SLO to ILO Alignment Reports

CAN - 00 - Institutional Learning Outcomes (ILOs)

CAN ILO #1 - Critical Thinking - Select, evaluate, and use information to investigate a point of view, support a conclusion, or engage in problem solving.

CAN Dept - Computer Science

CAN CIS 118: Introduction to Computer Science

SLO 1: Write a program: read in data from a file, store it into an array, process the data and write the results to a file.

CAN CIS 118: Introduction to Computer Science

SLO 2: Demonstrate the correct use of a selection structure and a loop.

CAN CIS 118: Introduction to Computer Science

SLO 3: Write, compile and execute a program to solve a simple problem with use input.

CAN CIS 118: Introduction to Computer Science

SLO 4: Define and use the steps of the Software Development Life Cycle to create a program.

CAN CIS 118: Introduction to Computer Science

Simple: Correctly write, compile and execute a Java program to solve a simple problem with user input.

CAN CIS 118: Introduction to Computer Science

Class: Correctly implement a class in Java and create a driver program to test the class.

CAN CIS 118: Introduction to Computer Science

decisions: Correctly use decision structures in a Java program to execute alternatives depending on user input.

CAN CIS 118: Introduction to Computer Science

repetition: Correctly use repetition in a Java program to solve a problem.

CAN CIS 118: Introduction to Computer Science

Arrays and Files: Correctly use an array to store data read from a file, process the data and write the results to a file.

CAN CIS 118: Introduction to Computer Science

CAN ILO #1 - Critical Thinking - Select, evaluate, and use information to investigate a point of view, support a conclusion, or engage in problem solving.

CAN CIS 118: Introduction to Computer Science

GUI: Correctly implement a GUI interface for a Java application or applet.

CAN CIS 242: Computer Architecture and Assembly Language

SLO 1: Define the 5 basic components of an operating system.

CAN CIS 242: Computer Architecture and Assembly Language

SLO 2: Describe how data is represented in computer memory.

CAN CIS 242: Computer Architecture and Assembly Language

SLO 3: Demonstrate how fundamental high-level programming constructs are implemented at the machine-language level.

CAN CIS 242: Computer Architecture and Assembly Language

SLO 4: Write simple assembly language program segments.

CAN CIS 242: Computer Architecture and Assembly Language

SLO 5: 5. Describe the basic transistor can build basic digital and, nand, or, nor etc circuitry.

CAN CIS 250: Introduction to Object Oriented Programming: C++

SLO 1: Demonstrate, create and use user-defined data types, called classes, to solve a problem

CAN CIS 250: Introduction to Object Oriented Programming: C++

SLO 2: Write a program that accesses predefined template-classes in code libraries to solve a software problem.

CAN CIS 250: Introduction to Object Oriented Programming: C++

SLO 3: Demonstrate the use of pointers, dynamic memory allocation and file operations to solve a programming problem.

CAN CIS 250: Introduction to Object Oriented Programming: C++

SLO 4: Employ the use inheritance and polymorphism to meet a programming objective

CAN CIS 250: Introduction to Object Oriented Programming: C++

control: Correctly use control structures in a program

CAN CIS 250: Introduction to Object Oriented Programming: C++

array: Correctly use an array to solve a problem

CAN CIS 250: Introduction to Object Oriented Programming: C++

pointers: Correctly use pointers, dynamic memory allocation and file operations to solve a problem.

CAN CIS 250: Introduction to Object Oriented Programming: C++

library: Correctly use library classes and exceptions to handle errors in a program

CAN CIS 250: Introduction to Object Oriented Programming: C++

inheritance: Correctly use inheritance to solve a problem

CAN ILO #1 - Critical Thinking - Select, evaluate, and use information to investigate a point of view, support a conclusion, or engage in problem solving.

CAN CIS 250: Introduction to Object Oriented Programming: C++

inheritance: Correctly use inheritance to solve a problem

CAN CIS 252: Introduction to Data Structures: C++

SLO 1: Correctly use recursion to solve a problem with trees

CAN CIS 252: Introduction to Data Structures: C++

SLO 2: Correctly use recursion to solve a problem with graphs

CAN CIS 252: Introduction to Data Structures: C++

SLO 3: Correctly use Big-O notation to describe how the runtime of an algorithm depends on size.

CAN CIS 252: Introduction to Data Structures: C++

SLO 4: Correctly use a linked-list to solve a problem

CAN CIS 252: Introduction to Data Structures: C++

SLO 5: Correctly solve a problem with binary search trees

CAN CIS 252: Introduction to Data Structures: C++

SLO 6: Correctly implement an abstract data type (ADT) as a C++ class.

CAN CIS 252: Introduction to Data Structures: C++

Big-O: Correctly use Big-O notation to describe how the runtime of an algorithm depends on size.

CAN CIS 252: Introduction to Data Structures: C++

linked-list: Correctly use a linked-list to solve a problem

CAN CIS 252: Introduction to Data Structures: C++

ADT: Correctly implement an abstract data type (ADT) as a C++ class.

CAN CIS 262: Discrete Mathematics for Computer Science

SLO 1: Describe how formal tools of symbolic logic are used to model real-life situations, including those arising in computing contexts such as program correctness, database queries, and algorithms.

