82% 83% Program Objective #1 (PO1): Students will develop skills in problem analysis.
80% 82% Program Objective #2 (PO2): Students will develop problem-solving skills.
79% 85% Program Objective #3 (PO3): Students will develop solution-modeling skills.
82% 79% Program Objective #4 (PO4): Students will develop solution-implementation skills.
87% 86% Program Objective #5 (PO5): Students will develop strong communication skills.
78% 80% Program Objective #6 (PO6): Learn common algorithms and how to analyze them for efficiency.
88% 89 % Program Objective #7 (PO7): Understand the concepts used in modern computer technologies.

Outcome Description
82% 83% Program Objective #1 (PO1): Students will develop skills in problem analysis.

Assessment Method
Assessment will be measured through testing the following course objectives:
The first percentile is Fall 2009 and the second percentile is Spring 2010.

CSCI 270
77% 77% (CO270.2) Be able to use the linked list data structure.
80%80% (CO270.3) Be able to use the stack data structure.
79% 77% (CO270.4) Be able to use the queue data structure.
80% 86% (CO270.8) Be able to use the binary tree data structure and a hash table.

CSCI 340 Introduction to Database Systems
79% 79% (CO340.6) Describe, define and apply the major components of the relational database model.
76% 76% (CO340.8) Describe the fundamental data structures, access methods and storage devices needed for physical database design.

CSCI 359 Systems Analysis and Design <Data not available>
0% 0% (CO359.2) Explain the purpose and activities of the systems development life cycle phases.

CSCI 380
0% 0% (CO380.1) Creation and manipulation of web graphics using popular software tools.
0% 0% (CO380.2) Creation of Web Pages using XHTML
0% 0% (CO380.3) Application of cascading style sheets

CSCI 428 Object Oriented Programming
98% 100% (CO428.1) Software Engineering Basic.
85% 85% (CO428.6) UML

CSCI 431 JAVA Programming
0% 0% (CO431.9) Use the Swing library to develop programs with graphical user interfaces.

CSCI 440 Applied Software Project Development

0% 93% (CO440.6)Build user-friendly, aesthetic, and functional interfaces for application software projects.

0% 95% (CO440.8)Develop and implement a system application project in an object-oriented programming language using traditional process model diagrams as a guide.

CSCI 470 Database Programming
0% 80% (CO470.1)Identify and explain the major components of the relational data model.
0% 88% (CO470.2)Utilize structured query language (SQL) to define and manipulate database objects in the interactive mode.
0% 82% (CO470.3)Incorporate procedural extensions to SQL for maintaining database tables.
0% 82% (CO470.4)Develop an application program to access databases with the Java programming language.
0% 80% (CO470.8)Perform system and database administration to implement software to support database application development.
0% 75% (CO470.9)Complete a project to implement database management software or related tools.

80% 82% Program Objective #2 (PO2): Students will develop problem-solving skills.
Assessment will be measured through testing the following course objectives:
The first percentile is Fall 2009 and the second percentile is Spring 2010.

CSCI 152 Programming Fundamentals II
84% 76% (CO152.1) Be able to use one-dimensional arrays.
77% 80 % (CO152.2) Be able to use at least one (preferably at least two) sorting technique(s) to rearrange data in an array.
76% 80% (CO152.3) Be able to search an array using both linear and binary searching techniques.
77% 79% (CO152.7) Be able to design and code a program which includes a user-created class.

CSCI 241 Assembly Language and Computer Organization
89% 84% (CO241.2) Concepts of Machine Instructions, Assembly and linking, assembly language programming (Unconditional jumps, flags, subroutines, Stacks)

CSCI 270 Data Structure and Algorithms
76%76 % (CO270.1) Be able to use address variables.
80% 86% (CO270.8)Be able to integrate the use of container classes (user-created or STL) into a moderately complex program solution.

CSCI 431 JAVA Programming
0% 0% (CO431.7) Employ exception-handling programming techniques.
0% 0% (CO431.8) Utilize file input and output procedures for sequential and random access.
0% 0% (CO431.9) Use the Swing library to develop programs with graphical user interfaces.

CSCI 440 Applied Software Project Development
0% 95% (CO440.9)Connect a database and interface to software project.

