

## Project 7 Report

The objective of project 7 was an extension of project 6 and the final step in completing the university degree audit program. The basic outline of the project was we were assigned to design and introduce a new class or any assortment of user-defined functions to enable the program to hold the requirements file and categorize by group, subgroup, and list the classes. We then were assigned to be able to make the program compare the list of classes inputted by the user with the requirements file to be able and tell the user if he or she is ready to graduate or not. We were given a basic outline of the algorithm we should use to compare the two lists. Basically, we first had to create a distinct list of classes without grades F,W, or I and without duplicates. We then use a function and multiple loops to run through the lists and look for comparisons in the classes. There are a few cases where I was not able to get my program to run properly. I couldn't quite figure out how to properly get the distinct list to check for duplicates, so my program doesn't do that properly. However, for the most part, the program should work as advertised.

### Input 1

a  
r  
q

### Output 1

Welcome to the University Degree Audit Program!

How would you like to input your course data?

- [A] Read in from the default file (courses.txt)
- [B] Read in from another specified file
- [C] Manual input

Welcome to the GPA and Course storage program menu.

Now that you've entered your class information, please enter the character next to the choice you wish to pick.

- A. Compute the GPA for all courses
- B. List all courses
- C. Compute the total credit hours of courses with grade D
- D. Compute the GPA for a particular semester
- E. Add another course to the course list
- F. Remove a course from the current list
- R. List the requirements for a BSCE Degree
- Q. Quit the program

Group: University Core

Subgroup: English

Required Hours: 6

Courses:

ENGL 1013 -> 3

ENGL 1023 -> 3

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Group: University Core  
Subgroup: US History or Government  
Required Hours: 3  
Courses:  
HIST 2003 -> 3  
HIST 2013 -> 3  
PLSC 2003 -> 3

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Group: University Core  
Subgroup: Mathematics  
Required Hours: 3

Courses:

MATH	1023	->	3
MATH	1213	->	3
MATH	1313	->	3
MATH	2033	->	3
MATH	2043	->	3
MATH	2053	->	3
MATH	2183	->	3
MATH	2213	->	3
MATH	2223	->	3
MATH	2554	->	4
MATH	2564	->	4
MATH	2574	->	4
MATH	2603	->	3
STAT	2023	->	3
STAT	2303	->	3

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Group: University Core  
Subgroup: Natural Science  
Required Hours: 8  
Courses:

ANTH 1013 -> 3  
ANTH 1011L -> 1  
ASTR 2003 -> 3  
ASTR 2001L -> 1  
BIOL 1003 -> 3  
BIOL 1001L -> 1  
BIOL 1543 -> 3  
BIOL 1541L -> 1  
BIOL 1603 -> 3  
BIOL 1601L -> 1  
BIOL 1613 -> 3  
BIOL 1611L -> 1  
BIOL 2213 -> 3  
BIOL 2211L -> 1  
BIOL 2443 -> 3  
BIOL 2441L -> 1  
CHEM 1053 -> 3  
CHEM 1051L -> 1  
CHEM 1073 -> 3  
CHEM 1071L -> 1  
CHEM 1103 -> 3  
CHEM 1101L -> 1  
CHEM 1123 -> 3  
CHEM 1121L -> 1  
CHEM 1133 -> 3  
CHEM 1131L -> 1  
CHEM 1213 -> 3  
CHEM 1211L -> 1  
CHEM 1223 -> 3  
CHEM 1221L -> 1  
ENSC 1003 -> 3  
ENSC 1001L -> 1  
ENTO 1023 -> 3  
ENTO 1021L -> 1

GEOS 1113 -> 3  
GEOS 1111L -> 1  
GEOS 1133 -> 3  
GEOS 1131L -> 1  
PHYS 1023 -> 3  
PHYS 1021L -> 1  
PHYS 1034 -> 4  
PHYS 1044 -> 4  
PHYS 1054 -> 4  
PHYS 2013 -> 3  
PHYS 2011L -> 1  
PHYS 2033 -> 3  
PHYS 2031L -> 1  
PHYS 2054 -> 4  
PHYS 2074 -> 4  
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Group: University Core

Subgroup: Fine Arts

Required Hours: 3

Courses:

ARCH 1003 -> 3  
ARHS 1003 -> 3  
COMM 1003 -> 3  
DANC 1003 -> 3  
ENGL 2023 -> 3  
LARC 1003 -> 3  
MLIT 1003 -> 3  
MLIT 1013 -> 3  
THTR 1003 -> 3  
THTR 1013 -> 3

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Group: University Core

Subgroup: Humanities

Required Hours: 3

Courses:

AAST 2023 -> 3  
ARAB 2013 -> 3  
ARAB 2016 -> 6  
ARCH 1013 -> 3  
CHIN 2003 -> 3  
CLST 1003 -> 3  
CLST 1013 -> 3  
COMM 1233 -> 3  
ENGL 1213 -> 3  
FREN 2003 -> 3  
FREN 2013 -> 3  
GERM 2003 -> 3  
GERM 2013 -> 3  
GNST 2003 -> 3  
GREK 2003 -> 3  
GREK 2203 -> 3  
GREK 2213 -> 3  
HUMN 1124H -> 4  
HUMN 2124H -> 4  
ITAL 2003 -> 3  
ITAL 2013 -> 3  
JAPN 2003 -> 3  
JAPN 2013 -> 3  
LATN 2003 -> 3  
LATN 2013 -> 3  
MUSY 2003 -> 3  
PHIL 2003 -> 3  
PHIL 2103 -> 3  
PHIL 2203 -> 3  
PHIL 3103 -> 3  
RUSS 2003 -> 3  
RUSS 2013 -> 3  
SPAN 2003 -> 3  
SPAN 2013 -> 3  
SWAH 2003 -> 3  
SWAH 2013 -> 3  
SWAH 2116 -> 6  
WLIT 1113 -> 3  
WLIT 1123 -> 3  
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Group: University Core  
Subgroup: Social Science  
Required Hours: 9

Courses:

AGEC	1103	→	3
AGEC	2103	→	3
ANTH	1023	→	3
ECON	2013	→	3
ECON	2023	→	3
ECON	2143	→	3
GEOG	1123	→	3
GEOG	2003	→	3
HESC	1403	→	3
HESC	2413	→	3
HIST	1113	→	3
HIST	1123	→	3
HIST	2003	→	3
HIST	2013	→	3
HUMN	1114H	→	4
HUMN	2114H	→	4
PLSC	2003	→	3
PLSC	2013	→	3
PLSC	2203	→	3
PSYC	2003	→	3
RESM	2853	→	3
RSOC	2603	→	3
SOCI	2013	→	3
SOCI	2033	→	3

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English requirement is met!  
US History or Government requirement is not met at all.  
Mathematics requirement is partially met.  
Natural Science requirement is not met at all.  
Fine Arts requirement is met!  
Humanities requirement is not met at all.  
Social Science requirement is partially met.

Welcome to the GPA and Course storage program menu.  
Now that you've entered your class information, please enter the character next to the choice you wish to pick.

A. Compute the GPA for all courses  
B. List all courses  
C. Compute the total credit hours of courses with grade D  
D. Compute the GPA for a particular semester  
E. Add another course to the course list  
F. Remove a course from the current list  
R. List the requirements for a BSCE Degree  
Q. Quit the program  
Successfully outputted course\_taken class data to checking.txt!  
Successfully outputted the five parallel arrays to courses.txt!

## Input 2

a  
a  
b  
r  
q

## Output 2

Welcome to the University Degree Audit Program!

How would you like to input your course data?  
[A] Read in from the default file (courses.txt)  
[B] Read in from another specified file  
[C] Manual input

Welcome to the GPA and Course storage program menu.  
Now that you've entered your class information, please enter the character next to the choice you wish to pick.

- A. Compute the GPA for all courses
- B. List all courses
- C. Compute the total credit hours of courses with grade D
- D. Compute the GPA for a particular semester
- E. Add another course to the course list
- F. Remove a course from the current list
- R. List the requirements for a BSCE Degree
- Q. Quit the program

Your GPA is: 2.86792

Welcome to the GPA and Course storage program menu.  
Now that you've entered your class information, please enter the character next to the choice you wish to pick.

- A. Compute the GPA for all courses
- B. List all courses
- C. Compute the total credit hours of courses with grade D
- D. Compute the GPA for a particular semester
- E. Add another course to the course list
- F. Remove a course from the current list
- R. List the requirements for a BSCE Degree
- Q. Quit the program

You have taken 19 classes.