CAN CIS 262: Discrete Mathematics for Computer Science

SLO 2: Relate the ideas of mathematical induction to recursion and recursively defined structures.

CAN CIS 262: Discrete Mathematics for Computer Science

SLO 3: Analyze a problem to create relevant recurrence equations.

CAN CIS 262: Discrete Mathematics for Computer Science

SLO 4: Demonstrate different traversal methods for trees and graphs.

CAN CIS 262: Discrete Mathematics for Computer Science

CAN ILO #1 - Critical Thinking - Select, evaluate, and use information to investigate a point of view, support a conclusion, or engage in problem solving.

CAN CIS 262: Discrete Mathematics for Computer Science

SLO 5: Apply the Binomial Theorem to independent events and Bayes' Theorem to dependent events.

CAN CIS 284: Introduction to Object Oriented Programming: Java

SLO 1: Correctly use classes from the standard Java libraries to solve a problem

CAN CIS 284: Introduction to Object Oriented Programming: Java

SLO 2: Correctly use exceptions to handle errors in a program

CAN CIS 284: Introduction to Object Oriented Programming: Java

SLO 3: Correctly use graphical user interface (GUI) components to create a program.

CAN CIS 284: Introduction to Object Oriented Programming: Java

SLO 4: Correctly use inheritance relations to solve a problem

CAN CIS 284: Introduction to Object Oriented Programming: Java

SLO 5: Correctly implement an abstract data type (ADT) as a Java class and create a driver program to test the class.

CAN CIS 286: Introduction to Data Structures: Java

SLO 1: Correctly use a linked-list to solve a problem.

CAN CIS 286: Introduction to Data Structures: Java

SLO 2: Correctly determine the relative runtimes of different sort algorithms on arrays of different sizes.

CAN CIS 286: Introduction to Data Structures: Java

SLO 3: Correctly solve a problem with binary search trees (BSTs).

CAN CIS 286: Introduction to Data Structures: Java

SLO 4: Correctly use recursion to solve a problem with trees.

CAN CIS 286: Introduction to Data Structures: Java

SLO 5: Correctly use recursion to solve a problem with graphs.

CAN CIS 286: Introduction to Data Structures: Java

SLO 6: Correctly implement an abstract data type (ADT) as a Java class.

CAN CIS 294: Intro to Object-Oriented Programming: Objective-C

SLO 1: Write a program that accesses predefined template-classes in code libraries to solve a software problem.

CAN CIS 294: Intro to Object-Oriented Programming: Objective-C

SLO 2: Employ the use inheritance and polymorphism to meet a programming objective

CAN CIS 294: Intro to Object-Oriented Programming: Objective-C

CAN ILO #1 - Critical Thinking - Select, evaluate, and use information to investigate a point of view, support a conclusion, or engage in problem solving.

CAN CIS 294: Intro to Object-Oriented Programming: Objective-C

SLO 3: Demonstrate the use of pointers, dynamic memory allocation and file operations to solve a programming problem

CAN CIS 294: Intro to Object-Oriented Programming: Objective-C

SLO 4: Demonstrate, create and use user-defined data types, called classes, to solve a problem

CAN CIS 321: iOS Programming

write code: Write object-oriented code in Swift using the XCode IDE for an iPhone or iPad application

CAN CIS 321: iOS Programming

Storyboard: Use Storyboard to build a GUI for an iPhone or iPod Touch application.

CAN CIS 321: iOS Programming

debug: Test and debug using the "Simulator" for an iPhone/iPad application

CAN CIS 680CF: Introduction to Relational Databases

SLO 1: Create a database, tables and table indexes. Draw a ER Diagram illustrating the relationships between the added tables.

CAN CIS 680CF: Introduction to Relational Databases

SLO 2: Use normalization to transform a relational schema into a set of normalized relations: 1NF, 2NF and 3NF.

CAN CIS 680CF: Introduction to Relational Databases

SLO 4: Employ queries with dynamic or static tables.

CAN CIS 680CF: Introduction to Relational Databases

SLO 5: Perform basic database administration tasks of backup and recovery.

CAN ILO #2 - Creativity - Produce, combine, or synthesize ideas in creative ways within or across disciplines.

CAN Dept - Computer Science

CAN CIS 118: Introduction to Computer Science

SLO 3: Write, compile and execute a program to solve a simple problem with use input.

CAN CIS 118: Introduction to Computer Science

SLO 4: Define and use the steps of the Software Development Life Cycle to create a program.

CAN CIS 242: Computer Architecture and Assembly Language

SLO 4: Write simple assembly language program segments.

CAN CIS 250: Introduction to Object Oriented Programming: C++

SLO 1: Demonstrate, create and use user-defined data types, called classes, to solve a problem

CAN CIS 250: Introduction to Object Oriented Programming: C++

SLO 2: Write a program that accesses predefined template-classes in code libraries to solve a software problem.

CAN CIS 250: Introduction to Object Oriented Programming: C++

SLO 3: Demonstrate the use of pointers, dynamic memory allocation and file operations to solve a programming problem.

