit sector ; and • graduate study in fields related to computer science.	Graduates will be prepared for: • careers that use mathematics in business, industry, government and the non-profit sector ; • graduate study in fields related to mathematics; and • teaching mathematics and computer science at the secondary level.

Other:

MTH213 Assessment (Liberal Studies) (A)	Students will be able to: 4. Demonstrate a facility with operations on the integers (1c, 1d) 5. Demonstrate a facility with operations on the rational numbers (1c, 1d) 6. Apply concepts from number theory to solve problems (1b, 1c, 1d)
MTH223 Assessment (Liberal Studies) (A)	Students will be able to: 4. Construct geometric figures using a compass and straight edge (1c, 1d) 5. Compute area and volume (1d, 1d) 6. Use probability and statistics to solve problems (1b, 1c, 1d)
GE: MTH144, MTH164, MTH303 Assessment (Random Samples) (A)	C. Students will demonstrate effective written and oral communication skills, both as individuals and in groups. 4. Students will be able to formulate a mathematical model from a verbal description of a problem. D. Students will use quantitative analysis, qualitative analysis, and logic skills to address questions and solve problems. 5. Students will be able it solve non-routine problems using logic and quantitative techniques. 6. Students will be able to construct solutions to problems using computational techniques.

Academic Year 2016-17

Activity	Computer Information Systems Learning Outcome	Computer Science Learning Outcome	Mathematics Learning Outcome
ETS Exam (A)	Graduates will have a coherent and broad based knowledge of their discipline. Graduates will be prepared for: • careers that use computer information systems in business, industry, government and the non-profit sector ; and • graduate study in fields related to computer information systems.	Graduates will have a coherent and broad based knowledge of their discipline. Graduates will be prepared for: • careers that use computer science in business, industry, government and the non-profit sector ; and • graduate study in fields related to computer science.	Graduates will have a coherent and broad based knowledge of their discipline. Graduates will be prepared for: • careers that use mathematics in business, industry, government and the non-profit sector ; • graduate study in fields related to mathematics; and • teaching mathematics and computer science at the secondary level.
ETS Substructures and Algorithms Subscore (A)		Students will us the theory of algorithms and computation to solve problems.	
ETS Computer Organization, Architecture and Operating Systems Subscore (A)		Students will analyze the interaction between hardware and software.	
ETS Calculus Subscore (A)			Students will be able to demonstrate a facility with analytical concepts.
ETS Algebra Subscore (A)			Students will be able to demonstrate a facility with algebraic structures.
ETS Applied Subscore (A)			Students will be able to apply their mathematical knowledge to solve problems.
Senior Seminar Oral Presentations (A)	Students will be able to speak about their work with precision, clarity and organization (Oral Communication)	Students will be able to speak about their work with precision, clarity and organization (Oral Communication)	Students will be able to speak about their work with precision, clarity and organization (Oral Communication)
Senior Seminar Activity (A)	Students will be able to understand and create arguments supported by quantitative evidence, and they can clearly communicate those arguments in a variety of formats (Quantitative Reasoning).	Students will be able to understand and create arguments supported by quantitative evidence, and they can clearly communicate those arguments in a variety of formats (Quantitative Reasoning).	Students will be able to understand and create arguments supported by quantitative evidence, and they can clearly communicate those arguments in a variety of formats (Quantitative Reasoning).

Senior Seminar Written Presentations (A)	• Students will be able to write about their work with precision, clarity and organization (Written Communication) • Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand (Information Literacy). • Students will be able to gather relevant information, examine information and form a conclusion based on that information (Critical Thinking).	• Students will be able to write about their work with precision, clarity and organization (Written Communication) • Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand (Information Literacy). • Students will be able to gather relevant information, examine information and form a conclusion based on that information (Critical Thinking).	• Students will be able to write about their work with precision, clarity and organization (Written Communication) • Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand (Information Literacy). • Students will be able to gather relevant information, examine information and form a conclusion based on that information (Critical Thinking).
MTH242 Signature Assignment (A)			Students will be able to write proofs.
CSC 254 Signature Assignment (A)	Students will be able to write correct and robust software.	Students will be able to write correct and robust software.	Students will be able to use technology to solve problems.
CSC 314 Signature Assignment (A)	Students will analyze the interaction between hardware and software.	Students will analyze the interaction between hardware and software.	
MTH 382 Signature Assignment (A)			Students will be able to use technology to solve problems.
CSC 324 Signature Assignment and Rubric to measure teamwork (develop) (2)	Students will collaborate effectively in teams.	Students will collaborate effectively in teams.	
CSC 493 Signature Assignment and Rubric (develop) (2)		Students will be able to apply their technical knowledge to solve problems.	
MTH 352 Signature Assignment and Rubric to measure teamwork (develop) (2)			Students will collaborate effectively in teams.
MTH 444 Signature Assignment and Rubric (develop) (2)			Students will be able to write proofs.

Other:

MTH213 Assessment (Liberal Studies) (A)	Students will be able to: 7. Demonstrate a facility with operations on the integers (1c, 1d) 8. Demonstrate a facility with operations on the rational numbers (1c, 1d) 9. Apply concepts from number theory to solve problems (1b, 1c, 1d)
MTH223 Assessment (Liberal Studies) (A)	Students will be able to: 7. Construct geometric figures using a compass and straight edge (1c, 1d) 8. Compute area and volume (1d, 1d) 9. Use probability and statistics to solve problems (1b, 1c, 1d)
GE: MTH144, MTH164, MTH303 Assessment (Random Samples) (A)	E. Students will demonstrate effective written and oral communication skills, both as individuals and in groups. 7. Students will be able to formulate a mathematical model from a verbal description of a problem. F. Students will use quantitative analysis, qualitative analysis, and logic skills to address questions and solve problems. 8. Students will be able it solve non-routine problems using logic and quantitative techniques. 9. Students will be able to construct solutions to problems using computational techniques.