 CSCI 470 Database Programming
0% 82% (CO470.4)Develop an application program to access databases with the Java programming language.

79% 85% Program Objective #3 (PO3): Students will develop solution-modeling skills.
Assessment will be measured through testing the following course objectives:
The first percentile is Fall 2009 and the second percentile is Spring 2010.

CSCI 340 Introduction to Database Systems
94% 92% (CO340.1) Model a single entity, define and access a single entity database.
83% 79% (CO340.2) Model a one-to-many (1:m) relationship between two entities, define a 1:m database, and process a 1:m database .
70% 72% (CO340.3) Model a m:m relationship between two entities, define and process a m:m database.
75% 75% (CO340.4) Create a well-formed, high fidelity data model.
72% 77% (CO340.5) Describe the process of normalization and distinguish between different normal forms.

CSCI 359 Systems Analysis and Design <Data not available>
0% 0% (CO359.5) Understand and model system entities and data stores.
0% 0% (CO359.6) Understand and model system processes, events, and data flows within a system.
0% 0% (CO359.7) Understand and model classes of data within a system.
0% 0% (CO359.8) Understand concepts relating to various models, tools, and techniques used in system analysis and design.

 CSCI 440 Applied Software Project Development
0% 95% (CO440.2)Use Microsoft Visio to create, edit, and publish to a web site traditional process model diagrams.
0% 97% (CO440.3)Use Microsoft Visio to create, edit, and publish to a web site Entity-Relationship diagrams.
0% 96% (CO440.7)Create a database using an Entity-Relationship diagram.

82% 73% Program Objective #4 (PO4): Students will develop solution-implementation skills.
Assessment will be measured through testing the following course objectives:
The first percentile is Fall 2009 and the second percentile is Spring 2010.

CSCI 152 Programming Fundamentals II
81% 76 % (CO152.4) Be able to use multiple-dimensional arrays.
83% 78% (CO152.5) Be able to use structs.
77% 77% (CO152.6) Be able to use classes.

CSCI 241 Machine Language and Computer Organization
89% 84% (CO241.2) Concepts of Machine Instructions, Assembly and linking, assembly language programming (Unconditional jumps, flags, subroutines, Stacks)
94% 85% (CO241.4) I/O devices; memory mapped I/O; Interrupts ; Arrays, addressing modes and Floating Point Instructions

CSCI 270
80% 77% (CO270.5) Be able to design, code, and use recursive functions.

CSCI 359 Systems Analysis and Design
0% 0% (CO359.4) Identify and understand system inputs and outputs.

CSCI 340 Introduction to Database Systems
80% 80% (CO340.7) Learn and apply the Structured Query Language (SQL) for database definition and manipulation.
72% 62% (CO340.9) Develop a procedural language application program to update a database table.

CSCI 380 Web Programming and Interface Design
0% 0% (CO380.1) Creation and manipulation of web graphics using popular software tools.
0% 0% (CO380.2) Creation of Web Pages using XHTML

0% 0% (CO380.3) Application of cascading style sheets
0% 0% (CO380.4) Client Side Scripting using JavaScript
0% 0% (CO380.5) Database creation and Web Integration using server side scripting.
0% 0% (CO380.6) Utilize Ajax and Web 2.0 technologies to create Rich Internet Applications

CSCI 431 JAVA Programming
0% 0% (CO431.1) Code, compile and run a Java program.
0% 0% (CO431.2) Master programming techniques for console input and output.
0% 0% (CO431.3) Apply logical constructs for branching and loops.
0% 0% (CO431.7) Employ exception-handling programming techniques.
0% 0% (CO431.8) Utilize file input and output procedures for sequential and random access.
0% 0% (CO431.9) Use the Swing library to develop programs with graphical user interfaces.

 CSCI 440 Applied Software Project Development
0% 90% (CO440.1) Develop and maintain an informational and project repository web site for an application
project.

CSCI 470 Database Programming
0% 88% (CO470.2)Utilize structured query language (SQL) to define and manipulate database objects in the
interactive mode.
0% 80% (CO470.5)Design a database-supported Web site.
0% 75% (CO470.6)Develop a database-supported Web site utilizing HTML and JavaServer Pages.
0% 0% (CO470.7)Apply XML for Data Exchange.