CAN CIS 250: Introduction to Object Oriented Programming: C++

SLO 4: Employ the use inheritance and polymorphism to meet a programming objective

CAN CIS 252: Introduction to Data Structures: C++

SLO 1: Correctly use recursion to solve a problem with trees

CAN CIS 252: Introduction to Data Structures: C++

SLO 2: Correctly use recursion to solve a problem with graphs

CAN CIS 252: Introduction to Data Structures: C++

SLO 3: Correctly use Big-O notation to describe how the runtime of an algorithm depends on size.

CAN CIS 252: Introduction to Data Structures: C++

SLO 4: Correctly use a linked-list to solve a problem

CAN CIS 252: Introduction to Data Structures: C++

SLO 5: Correctly solve a problem with binary search trees

CAN CIS 252: Introduction to Data Structures: C++

SLO 6: Correctly implement an abstract data type (ADT) as a C++ class.

CAN CIS 262: Discrete Mathematics for Computer Science

SLO 1: Describe how formal tools of symbolic logic are used to model real-life situations, including those arising in computing contexts such as program correctness, database

CAN CIS 262: Discrete Mathematics for Computer Science

queries, and algorithms.

CAN CIS 262: Discrete Mathematics for Computer Science

SLO 2: Relate the ideas of mathematical induction to recursion and recursively defined structures.

CAN CIS 284: Introduction to Object Oriented Programming: Java

SLO 1: Correctly use classes from the standard Java libraries to solve a problem

CAN CIS 286: Introduction to Data Structures: Java

SLO 1: Correctly use a linked-list to solve a problem.

CAN CIS 286: Introduction to Data Structures: Java

SLO 3: Correctly solve a problem with binary search trees (BSTs).

CAN CIS 286: Introduction to Data Structures: Java

SLO 4: Correctly use recursion to solve a problem with trees.

CAN CIS 286: Introduction to Data Structures: Java

SLO 5: Correctly use recursion to solve a problem with graphs.

CAN CIS 286: Introduction to Data Structures: Java

SLO 6: Correctly implement an abstract data type (ADT) as a Java class.

CAN CIS 294: Intro to Object-Oriented Programming: Objective-C

SLO 2: Employ the use inheritance and polymorphism to meet a programming objective

CAN CIS 294: Intro to Object-Oriented Programming: Objective-C

SLO 4: Demonstrate, create and use user-defined data types, called classes, to solve a problem

CAN CIS 321: iOS Programming

write code: Write object-oriented code in Swift using the XCode IDE for an iPhone or iPad application

CAN CIS 321: iOS Programming

Storyboard: Use Storyboard to build a GUI for an iPhone or iPod Touch application.

CAN CIS 680CF: Introduction to Relational Databases

SLO 1: Create a database, tables and table indexes. Draw a ER Diagram illustrating the relationships between the added tables.

CAN CIS 680CF: Introduction to Relational Databases

SLO 2: Use normalization to transform a relational schema into a set of normalized relations: 1NF, 2NF and 3NF.

CAN CIS 680CF: Introduction to Relational Databases

SLO 4: Employ queries with dynamic or static tables.

CAN ILO #3 - Communication - Use language to effectively convey an idea or a set of facts, including the accurate use of source material and evidence according to institutional and discipline standards.

CAN Dept - Computer Science

CAN CIS 118: Introduction to Computer Science

SLO 1: Write a program: read in data from a file, store it into an array, process the data and write the results to a file.

CAN CIS 118: Introduction to Computer Science

Simple: Correctly write, compile and execute a Java program to solve a simple problem with user input.

CAN CIS 118: Introduction to Computer Science

Class: Correctly implement a class in Java and create a driver program to test the class.

CAN CIS 118: Introduction to Computer Science

decisions: Correctly use decision structures in a Java program to execute alternatives depending on user input.

CAN CIS 118: Introduction to Computer Science

repetition: Correctly use repetition in a Java program to solve a problem.

CAN CIS 242: Computer Architecture and Assembly Language

SLO 1: Define the 5 basic components of an operating system.

CAN CIS 242: Computer Architecture and Assembly Language

SLO 2: Describe how data is represented in computer memory.

CAN CIS 242: Computer Architecture and Assembly Language

SLO 3: Demonstrate how fundamental high-level programming constructs are implemented at the machine-language level.

CAN CIS 242: Computer Architecture and Assembly Language

SLO 5: 5. Describe the basic transistor can build basic digital and, nand, or, nor etc circuitry.

CAN CIS 250: Introduction to Object Oriented Programming: C++

SLO 1: Demonstrate, create and use user-defined data types, called classes, to solve a problem

CAN CIS 250: Introduction to Object Oriented Programming: C++

SLO 4: Employ the use inheritance and polymorphism to meet a programming objective

CAN CIS 252: Introduction to Data Structures: C++

SLO 3: Correctly use Big-O notation to describe how the runtime of an algorithm depends on size.

CAN CIS 262: Discrete Mathematics for Computer Science

SLO 1: Describe how formal tools of symbolic logic are used to model real-life situations, including those arising in computing contexts such as program correctness, database queries, and algorithms.

CAN ILO #3 - Communication - Use language to effectively convey an idea or a set of facts, including the accurate use of source material and evidence according to institutional and discipline standards.

