Classroom Scheduler User Manual

**Introduction**

The classroom scheduler is a program designed to utilize university course schedules and faculty list with expertise to help determine how the university should handle its personnel decisions.

**Input Data**

Two input files are required to initially start the program.

1. Faculty.txt is a text file derived from an excel spreadsheet and saved in a tab delimited txt file. The headings for each column are: Name, Full-Time, Number of Classes, Number of students advised, Expertise 1, Expertise 2, and Expertise 3.
   1. Name – Used for faculty member name
   2. Full-Time – utilizes a ‘Y’ for yes and a ‘N’ for no for full-time faculty
   3. Number of classes – A number representing the number of classes a faculty member can teach in a given year
   4. Number of students advised – A number representing the number of students the faculty member is advising (Currently not incorporated in existing model)
   5. Expertise 1/Expertise2/Expertise3 - a space free description of the expertise in which this faculty member can teach classes
2. Classes.scv is a comma delimited csv file derived from an excel spreadsheet and saved in a comma delimited csv file. There are six columns as follows: Course, Time, Day, Cap, Quarter and Expertise.
   1. Course - Represented by the University course code (i.e. 342 for CSS 342)
   2. Time – Starting time of class, a dash (‘-‘) and the end time of the class (i.e. 845-1045) all times are kept in 24-hour time (1800-2000 represents an 8pm-10pm class)
   3. Day – Days of the week the class is taught. M, T, W, Th, F are all acceptable formats for days of the week. Multiple days are separated by a slash (‘/’).
   4. Cap - a number representing the max number of students in a class.
   5. Quarter – Autumn, Winter, Spring and Summer are used to represent the quarter of the class.
   6. Expertise – the required expertise to teach given class. This column will match up with expertise from faculty.txt

**Classroom-Scheduler**

Program consists of five main classes: MainCode, Quarter, Course, Faculty and Schedule along with the two input files.

Ensure all files are in a single location and run using any python IDE.

Current version of classroom scheduler does not contain a user interface to alter data. Therefore all information is determined from input files.

**Standard Algorithm**

Current algorithm utilizes input files to determine a number of optimized schedules based on necessity of class expertise. (Not all classes can be taught by numerous faculty) Classroom scheduler will calculate the statistical data of these schedules and produce information towards determining in what field any new or added faculty should be considered experts.

Current program optimizes schedule based on most needed expertise.

Assign classes to faculty based on full time/part time and number of classes per year.