

## CSI2441 Applications Development – Assignment One

### Coding logic design and implementation (15 Marks Total)

Your first assignment will require you to develop a record processing system in both ASP.Net (inline coding) and PHP, giving you an opportunity to see two modern web scripting languages in action. You will be provided with an input form for both ASP.Net and PHP, from which you must develop a logically design script which validates and processes the incoming data, presenting the results to screen. Your use of Functions, Control Structures, Input Validation, Conditions, and basic numerical calculations will form the core of each ASP/PHP script.

## Task

Your task is to create an ASP.Net and PHP page that reads in the data from the attached forms, validate the data (looking for physical and logical errors), then process the data and output a summary. Your script is required to process a list of units in order to help students figure out how much of their course they have completed and how far they have to go.

The following screenshot shows some of the fields in the input form;

## Course Progression Analyser

[illegible]

# SCHOOL OF COMPUTER AND SECURITY SCIENCE

The first three fields simply identify the student, while the Course Type field asks the student to choose the type of degree they are studying. After this is 30 rows of records, each recording a unitcode, the credit points that unit is worth (15 or 20), the semester it was studied (Semester 2, 2010 would be 102) and the mark received for the unit. The reason for 30 fields instead of a maximum of 22 is that a student may not have passed all units on the first attempt.

Your job is to write each of your scripts according to the following business logic;

All units that have a mark of 50 or higher have their Credit Points added to a grand total, this total then being subtracted from the Credit Points required for each of the four listed degrees. The total credit points required for each degree is;

Undergraduate - 360  
Graduate Diploma - 120  
Masters by Coursework - 180  
Masters by Research - 240

Thus, if a student fills in 10 rows on the form with units, each unit being worth 15 Credit Points, but has only passed 8 of those units, then the Total Passed Credit Points will be 120, leaving 240 Credit Points Required if they are studying an Undergraduate degree.

Your job is to output the Total Passed Credit Points, the Credit Points Required, along with the students name, student id and Course type. You need to also indicate how many units have been attempted and how many have been successfully completed, as well as the student's course average (indicated as a mark and a grade, such as 65 Cr). Indicate in the output any errors, such as blank fields or any other user input errors according to the criteria below.

If the student has obtained or gone over their required Credit Points for their course a Course Completed indicator needs to appear on screen.

The minimum validation you need to perform and business rules to process includes;

- None of the input fields (rows with data) have blank fields
- The Unitcode data is not less than 7 characters in length
- That the Credit Points field contains only 15 or 20, nothing else
- That the Year/Semester field contains only 3 digits
- That the Mark field is numeric, and not less than zero or greater than 100
- The student id field is numeric and not less than 8 characters in length
- If a student fails ANY unit three (3) times then their course result needs to indicate 'Excluded from Course'

- If a student has completed more than 66% (two thirds) of their course, and they have a single unit with a score between 40-45, they get a 'Supp assessment' next to that unit, whereas if the score is 46-49, they get a 'Conceded Pass'

## Assignment Submission

Remember, all files will be checked against all others, so do not share your work with others or use other student work as this can lead to issues of collusion and loss of marks.

### Coding (12 Marks)

### Presentation and Form Improvement (3 Marks)

## Overall Summary

**Total Mark** \_\_\_ / 15  
**Assignment Grade** \_\_\_\_\_