CAN CIS 284: Introduction to Object Oriented Programming: Java

SLO 1: Correctly use classes from the standard Java libraries to solve a problem

CAN CIS 286: Introduction to Data Structures: Java

SLO 6: Correctly implement an abstract data type (ADT) as a Java class.

CAN CIS 294: Intro to Object-Oriented Programming: Objective-C

SLO 2: Employ the use inheritance and polymorphism to meet a programming objective

CAN CIS 294: Intro to Object-Oriented Programming: Objective-C

SLO 4: Demonstrate, create and use user-defined data types, called classes, to solve a problem

CAN CIS 321: iOS Programming

write code: Write object-oriented code in Swift using the XCode IDE for an iPhone or iPad application

CAN CIS 321: iOS Programming

Storyboard: Use Storyboard to build a GUI for an iPhone or iPod Touch application.

CAN CIS 680CF: Introduction to Relational Databases

SLO 3: Create User Accounts and apply appropriate levels of security and access to created tables.

CAN ILO #4 - Community - Understand and interpret various points of view that emerge from a diverse world of peoples and cultures.

CAN Dept - Computer Science

CAN CIS 118: Introduction to Computer Science

SLO 3: Write, compile and execute a program to solve a simple problem with use input.

CAN CIS 118: Introduction to Computer Science

Class: Correctly implement a class in Java and create a driver program to test the class.

CAN CIS 242: Computer Architecture and Assembly Language

SLO 5: 5. Describe the basic transistor can build basic digital and, nand, or, nor etc circuitry.

CAN CIS 250: Introduction to Object Oriented Programming: C++

SLO 1: Demonstrate, create and use user-defined data types, called classes, to solve a problem

CAN CIS 250: Introduction to Object Oriented Programming: C++

SLO 4: Employ the use inheritance and polymorphism to meet a programming objective

CAN CIS 252: Introduction to Data Structures: C++

SLO 3: Correctly use Big-O notation to describe how the runtime of an algorithm depends on size.

CAN CIS 262: Discrete Mathematics for Computer Science

SLO 1: Describe how formal tools of symbolic logic are used to model real-life situations, including those arising in computing contexts such as program correctness, database queries, and algorithms.

CAN CIS 284: Introduction to Object Oriented Programming: Java

SLO 1: Correctly use classes from the standard Java libraries to solve a problem

CAN CIS 286: Introduction to Data Structures: Java

SLO 6: Correctly implement an abstract data type (ADT) as a Java class.

CAN CIS 294: Intro to Object-Oriented Programming: Objective-C

SLO 2: Employ the use inheritance and polymorphism to meet a programming objective

CAN CIS 321: iOS Programming

write code: Write object-oriented code in Swift using the XCode IDE for an iPhone or iPad application

CAN CIS 321: iOS Programming

Storyboard: Use Storyboard to build a GUI for an iPhone or iPod Touch application.

CAN CIS 680CF: Introduction to Relational Databases

SLO 3: Create User Accounts and apply appropriate levels of security and access to created tables.

CAN ILO #5 - Quantitative Reasoning - Represent complex data in various mathematical forms (e.g., equations, graphs, diagrams, tables, and words) and analyze these data to draw appropriate conclusions.

CAN Dept - Computer Science

CAN CIS 118: Introduction to Computer Science

SLO 1: Write a program: read in data from a file, store it into an array, process the data and write the results to a file.

CAN CIS 118: Introduction to Computer Science

SLO 2: Demonstrate the correct use of a selection structure and a loop.

CAN CIS 118: Introduction to Computer Science

SLO 3: Write, compile and execute a program to solve a simple problem with use input.

CAN CIS 118: Introduction to Computer Science

Simple: Correctly write, compile and execute a Java program to solve a simple problem with user input.

CAN CIS 118: Introduction to Computer Science

Class: Correctly implement a class in Java and create a driver program to test the class.

CAN CIS 118: Introduction to Computer Science

decisions: Correctly use decision structures in a Java program to execute alternatives depending on user input.

CAN CIS 118: Introduction to Computer Science

repetition: Correctly use repetition in a Java program to solve a problem.

CAN CIS 118: Introduction to Computer Science

Arrays and Files: Correctly use an array to store data read from a file, process the data and write the results to a file.

CAN CIS 118: Introduction to Computer Science

GUI: Correctly implement a GUI interface for a Java application or applet.

CAN CIS 242: Computer Architecture and Assembly Language

SLO 1: Define the 5 basic components of an operating system.

CAN CIS 242: Computer Architecture and Assembly Language

SLO 2: Describe how data is represented in computer memory.

CAN CIS 242: Computer Architecture and Assembly Language

SLO 3: Demonstrate how fundamental high-level programming constructs are implemented at the machine-language level.

CAN CIS 242: Computer Architecture and Assembly Language

SLO 4: Write simple assembly language program segments.

CAN CIS 242: Computer Architecture and Assembly Language

CAN ILO #5 - Quantitative Reasoning - Represent complex data in various mathematical forms (e.g., equations, graphs, diagrams, tables, and words) and analyze these data to draw appropriate conclusions.

CAN CIS 242: Computer Architecture and Assembly Language

SLO 5: 5. Describe the basic transistor can build basic digital and, nand, or, nor etc circuitry.