87% 86% Program Objective #5 (PO5) : Students will develop ethics and strong communication skills.
Assessment will be measured through testing the following course objectives:
The first percentile is Fall 2009 and the second percentile is Spring 2010.

CSCI 251 Introduction to Information Security, Law, and Ethics
83% 85% (CO251.1) Define ethics, morality, and moral system and recognize the distinction between ethical
theory and professional ethics.
82% 86% (CO251.2)Summarize the basic concepts of relativism, utilitarianism, and deontological theories.
84% 78% (CO251.3)Use methods and tools of analysis to analyze an argument to identify premises and
conclusion and illustrate the use of example, analogy, and counter-analogy in an ethical argument.
91% 84% (CO251.4) Identify the strengths and weaknesses of relevant professional codes as expressions of
professionalism and guides to decision-making.
84% 85% (CO251.5) Summarize the legal bases for the right to privacy and freedom of expression in one's own
nation and how those concepts vary from country to country.
92% 83% (CO251.6) Identify the professional's role in security and the tradeoffs involved.
87% 83% (CO251.7) Outline the technical basis of viruses and denial-of-service attacks and enumerate
techniques to combat the same.
80% 76% (CO251.8) Distinguish among patent, copyright, and trade secret protection and explain how patent
and copyright laws may vary internationally.
89% 83% (CO251.9) Explain the various U.S. legislation and regulations that impact technology and the
disadvantages and advantages of free expression in cyberspace.
92% 86% (CO251.10) Explain why computing/network access is restricted in some countries.
90% 87% (CO251.11) Define a computer use policy with enforcement measures.

CSCI 359 Systems Analysis and Design
0% 0% (CO359.3) Understand project management techniques.

CSCI 440 Applied Software Project Development

0% 95% (CO440.4)Develop and use a team constitution.
0% 86% (CO440.5)Solve team conflicts in a project building environment.
0% 95% (CO440.10)Create system documentation including help files, diagrams, and programming code.
0% 93% (CO440.11)Present the final project to an audience consisting of faculty, peers, administrators, and business leaders.
0% 89% (CO440.12)Evaluate other team members based upon specific criteria. (Derived based on team member evaluations.)

78% 80% Program Objective #6 (PO6) : Learn common algorithms and how to analyze them for efficiency.
Assessment will be measured through testing the following course objectives:
The first percentile is Fall 2009 and the second percentile is Spring 2010.

CSCI 152
77% 79% (CO152.7) Be able to design and code a program which includes a user-created class.

CSCI 270
75% 76% (CO270.6) Understand Big-O notation (for algorithm efficiency): what it means, how it is determined, and why it should be considered in effective programming.
81% 85% (CO270.7) Be able to use the binary tree data structure and a hash table.

88% 89% Program Objective #7 (PO7) : Learn theory behind modern computer technologies.
Assessment will be measured through testing the following course objectives:
The first percentile is Fall 2009 and the second percentile is Spring 2010.

CSCI 241
93% 89 % (CO241.1) Understand various numbering systems and conversions.
76% 85% (CO241.3) Understand Computer Organization: registers, transfers, machine cycles.
94% 85% (CO241.4) Understand I/O devices, memory mapped I/O; Interrupts.

CSCI 428 Object Oriented Programming
98% 100% (CO428.1) Software Engineering Basic.
84% 88% (CO428.2) Classes basics/advanced
85% 85% (CO428.6) UML

CSCI 430 Operating Systems
0% 0% (CO430.1) Understand the concepts, structures, and mechanisms of operating systems.
0% 0% (CO430.2) Understand memory management, virtual memory, swapping, paging algorithms, segmentation, and clock paging policies.
0% 0% (CO430.3) Understand multiprogramming and multiuser capabilities, and how operating systems evolved.
 0% 0% (CO430.4) Understand process management, process states and process and thread structures and concepts.
0% 0% (CO430.5) Understand concurrent processes and associated deadlock prevention, avoidance, detection, recovery methods, and the use of semaphores.
0% 0% (CO430.6) Learn specific design decisions and architectures used in modern operating systems.

CSCI 359 Systems Analysis and Design

0% 0% (CO359.1) Understand concepts relating to different types of information systems.