Academic Year 2017-18

Activity	Computer Information Systems Learning Outcome	Computer Science Learning Outcome	Mathematics Learning Outcome
ETS Exam (A)	Graduates will have a coherent and broad based knowledge of their discipline. Graduates will be prepared for: • careers that use computer information systems in business, industry, government and the non-profit sector ; and • graduate study in fields related to computer information systems.	Graduates will have a coherent and broad based knowledge of their discipline. Graduates will be prepared for: • careers that use computer science in business, industry, government and the non-profit sector ; and • graduate study in fields related to computer science.	Graduates will have a coherent and broad based knowledge of their discipline. Graduates will be prepared for: • careers that use mathematics in business, industry, government and the non-profit sector ; • graduate study in fields related to mathematics; and • teaching mathematics and computer science at the secondary level.
ETS Substructures and Algorithms Subscore (A)		Students will us the theory of algorithms and computation to solve problems.	
ETS Computer Organization, Architecture and Operating Systems Subscore (A)		Students will analyze the interaction between hardware and software.	
ETS Calculus Subscore (A)			Students will be able to demonstrate a facility with analytical concepts.
ETS Algebra Subscore (A)			Students will be able to demonstrate a facility with algebraic structures.
ETS Applied Subscore (A)			Students will be able to apply their mathematical knowledge to solve problems.
Senior Seminar Oral Presentations (A)	Students will be able to speak about their work with precision, clarity and organization (Oral Communication)	Students will be able to speak about their work with precision, clarity and organization (Oral Communication)	Students will be able to speak about their work with precision, clarity and organization (Oral Communication)
Senior Seminar Activity (A)	Students will be able to understand and create arguments supported by quantitative evidence, and they can clearly communicate those arguments in a variety of formats (Quantitative Reasoning).	Students will be able to understand and create arguments supported by quantitative evidence, and they can clearly communicate those arguments in a variety of formats (Quantitative Reasoning).	Students will be able to understand and create arguments supported by quantitative evidence, and they can clearly communicate those arguments in a variety of formats (Quantitative Reasoning).

Senior Seminar Written Presentations (A)	• Students will be able to write about their work with precision, clarity and organization (Written Communication) • Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand (Information Literacy). • Students will be able to gather relevant information, examine information and form a conclusion based on that information (Critical Thinking).	• Students will be able to write about their work with precision, clarity and organization (Written Communication) • Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand (Information Literacy). • Students will be able to gather relevant information, examine information and form a conclusion based on that information (Critical Thinking).	• Students will be able to write about their work with precision, clarity and organization (Written Communication) • Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand (Information Literacy). • Students will be able to gather relevant information, examine information and form a conclusion based on that information (Critical Thinking).
MTH242 Signature Assignment (A)			Students will be able to write proofs.
CSC 254 Signature Assignment (A)	Students will be able to write correct and robust software.	Students will be able to write correct and robust software.	Students will be able to use technology to solve problems.
CSC 314 Signature Assignment (A)	Students will analyze the interaction between hardware and software.	Students will analyze the interaction between hardware and software.	
MTH 382 Signature Assignment (A)			Students will be able to use technology to solve problems.
ISS 414 Signature Assignment (2)	Students will be able to apply their technical knowledge to solve problems. Students will use information management as a tool to support decision making in business environments.		
MTH 424 Signature Assignment (2)			Students will be able to write proofs.
Alumni Survey (5) – Preparation for 2016-17 Program Review	Graduates will be prepared for: • careers that use computer information systems in business, industry, government and the non-profit sector ; and • graduate study in fields related to computer information systems.	Graduates will be prepared for: • careers that use computer science in business, industry, government and the non-profit sector ; and • graduate study in fields related to computer science.	Graduates will be prepared for: • careers that use mathematics in business, industry, government and the non-profit sector ; • graduate study in fields related to mathematics; and • teaching mathematics and computer science at the secondary level.

Other:

MTH213 Assessment (Liberal Studies) (A)	Students will be able to: 10. Demonstrate a facility with operations on the integers (1c, 1d) 11. Demonstrate a facility with operations on the rational numbers (1c, 1d) 12. Apply concepts from number theory to solve problems (1b, 1c, 1d)
MTH223 Assessment (Liberal Studies) (A)	Students will be able to: 10. Construct geometric figures using a compass and straight edge (1c, 1d) 11. Compute area and volume (1d, 1d) 12. Use probability and statistics to solve problems (1b, 1c, 1d)
GE: MTH144, MTH164, MTH303 Assessment (Random Samples) (A)	G. Students will demonstrate effective written and oral communication skills, both as individuals and in groups. 10. Students will be able to formulate a mathematical model from a verbal description of a problem. H. Students will use quantitative analysis, qualitative analysis, and logic skills to address questions and solve problems. 11. Students will be able it solve non-routine problems using logic and quantitative techniques. 12. Students will be able to construct solutions to problems using computational techniques.