CAN CIS 250: Introduction to Object Oriented Programming: C++

SLO 1: Demonstrate, create and use user-defined data types, called classes, to solve a problem

CAN CIS 250: Introduction to Object Oriented Programming: C++

SLO 2: Write a program that accesses predefined template-classes in code libraries to solve a software problem.

CAN CIS 250: Introduction to Object Oriented Programming: C++

SLO 3: Demonstrate the use of pointers, dynamic memory allocation and file operations to solve a programming problem.

CAN CIS 250: Introduction to Object Oriented Programming: C++

SLO 4: Employ the use inheritance and polymorphism to meet a programming objective

CAN CIS 250: Introduction to Object Oriented Programming: C++

control: Correctly use control structures in a program

CAN CIS 250: Introduction to Object Oriented Programming: C++

array: Correctly use an array to solve a problem

CAN CIS 250: Introduction to Object Oriented Programming: C++

pointers: Correctly use pointers, dynamic memory allocation and file operations to solve a problem.

CAN CIS 250: Introduction to Object Oriented Programming: C++

library: Correctly use library classes and exceptions to handle errors in a program

CAN CIS 250: Introduction to Object Oriented Programming: C++

inheritance: Correctly use inheritance to solve a problem

CAN CIS 252: Introduction to Data Structures: C++

SLO 1: Correctly use recursion to solve a problem with trees

CAN CIS 252: Introduction to Data Structures: C++

SLO 2: Correctly use recursion to solve a problem with graphs

CAN CIS 252: Introduction to Data Structures: C++

SLO 3: Correctly use Big-O notation to describe how the runtime of an algorithm depends on size.

CAN CIS 252: Introduction to Data Structures: C++

SLO 4: Correctly use a linked-list to solve a problem

CAN CIS 252: Introduction to Data Structures: C++

SLO 5: Correctly solve a problem with binary search trees

CAN ILO #5 - Quantitative Reasoning - Represent complex data in various mathematical forms (e.g., equations, graphs, diagrams, tables, and words) and analyze these data to draw appropriate conclusions.

CAN CIS 252: Introduction to Data Structures: C++

SLO 5: Correctly solve a problem with binary search trees

CAN CIS 252: Introduction to Data Structures: C++

SLO 6: Correctly implement an abstract data type (ADT) as a C++ class.

CAN CIS 252: Introduction to Data Structures: C++

Big-O: Correctly use Big-O notation to describe how the runtime of an algorithm depends on size.

CAN CIS 252: Introduction to Data Structures: C++

linked-list: Correctly use a linked-list to solve a problem

CAN CIS 252: Introduction to Data Structures: C++

ADT: Correctly implement an abstract data type (ADT) as a C++ class.

CAN CIS 262: Discrete Mathematics for Computer Science

SLO 1: Describe how formal tools of symbolic logic are used to model real-life situations, including those arising in computing contexts such as program correctness, database queries, and algorithms.

CAN CIS 262: Discrete Mathematics for Computer Science

SLO 2: Relate the ideas of mathematical induction to recursion and recursively defined structures.

CAN CIS 262: Discrete Mathematics for Computer Science

SLO 3: Analyze a problem to create relevant recurrence equations.

CAN CIS 262: Discrete Mathematics for Computer Science

SLO 4: Demonstrate different traversal methods for trees and graphs.

CAN CIS 262: Discrete Mathematics for Computer Science

SLO 5: Apply the Binomial Theorem to independent events and Bayes' Theorem to dependent events.

CAN CIS 284: Introduction to Object Oriented Programming: Java

SLO 1: Correctly use classes from the standard Java libraries to solve a problem

CAN CIS 284: Introduction to Object Oriented Programming: Java

SLO 2: Correctly use exceptions to handle errors in a program

CAN CIS 284: Introduction to Object Oriented Programming: Java

SLO 3: Correctly use graphical user interface (GUI) components to create a program.

CAN CIS 284: Introduction to Object Oriented Programming: Java

SLO 4: Correctly use inheritance relations to solve a problem

CAN CIS 284: Introduction to Object Oriented Programming: Java

CAN ILO #5 - Quantitative Reasoning - Represent complex data in various mathematical forms (e.g., equations, graphs, diagrams, tables, and words) and analyze these data to draw appropriate conclusions.

CAN CIS 284: Introduction to Object Oriented Programming: Java

SLO 5: Correctly implement an abstract data type (ADT) as a Java class and create a driver program to test the class.

CAN CIS 286: Introduction to Data Structures: Java

SLO 1: Correctly use a linked-list to solve a problem.

CAN CIS 286: Introduction to Data Structures: Java

SLO 2: Correctly determine the relative runtimes of different sort algorithms on arrays of different sizes.

CAN CIS 286: Introduction to Data Structures: Java

SLO 3: Correctly solve a problem with binary search trees (BSTs).

CAN CIS 286: Introduction to Data Structures: Java

SLO 4: Correctly use recursion to solve a problem with trees.

CAN CIS 286: Introduction to Data Structures: Java

SLO 5: Correctly use recursion to solve a problem with graphs.

CAN CIS 286: Introduction to Data Structures: Java

SLO 6: Correctly implement an abstract data type (ADT) as a Java class.

