

Design and Methodology

Programming and Algorithm

The system will be incorporated in the Flavio module as a faculty loading module which will the Program head will be using. The module will cater the loading of the faculty with less time rather than the current process. The algorithm of the module will use different criteria to satisfy the load of each faculty. Another part of the system is the analytics report, in which how the faculty got the load in percentage. Only the Program Head has the right to view the report.

The systems developer used HTML and PHP for the working system. The algorithm will be a pseudocode that will be translated to Java. Systems analyst is still searching on how to integrate Java to Php.

1. Faculty – The faculty has pre-defined values if they are Programming, Network, Database Management and others (specialization)
2. Algorithm Specialization Database – The system will have a defined database in which the specialization process will refer to. This database will have tables (Programming, Network, Database Management, ...) that will include subjects to match with the faculty.
3. Specialization – In terms of the back end process, the algorithm will match with the faculty pre-defined values in which matched to the Algorithm Specialization Database.
4. Availability – The algorithm will determine the availability of each faculty, if the faculty is full time or part time. If full time, the faculty can have any schedule.

Otherwise if part time, the faculty will notify the Program Head of his/her availability.

5. Power Bi – This is used as the analytics report of the system. In which the Program head will see the percentage on how to Faculty got the load.
6. Excel – This is where the output of the result of the algorithm will be placed which will be imported to the Power Bi for the descriptive analytics report.

Agile Methodology

This project entitled “Enhanced APC Faculty Loading System” is a research and development system that attempts to gather the existing information and data from the APC’s Information System – Flavio. This project is being designed to generate a proposed faculty loading schedule based on the matching of algorithms and a statistical report of each faculty member schedule. The project team uses the Agile Development Methodology to assess the direction of a project throughout the development lifecycle. According to the research, the use of Agile Methodology will guarantee the quality of the system throughout the development lifecycle. The project team could achieve this through regular cadences of work, known as sprints or iterations, at the end of which the project team will be able to present a potentially working system. Small incremental releases will be visible to the project team to identify any issues early and make it easier to respond to change. The clear visibility in agile development helps both client and project team to ensure that any necessary decisions can be taken at the earliest possible opportunity. The team goes through a series of iterations, analyzing, designing, developing and testing each feature in turn within the iterations. Each feature is taken from start to finish within an iteration, with the software being tested at the end of each

iteration. Based on the Project Based Learning Track of the project members, there would be at least 3 iterations before the proposed system will be deployed and integrated in APC's Information System. Each iteration covers 3 and a half months including the Alpha and Beta Testing of the system.