Scheduler Requirements

# Team Apple

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# Purpose of This Document

This document details what Team Apple will implement in GGC’s Scheduler for professors and administrators. Implemented features are meant to automate GGC’s currently manual Scheduler in order to make the process more efficient and to ensure professors are most satisfied with the times and courses they teach.

# Functional Requirements

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| --- | --- |
| **Priority Key** | |
| **Key** | **Description** |
| AU | Authentication Requirements |
| PR | Professor Requirements |
| AD | Administrator Requirements |
| UD | Update Requirements |
| NR | Non-Functional Requirements |
| DR | Domain Requirements |
| H | High |
| M | Medium |
| L | Low |

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| --- | --- | --- | --- |
| Name | Description | Justification | Priority |
| AU001 | An authenticator must be implemented to only allow verified professors to be logged in as professors and verified administrators to be logged in as administrators. | To secure private information and separate professors from admins | L |
| AU002 | The password field for the login must be encrypted. | To secure passwords so hackers can’t easily steal or see private information | L |
| AU003 | Administrators must have a separate view from professors. | To give admins better control over the schedule | M |
| AU004 | It must be possible for administrators to be added to the system. | To allow new admins to be added | M |
| PR001 | Professors must be able to search for courses with the options of: Course number, Department, Course title, and Days and time of course. | To allow registration for certain classes to become easier | H |
| PR002 | Professors must be able to allocate a set number of points towards the courses they want. | To show the extent a professor wants a class so higher points get priority | H |
| PR003 | Professors must be able to edit preferences of the courses they want. | To allow professors editing for potential unforeseen changes or mistakes | H |
| PR004 | Preferences must be fixed. | To show important professors with high priority | H |
| PR005 | Professors must be able to add times they are available. | To show times professors can teach | H |
| PR006 | Professors must be able to add times they are not available. | To show times professors absolutely cannot teach | H |
| PR007 | Professors must be able to access a calendar schedule. | So professors can see a visual of their courses | H |
| PR008 | The hours of professors instruct must be kept track of. | So professors don’t go over their teaching limit | H |
| PR009 | Professors must be provided information of the initial professor that already has a preferred time they want. | So professors can discuss how to resolve conflicts | M |
| AD001 | Administrators must be able to add and remove courses and sections. | To be able to modify any last minute changes | H |
| AD002 | Administrators must be able to use a simple filter using course number and sections. | To more easily find classes | M |
| AD003 | Administrators must be able to use a complex filter using a course’s: Course Registration Number, Title, Section, Time and day, Class number, and Instructor | To more easily find classes simple filters don’t find | L |
| AD004 | Administrators must be able to see a professor’s total hours of teaching based on the classes the professor registered for. | To see professors over their teaching limit | H |
| AD005 | Administrators must be able to upload classes into Microsoft Excel. | So admins can add or archive classes | M |
| AD006 | Administrators must be able to download classes from Microsoft Excel. | So admins can add or archive classes | H |
| AD007 | Administrators must be able to download professor data from Microsoft Excel. | So admins can archive professor data | H |
| AD008 | Administrators must be able to control entire sections of course data. | To more easily modify classes | L |
| AD009 | Administrators must see overlaps within the calendar schedule. | To see where conflicts are | H |
| AD010 | Visual filters must be implemented to show which classes have conflicts and which do not have conflicts. | So it is easier to see where conflicts are | L |
| AD011 | Administrators must see which classes are empty and which professors are available at those times. | To fill in gaps to unattended classes | M |
| UD001 | Must update all dependencies to modern and stable versions. | To update framework so information is consistent between implementers | H |

# Non-Functional Requirements

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| --- | --- | --- | --- |
| Name | Description | Justification | Priority |
| NR001 | A webpage that has working graphics of the schedule database and the actual schedule must be implemented before September 17th. | This is the class’ deadline | H |
| NR002 | A webpage that implements functional requirements must be implemented before October 8th. | This is the class’ deadline | H |
| NR003 | The final product must be implemented before November 5th. | This is the class’ deadline | H |
| NR004 | The Scheduler must be scalable, meaning it must have a simple and easy to modify database data. | To allow future programmers to easily modify the Scheduler | M |
| NR005 | Professors and administrators must be able to use the interface easily and have access to help info bubbles that explain features to them. | So it is easier to register using the Scheduler | M |
| NR006 | There must not be duplicate data. | So redundant data does not cause errors | H |
| NR007 | The webpage must at least run on major web browsers. | So users don’t have problems accessing the Scheduler | H |
| NR008 | The Scheduler must refresh calendars and classes to professors and administrators every 30 or 60 seconds. | So the Scheduler gives users accurate data | H |

# Domain Requirements

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| Name | Description | Justification | Priority |
| DR001 | Database Statistics must be kept track of. Information included are: The most congested course times, Most preferred availability of professors, and the number of professors. | So admins can get a better idea of how to handle schedule conflicts | M |
| DR002 | There must be a way to keep track of the Schedule’s data of courses, administrators, and professors. | To allow GGC to keep track of data for business reasons and to ensure all courses have an instructor | H |
| DR003 | An activity log may be implemented. | To keep track of changes and to fix errors | L |