CAN CIS 294: Intro to Object-Oriented Programming: Objective-C

SLO 1: Write a program that accesses predefined template-classes in code libraries to solve a software problem.

CAN CIS 294: Intro to Object-Oriented Programming: Objective-C

SLO 2: Employ the use inheritance and polymorphism to meet a programming objective

CAN CIS 294: Intro to Object-Oriented Programming: Objective-C

SLO 3: Demonstrate the use of pointers, dynamic memory allocation and file operations to solve a programming problem

CAN CIS 294: Intro to Object-Oriented Programming: Objective-C

SLO 4: Demonstrate, create and use user-defined data types, called classes, to solve a problem

CAN CIS 321: iOS Programming

write code: Write object-oriented code in Swift using the XCode IDE for an iPhone or iPad application

CAN CIS 321: iOS Programming

Storyboard: Use Storyboard to build a GUI for an iPhone or iPod Touch application.

CAN CIS 321: iOS Programming

debug: Test and debug using the "Simulator" for an iPhone/iPad application

CAN CIS 680CF: Introduction to Relational Databases

CAN ILO #5 - Quantitative Reasoning - Represent complex data in various mathematical forms (e.g., equations, graphs, diagrams, tables, and words) and analyze these data to draw appropriate conclusions.

CAN CIS 680CF: Introduction to Relational Databases

SLO 1: Create a database, tables and table indexes. Draw a ER Diagram illustrating the relationships between the added tables.

CAN CIS 680CF: Introduction to Relational Databases

SLO 2: Use normalization to transform a relational schema into a set of normalized relations: 1NF, 2NF and 3NF.

CAN CIS 680CF: Introduction to Relational Databases

SLO 5: Perform basic database administration tasks of backup and recovery.

SLO to ILO Alignment Reports

CAN - 00 - Institutional Learning Outcomes (ILOs)

CAN ILO #1 - Critical Thinking - Select, evaluate, and use information to investigate a point of view, support a conclusion, or engage in problem solving.

CAN Dept - Engineering

CAN ENGR 100 : Introduction to Engineering

Role: Evaluate the role of engineers in various societies around the world and throughout history.

CAN ENGR 100 : Introduction to Engineering

Disciplines: Recommend the types of projects and responsibilities that are the most appropriate for various engineering disciplines.

CAN ENGR 100 : Introduction to Engineering

Calculations: Formulate and perform elementary engineering calculations to aid the selection of the best design for a simple device.

CAN ENGR 100 : Introduction to Engineering

Drawings: Read and write elementary engineering drawings, instructions, and reports.

CAN ENGR 100 : Introduction to Engineering

Data: Perform experiments analyze and interpret data, and prepare a report summarizing the results of the experiments.

CAN ENGR 100 : Introduction to Engineering

License: Illustrate the processes required to become an engineer and maintain a license.

CAN ENGR 100 : Introduction to Engineering

Ethics: Explain and analyze ethical issues in engineering

CAN ENGR 111 : Engineering Surveying

survey: Correctly perform surveying computations and design related to differential leveling, traverses, boundary surveys, and topographic surveys.

CAN ENGR 111 : Engineering Surveying

equipment use: Utilize survey equipment to observe distances, angles, directions, and elevations; and to generate field notes for various types of surveys.

CAN ENGR 111 : Engineering Surveying

CAN ILO #1 - Critical Thinking - Select, evaluate, and use information to investigate a point of view, support a conclusion, or engage in problem solving.

CAN ENGR 111 : Engineering Surveying

Field Notes: Correctly apply appropriate mathematical techniques to reduce field notes to generate data and records for describing horizontal and vertical control of land forms.

CAN ENGR 111 : Engineering Surveying

drafting tools: Demonstrate proficient use of manual and computer-aided drafting tools and applications to plot plans and maps from field work data.

CAN ENGR 111 : Engineering Surveying

Group work: Work effectively in groups in surveying and engineering design projects that involve problem solving, report writing, and oral presentations.

CAN ENGR 210 : Engineering Graphics

Orthographic: Apply rules of orthographic projection to create multiview drawings.

CAN ENGR 210 : Engineering Graphics

Pictorials: Create pictorials from orthographic views.

CAN ENGR 210 : Engineering Graphics

Sectioning/Auxiliary: Create auxiliary and section views of an object following correct conventions.

CAN ENGR 210 : Engineering Graphics

CAD: Use CAD software to create 2D engineering drawings, including working drawings and assembly drawings, as well as 3D models and assemblies.

CAN ENGR 210 : Engineering Graphics

Design: Apply the engineering design process to a design project.

CAN ENGR 210 : Engineering Graphics

Symbols: Adhere to the standard conventions for terminology, symbols, and styles used in engineering graphics.

CAN ENGR 230 : Engineering Statics

Reduce force: Reduce systems of forces to one force or one force and one couple.

CAN ENGR 230 : Engineering Statics

Rigid: Solve for unknown forces for rigid bodies in two-dimensional and three-dimensional equilibrium.

CAN ENGR 230 : Engineering Statics

trusses: Analyze trusses, frames, and machines for external reaction forces and forces between the members.

CAN ENGR 230 : Engineering Statics

centroids: Calculate centroids and moments of inertia for composite bodies.