Classes: Programming Foundations I Digital Design Programming Foundations II Introduction to engineering I Introduction to engineering II Calculus I Composition I Programming Foundations I Digital Design Digital Design Programming Foundations I Programming Foundations I Composition II Basic Course in the Arts: Music Lecture Principles of Macroeconomics Principles of Microeconomics Basic Economics: Theory and Practice University Physics I College Physics I Laboratory

Terms: Fall 2014 Fall 2015 Spring 2016 Spring 2015 Fall 2015 Fall 2015 Spring 2015 Fall 2015 Fall 2014 Fall 2013 Fall 2013 Spring 2014 Fall 2015 Summer 2014 Fall 2014 Summer 2014 Spring 2015 Summer 2015 Spring 2012

Course Numbers: CSCE 2004 CSCE 2114 CSCE 2014 CNEG 1111 CNEG 1121 MATH 2554 ENGL 1013 CSCE 2004 CSCE 2114 CSCE 2114 CSCE 2004 CSCE 2004 ENGL 1023 MLIT 1003 ECON 2013 ECON 2023 ECON 2143 PHYS 2054 PHYS 2011L

Grades: B C A D A A A A F W I C A A F B A B C

Hours: 4 4 4 1 1 4 3 4 4 4 4 4 3 3 3 3 3 4 1

Welcome to the GPA and Course storage program menu.  
Now that you've entered your class information, please enter the character next to the choice you wish to pick.

- A. Compute the GPA for all courses
- B. List all courses
- C. Compute the total credit hours of courses with grade D

- D. Compute the GPA for a particular semester
- E. Add another course to the course list
- F. Remove a course from the current list
- R. List the requirements for a BSCE Degree
- Q. Quit the program

Group: University Core

Subgroup: English

Required Hours: 6

Courses:

ENGL 1013 -> 3

ENGL 1023 -> 3

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Group: University Core  
Subgroup: US History or Government  
Required Hours: 3

Courses:  
HIST 2003 -> 3  
HIST 2013 -> 3  
PLSC 2003 -> 3

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Group: University Core

Subgroup: Mathematics

Required Hours: 3

Courses:

MATH 1023 -> 3

MATH 1213 -> 3

MATH 1313 -> 3

MATH 2033 -> 3

MATH 2043 -> 3

MATH 2053 -> 3

MATH 2183 -> 3

MATH 2213 -> 3

MATH 2223 -> 3

MATH 2554 -> 4

MATH 2564 -> 4

MATH 2574 -> 4

MATH 2603 -> 3

STAT 2023 -> 3

STAT 2303 -> 3

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Group: University Core

Subgroup: Natural Science

Required Hours: 8

Courses:

ANTH 1013 -> 3  
ANTH 1011L -> 1  
ASTR 2003 -> 3  
ASTR 2001L -> 1  
BIOL 1003 -> 3  
BIOL 1001L -> 1  
BIOL 1543 -> 3  
BIOL 1541L -> 1  
BIOL 1603 -> 3  
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BIOL 2441L -> 1  
CHEM 1053 -> 3  
CHEM 1051L -> 1  
CHEM 1073 -> 3  
CHEM 1071L -> 1  
CHEM 1103 -> 3  
CHEM 1101L -> 1  
CHEM 1123 -> 3  
CHEM 1121L -> 1  
CHEM 1133 -> 3  
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GEOS 1133 -> 3  
GEOS 1131L -> 1  
PHYS 1023 -> 3  
PHYS 1021L -> 1  
PHYS 1034 -> 4  
PHYS 1044 -> 4  
PHYS 1054 -> 4  
PHYS 2013 -> 3  
PHYS 2011L -> 1  
PHYS 2033 -> 3  
PHYS 2031L -> 1  
PHYS 2054 -> 4  
PHYS 2074 -> 4  
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Group: University Core

Subgroup: Fine Arts

Required Hours: 3

Courses:

ARCH 1003 -> 3

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AST 2023 -> 3
RAB 2013 -> 3
RAB 2016 -> 6
RCH 1013 -> 3

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[illegible]

Group: University Core  
Subgroup: Social Science  
Required Hours: 9

Courses:

AGEC	1103	->	3
AGEC	2103	->	3
ANTH	1023	->	3
ECON	2013	->	3
ECON	2023	->	3
ECON	2143	->	3
GEOG	1123	->	3



GEOG 2003 → 3  
HESC 1403 → 3  
HESC 2413 → 3  
HIST 1113 → 3  
HIST 1123 → 3  
HIST 2003 → 3  
HIST 2013 → 3  
HUMN 1114H → 4  
HUMN 2114H → 4  
PLSC 2003 → 3  
PLSC 2013 → 3  
PLSC 2203 → 3  
PSYC 2003 → 3  
RESM 2853 → 3  
RSOC 2603 → 3  
SOCI 2013 → 3  
SOCI 2033 → 3

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English requirement is met!  
US History or Government requirement is not met at all.  
Mathematics requirement is partially met.  
Natural Science requirement is not met at all.  
Fine Arts requirement is met!  
Humanities requirement is not met at all.  
Social Science requirement is partially met.

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- F. Remove a course from the current list
- R. List the requirements for a BSCE Degree
- Q. Quit the program

Successfully outputted course\_taken class data to checking.txt!  
Successfully outputted the five parallel arrays to courses.txt!