

**22/SP-COP-2805C-61163 Java Advanced**

**Assignment 10.9**

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# Document Version Control

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# Document Purpose

The purpose of this document is to outline the process behind the Course class and discuss the parameters and functions involved.

# Technical Specifications

## Purpose of Technical Implementation

The application of this program is to create an easy way to manage students in a newly created course.

## Technical Implementation Components

* The program uses one main class called Course. Within this class, a new course is created, and the class also contains methods allowing management and manipulation of the arraylist of students in the course.

## Technical Implementation Pseudocode

*Create new course*

*add initial list of students into array list*

*display initial list of students*

*prompt user to remove a student*

*remove student and display active list.*

## Course Implementation

Course.java uses an ArrayList and many methods to complete its operations. Initially, the class starts with three private variables; A string for the course name, an ArrayList for the list of students, and an integer to hold the number of students. The constructor for this class creates a new course and sets the initial number of students to zero. The array list is an upgrade from the original array, so that the number of students that can be assigned becomes dynamic instead of static. addStudent method adds a new student to the array list, while incrementing the number of students variable by one. getStudents returns the list of students stored in the array. getNumberOfStudents returns the number of students currently added to the array list. getCourseName will return the name of the course when printed. The dropStudent method was recently implemented to allow the user to input a student to remove from the array list, while decreasing the number of students counted by one. the clear method will remove all students from the array list. Using .equalsIgnoreCase allows the user to type the students name without matching the capitalization, and will still remove the proper student.

The last main method allows testing of the course class to ensure proper working order.