CAN ILO #1 - Critical Thinking - Select, evaluate, and use information to investigate a point of view, support a conclusion, or engage in problem solving.

CAN ENGR 230 : Engineering Statics

centroids: Calculate centroids and moments of inertia for composite bodies.

CAN ENGR 230 : Engineering Statics

Internal: Solve for internal forces in members and construct shear and bending moment diagrams for beams.

CAN ENGR 230 : Engineering Statics

Friction: Solve problems that include friction.

CAN ENGR 230 : Engineering Statics

stability: Analyze the stability of rigid bodies in equilibrium.

CAN ENGR 240 : Engineering Dynamics

particle kinematics: Derive and apply the relationships between position, velocity, and acceleration of a particle in rectilinear and curvilinear motion.

CAN ENGR 240 : Engineering Dynamics

plane motion: Derive relations defining the velocity and acceleration of any particle on a rigid body for translation, rotation and general plane motion.

CAN ENGR 240 : Engineering Dynamics

Newton: Correctly apply Newton's second law to analyze the motion of a particle in rectilinear or curvilinear translation acted upon by forces, or a rigid body in plane motion acted upon by forces and moments.

CAN ENGR 240 : Engineering Dynamics

work-energy: Apply the method of work and energy to problems involving a single particle, a system of particles, or a rigid body in plane motion.

CAN ENGR 240 : Engineering Dynamics

Analysis: Select the method of analysis that is best suited for the solution of a given problem. (Newton's Law, Work and Energy, Impulse and Momentum, or a combination of these methods.)

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Coriolis: Describe and analyze the plane motion of a particle relative to a rotating frame. Determine the Coriolis acceleration in plane motion.

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Impact: Apply the principle of impulse and momentum to problems of direct and oblique central impact, as well as eccentric impact.

CAN ENGR 260 : Circuits And Devices

responses: Analyze electric circuits for DC, transient, and AC voltage and current responses.

CAN ENGR 260 : Circuits And Devices

techniques: Evaluate different circuits analysis techniques and choose an appropriate technique for a particular circuit.

CAN ENGR 260 : Circuits And Devices

Solution: Synthesize a method of solution to the determine current or voltage in any circuit using a combination Kirchhoff?s Laws, loop and node analysis, the solution of

CAN ENGR 260 : Circuits And Devices

differential equations, generalized impedance and admittance techniques, and phasor methods.

CAN ENGR 260 : Circuits And Devices

op amp: Apply a simple model for transistor and operational amplifiers to design and analyze simple circuits.

CAN ENGR 260 : Circuits And Devices

Steady state: Solve steady state AC circuit and network problems involving power transfer and resonance.

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simulation: Use a circuit simulation program (MultiSIM, PSPICE) to analyze circuit behavior.

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Operate: Operate, safely and properly, multimeters, power supplies, signal generators and oscilloscopes.

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Verify: Experimentally verify the transient behavior of first- and second-order RLC circuits.

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Reports: Write lab reports that evaluate, analyze and summarize results and measurements of circuit behavior, including a discussion of any discrepancies between theoretical and measured results.

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Simulation: Use a circuit simulation program (PSPICE, MultiSIM) and other computer applications (MATLAB, MS Excel) to predict circuit behavior.

CAN ENGR 270 : Materials Science

crystals: Identify the crystalline structure of models, and explain now the structure?s characteristics affect a material?s properties.

CAN ENGR 270 : Materials Science

Imperfections: Distinguish between the types of imperfections that can occur in crystalline structures and compare their effects on a material?s properties.

CAN ENGR 270 : Materials Science

CAN ILO #1 - Critical Thinking - Select, evaluate, and use information to investigate a point of view, support a conclusion, or engage in problem solving.

CAN ENGR 270 : Materials Science

s-s diffusion: Calculate rates of steady-state diffusion.

CAN ENGR 270 : Materials Science

mechanical properties: Perform tension, compression, and hardness tests, and interpret the results.

CAN ENGR 270 : Materials Science

strengthening mechanisms: Describe different strengthening mechanisms and thermal processing, and compare their effects.

CAN ENGR 270 : Materials Science

polymers: Relate typical properties of polymers and ceramics to their structures.

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semi-conductors: Describe the mechanisms for electrical conduction in semiconductors.

CAN ENGR 695 : Independent Study

Proposal: Write a proposal to perform an independent study of an engineering topic or problem.

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Propose Solutiion: Formulate, refine, analyze and propose a solution to an engineering problem.

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Engineering Application: Apply engineering knowledge and skills, and use engineering tools to perform an independent research project on a selected engineering topic.

CAN ENGR 695 : Independent Study

Written Report: Write a report that evaluates, analyzes and summarizes the results of the independent study following generally accepted guidelines in technical reports.

CAN ENGR 695 : Independent Study

Oral Presentation: Prepare and deliver an oral presentation of the results of the independent study.

CAN ILO #2 - Creativity - Produce, combine, or synthesize ideas in creative ways within or across disciplines.

CAN Dept - Engineering

CAN ENGR 111 : Engineering Surveying

survey: Correctly perform surveying computations and design related to differential leveling, traverses, boundary surveys, and topographic surveys.

CAN ENGR 111 : Engineering Surveying

drafting tools: Demonstrate proficient use of manual and computer-aided drafting tools and applications to plot plans and maps from field work data.

CAN ENGR 111 : Engineering Surveying

Group work: Work effectively in groups in surveying and engineering design projects that involve problem solving, report writing, and oral presentations.

CAN ILO #3 - Communication - Use language to effectively convey an idea or a set of facts, including the accurate use of source material and evidence according to institutional and discipline standards.

CAN Dept - Engineering

CAN ENGR 100 : Introduction to Engineering

Role: Evaluate the role of engineers in various societies around the world and throughout history.

CAN ENGR 100 : Introduction to Engineering

Disciplines: Recommend the types of projects and responsibilities that are the most appropriate for various engineering disciplines.

CAN ENGR 100 : Introduction to Engineering

Drawings: Read and write elementary engineering drawings, instructions, and reports.

CAN ENGR 100 : Introduction to Engineering

Data: Perform experiments analyze and interpret data, and prepare a report summarizing the results of the experiments.

CAN ENGR 100 : Introduction to Engineering

Ethics: Explain and analyze ethical issues in engineering

CAN ENGR 111 : Engineering Surveying

survey: Correctly perform surveying computations and design related to differential leveling, traverses, boundary surveys, and topographic surveys.

CAN ENGR 111 : Engineering Surveying

equipment use: Utilize survey equipment to observe distances, angles, directions, and elevations; and to generate field notes for various types of surveys.

CAN ENGR 111 : Engineering Surveying

Field Notes: Correctly apply appropriate mathematical techniques to reduce field notes to generate data and records for describing horizontal and vertical control of land forms.

CAN ENGR 111 : Engineering Surveying

drafting tools: Demonstrate proficient use of manual and computer-aided drafting tools and applications to plot plans and maps from field work data.

CAN ENGR 111 : Engineering Surveying

Group work: Work effectively in groups in surveying and engineering design projects that involve problem solving, report writing, and oral presentations.

CAN ENGR 210 : Engineering Graphics

Orthographic: Apply rules of orthographic projection to create multiview drawings.

CAN ENGR 210 : Engineering Graphics

Design: Apply the engineering design process to a design project.

CAN ILO #4 - Community - Understand and interpret various points of view that emerge from a diverse world of peoples and cultures.

CAN Dept - Engineering

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CAN ENGR 100 : Introduction to Engineering

Disciplines: Recommend the types of projects and responsibilities that are the most appropriate for various engineering disciplines.

CAN ENGR 100 : Introduction to Engineering

Calculations: Formulate and perform elementary engineering calculations to aid the selection of the best design for a simple device.

CAN ENGR 100 : Introduction to Engineering

Ethics: Explain and analyze ethical issues in engineering

CAN ENGR 210 : Engineering Graphics

Design: Apply the engineering design process to a design project.

CAN ILO #5 - Quantitative Reasoning - Represent complex data in various mathematical forms (e.g., equations, graphs, diagrams, tables, and words) and analyze these data to draw appropriate conclusions.

CAN Dept - Engineering

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Calculations: Formulate and perform elementary engineering calculations to aid the selection of the best design for a simple device.

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CAN ENGR 210 : Engineering Graphics

Orthographic: Apply rules of orthographic projection to create multiview drawings.

CAN ENGR 210 : Engineering Graphics

Pictorials: Create pictorials from orthographic views.

CAN ENGR 210 : Engineering Graphics

CAD: Use CAD software to create 2D engineering drawings, including working drawings and assembly drawings, as well as 3D models and assemblies.

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Design: Apply the engineering design process to a design project.

CAN ENGR 210 : Engineering Graphics

CAN ILO #5 - Quantitative Reasoning - Represent complex data in various mathematical forms (e.g., equations, graphs, diagrams, tables, and words) and analyze these data to draw appropriate conclusions.

CAN ENGR 210 : Engineering Graphics

Tolerances: Apply standards of dimensioning and tolerancing to engineering drawings.

CAN ENGR 210 : Engineering Graphics

Symbols: Adhere to the standard conventions for terminology, symbols, and styles used in engineering graphics.

CAN ENGR 230 : Engineering Statics

Reduce force: Reduce systems of forces to one force or one force and one couple.

CAN ENGR 230 : Engineering Statics

Rigid: Solve for unknown forces for rigid bodies in two-dimensional and three-dimensional equilibrium.

CAN ENGR 230 : Engineering Statics

trusses: Analyze trusses, frames, and machines for external reaction forces and forces between the members.

CAN ENGR 230 : Engineering Statics

centroids: Calculate centroids and moments of inertia for composite bodies.

CAN ENGR 230 : Engineering Statics

Internal: Solve for internal forces in members and construct shear and bending moment diagrams for beams.

CAN ENGR 230 : Engineering Statics

Friction: Solve problems that include friction.

CAN ENGR 230 : Engineering Statics

stability: Analyze the stability of rigid bodies in equilibrium.

CAN ENGR 240 : Engineering Dynamics

particle kinematics: Derive and apply the relationships between position, velocity, and acceleration of a particle in rectilinear and curvilinear motion.

CAN ENGR 240 : Engineering Dynamics

plane motion: Derive relations defining the velocity and acceleration of any particle on a rigid body for translation, rotation and general plane motion.

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