MIUSched

Vision Document

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Revision History

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| 20/APril/2020 | 0.1 | Draft | ABIA  (Adiam,Amanuel,Biruk,Isam) |
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Vision Document

# Introduction

The purpose of this document is to collect, analyze, and define high-level needs and features of the MIUSched, a new software tool that will build a Compro schedule of classes with faculty assigned to each class. It focuses on the capabilities needed by the stakeholders and the target users, and why these needs exist.

## References

Applicable references are:

<https://sceweb.uhcl.edu/helm/RUP_course_example/courseregistrationproject/indexcourse.htm>

Rational unified process Best Practices for Software Development Teams IBM developer works

<https://www.ibm.com/developerworks/rational/library/content/03July/1000/1251/1251_bestpractices_TP026B.pdf>

<https://www.ibm.com/support/knowledgecenter/SSWMEQ_4.0.6/com.ibm.rational.rrm.help.doc/topics/r_vision_doc.html>

MIU Registration and Infosys Page

<https://infosys.cs.miu.edu/infosys/index.jsp>

# Positioning

## Problem Statement

|  |  |
| --- | --- |
| The problem of | *managing the Compro schedule and allowing students to register for classes* |
| affects | administrators, faculty, and students |
| the impact of which is | *scheduling is complex, must be manually maintained, and changed frequently.* |
| a successful solution would be | *one tool which builds a Compro schedule that integrates the*  *business rules for faculty availability and courses needed by*  *students per entry. This tool will provide a Database and a user interface that is easy to use for faculty, staff, and*  students. |

## 

## Product Position Statement

|  |  |
| --- | --- |
| For | MIU |
| Who | *A software tool that will build a Compro schedule of classes with faculty assigned to each class and will also offer a simple tool for students to register for those classes.* |
| The MIUSched | is a Web Application |
| That | Automate the course scheduling process |
| