Course Level Learning Outcomes
2014-15

CSC133
Students will analyze the interaction between hardware and software.
Students will use the theory of algorithms and computation to solve problems.
Students will use information management as a tool to support decision making in business environments.
Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.

CSC143
Students will be able to write correct and robust software.
Students will analyze the interaction between hardware and software.
Students will be able to apply their technical knowledge to solve problems.
Students will collaborate effectively in teams.
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.

CSC153
Students will be able to write correct and robust software.
Students will analyze the interaction between hardware and software.
Students will be able to apply their technical knowledge to solve problems.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
Students will collaborate effectively in teams.
Students will be able to gather relevant information, examine information and form a conclusion based on that information.
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.

CSC181
Students will be able to use basic features of Excel.
Students will be able to use specific functions that may be useful for their future in areas of business, accounting, and science.

CSC191
Students will have a basic understanding of databases.
Students will learn to use data mining software on data.

CSC252 (Not on the latest curriculum map though in the curriculum for one more year)
Students will be able to write correct and robust software.
Students will use the theory of algorithms and computation to solve problems.
Students will analyze the interaction between hardware and software.
Students will be able to apply their technical knowledge to solve problems.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
Students will collaborate effectively in teams.

CSC254
Students will be able to write correct and robust software.
Students will use the theory of algorithms and computation to solve problems.
Students will analyze the interaction between hardware and software.
Students will be able to apply their technical knowledge to solve problems.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
Students will collaborate effectively in teams.
Students will be able to gather relevant information, examine information and form a conclusion based on that information.
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.

CSC302
Students will be able to apply their technical knowledge to solve problems.
Students will learn to use Python and Unix

CSC311
Students will be able to apply their technical knowledge to solve problems.
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.
Students will learn to use R

CSC314
Students will analyze the interaction between hardware and software.
Students will collaborate effectively in teams.
Students will be able to gather relevant information, examine information and form a conclusion based on that information.

CSC324
Students will be able to write correct and robust software.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.
Students will collaborate effectively in teams.
Students will be able to gather relevant information, examine information and form a conclusion based on that information.

CSC354
Students will be able to write correct and robust software.
Students will use the theory of algorithms and computation to solve problems.
Students will be able to apply their technical knowledge to solve problems.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
Students will collaborate effectively in teams.
Students will be able to gather relevant information, examine information and form a conclusion based on that information.
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.

CSC374
Students will analyze the interaction between hardware and software.

CSC394
Students will be able to write correct and robust software.
Students will use the theory of algorithms and computation to solve problems.
Students will analyze the interaction between hardware and software.

CSC412
Students will be able to apply their technical knowledge to solve problems.
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.

CSC422
Students will use the theory of algorithms and computation to solve problems.
Students will analyze the interaction between hardware and software.

CSC454
Students will analyze the interaction between hardware and software.
Students will collaborate effectively in teams.

CSC481
Students will be able to apply their technical knowledge to solve problems.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.
Students will be able to gather relevant information, examine information and form a conclusion based on that information.
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.

CSC491
Students will achieve the learning objectives set by the instructor. They depend on the material selected for the class.

CSC493
Students will be able to write correct and robust software.
Students will be able to apply their technical knowledge to solve problems.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
Students will analyze the interaction between hardware and software.
Students will collaborate effectively in teams. Students will be able to gather relevant information, examine information and form a conclusion based on that information.
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.

CSC496
Students will be able to apply their technical knowledge to solve problems.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
Students will collaborate effectively in teams.
Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.
Students will be able to gather relevant information, examine information and form a conclusion based on that information.
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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.

CSC498
Students will be able to apply their technical knowledge to solve problems.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.
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ISS242
Students will be able to write correct and robust software.
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.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
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ISS324
Students will be able to write correct and robust software.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
Students will collaborate effectively in teams.

ISS414
Students will be able to apply their technical knowledge to solve problems.
Students will analyze the interaction between hardware and software.
Students will use information management as a tool to support decision making in business environments.
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.

ISS424
Students will be able to write correct and robust software.
Students will be able to apply their technical knowledge to solve problems.
Students will analyze the interaction between hardware and software.
Students will collaborate effectively in teams.
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.

ISS472
Students will be able to apply their technical knowledge to solve problems.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
Students will collaborate effectively in teams.
Students will be able to gather relevant information, examine information and form a conclusion based on that information.
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.

ISS481
Students will be able to apply their technical knowledge to solve problems.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.
Students will be able to gather relevant information, examine information and form a conclusion based on that information.
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.

ISS496
Students will be able to apply their technical knowledge to solve problems.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
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Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.
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Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.
Students will be able to gather relevant information, examine information and form a conclusion based on that information.
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.

MTH099
Students will be able to perform basic operations on the real numbers
Students will be able to solve basic polynomial equations.

MTH113
Students will be able to solve complicated polynomial equations.
Students will be able to use graphing to solve equations.

MTH121
Students will be able to develop mathematical models for simple problems.
Students will be able to solve these problems using calculus.

MTH123
Students will develop an ability to graph functions including polynomial and trigonometric functions.
Students will develop an ability to solve functions including polynomial and trigonometric functions.

MTH131
Students will be able to use technology to solve problems.
Students will master the fundamentals of using a computer algebra system.
Students will solve calculus problems using a computer algebra system.

MTH133
Students will develop an ability to graph functions including polynomial and trigonometric functions.
Students will develop an ability to solve functions including polynomial and trigonometric functions.

MTH144
GE Learning Outcome: Students will be able to solve problems that are quantitative in nature:
Students will be able to formulate a mathematical model from a verbal description of a problem.
Students will be able it solve non-routine problems using logic and quantitative techniques.
Students will be able to construct solutions to problems using computational techniques.

MTH164
Students will be able to demonstrate facility with analytical concepts.
Students will be able to demonstrate facility with algebraic structures.
Students will be able to use technology to solve problems.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
Students will collaborate effectively in teams.
Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.
Students will be able to gather relevant information, examine information and form a conclusion based on that information.
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.

GE Learning Outcome: Students will be able to solve problems that are quantitative in nature:
Students will be able to formulate a mathematical model from a verbal description of a problem.
Students will be able it solve non-routine problems using logic and quantitative techniques.
Students will be able to construct solutions to problems using computational techniques

MTH174
Students will be able to demonstrate facility with analytical concepts.
Students will be able to demonstrate facility with algebraic structures.
Students will be able to use technology to solve problems.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
Students will collaborate effectively in teams.
Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.
Students will be able to gather relevant information, examine information and form a conclusion based on that information.
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.

MTH203
Students will be able to apply their technical knowledge to solve problems.
Students will be able to compute measures of central tendency for data.
Students will be able to compute measures of dispersion for data.
Students will be able to use statistical methods to test hypotheses.
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.

MTH213
Students will be able to demonstrate a facility with operations on the integers.
Students will be able to demonstrate a facility with operations on the rational numbers.
Students will be able to apply concepts from number theory to solve problems.

MTH223
Students will be able to construct geometric figures using a compass and straight edge.
Students will be able to compute area and volume.
Students will be able to distinguish between the appropriate uses of probability and statistics to solve problems.

MTH233
Students will be able to apply their mathematical knowledge to solve problems.
Students will be able to demonstrate facility with algebraic structures.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
Students will collaborate effectively in teams.
Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.
Students will be able to gather relevant information, examine information and form a conclusion based on that information.
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.

MTH242
Students will be able to write proofs.
Students will be able to demonstrate facility with algebraic structures.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
Students will collaborate effectively in teams.
Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.
Students will be able to gather relevant information, examine information and form a conclusion based on that information.

MTH274
Students will be able to demonstrate facility with analytical concepts.
Students will be able to demonstrate facility with algebraic structures.
Students will be able to apply their mathematical knowledge to solve problems.
Students will be able to use technology to solve problems.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
Students will collaborate effectively in teams.
Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.
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.

MTH303
GE Learning Outcome: Students will be able to solve problems that are quantitative in nature:
Students will be able to formulate a mathematical model from a verbal description of a problem.
Students will be able it solve non-routine problems using logic and quantitative techniques.
Students will be able to construct solutions to problems using computational techniques

MTH333
Students will be able to apply their mathematical knowledge to solve problems.
Students will be able to use technology to solve problems.

MTH343
Students will be able to write proofs.
Students will be able to demonstrate facility with algebraic structures.
Students will be able to apply their mathematical knowledge to solve problems.
Students will use the theory of algorithms and computation to solve problems.

MTH352
Students will be able to write proofs.
Students will be able to demonstrate facility with analytical concepts.
Students will be able to demonstrate facility with algebraic structures.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
Students will collaborate effectively in teams.
Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.
Students will be able to gather relevant information, examine information and form a conclusion based on that information.

MTH362
Students will be able to compute measures of central tendency for data.
Students will be able to compute measures of dispersion for data.
Students will be able to use statistical methods to make inferences from data.

MTH373
Students will be able to apply their mathematical knowledge to solve problems.
Students will be able to use technology to solve problems.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
Students will collaborate effectively in teams.
Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.
Students will be able to gather relevant information, examine information and form a conclusion based on that information.
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.

MTH382
Students will be able to apply their mathematical knowledge to solve problems.
Students will be able to use technology to solve problems.
Students will collaborate effectively in teams.
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.

MTH392
Students will be able to apply their technical knowledge to solve problems.
Students will be able to apply their mathematical knowledge to solve problems.
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.

MTH402
Students will be able to demonstrate facility with analytical concepts.
Students will be able to write proofs.
Students will be able to apply their mathematical knowledge to solve problems.

MTH413
Students will be able to demonstrate facility with analytical concepts.
Students will be able to apply their mathematical knowledge to solve problems.

MTH424
Students will be able to demonstrate facility with analytical concepts.
Students will be able to write proofs.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
Students will collaborate effectively in teams.
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.

MTH444
Students will be able to write proofs.
Students will be able to demonstrate facility with algebraic structures.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
Students will collaborate effectively in teams.
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.

MTH463
Students will be able to develop lesson plans to help middle and high school students to learn mathematical concept.
Students will have practice in communicating mathematical concepts to others.

MTH471
Students will be able to demonstrate facility with analytical concepts.
Students will be able to apply their mathematical knowledge to solve problems.
Students will be able to speak about their work with precision, clarity and organization.

MTH481
Students will be able to apply their mathematical knowledge to solve problems.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.

MTH491
Students will achieve the learning objectives set by the instructor. They depend on the material selected for the class.

MTH492
Students will be able to apply their mathematical knowledge to solve problems.
Students will be able to use technology to solve problems.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
Students will collaborate effectively in teams.

MTH496
Students will be able to apply their mathematical knowledge to solve problems.
Students will be able to use technology to solve problems.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
Students will collaborate effectively in teams.
Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.
Students will be able to gather relevant information, examine information and form a conclusion based on that information.
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.

MTH497
Students will be able to apply their mathematical knowledge to solve problems.
Students will be able to use technology to solve problems.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
Students will collaborate effectively in teams.
Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.
Students will be able to gather relevant information, examine information and form a conclusion based on that information.
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.

MTH498
Students will be able to apply their mathematical knowledge to solve problems.
Students will be able to use technology to solve problems.
Students will be able to speak about their work with precision, clarity and organization.
Students will be able to write about their work with precision, clarity and organization.
Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.
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MTH499

Students will be able to apply their mathematical knowledge to solve problems.
Students will be able to use technology to solve problems.
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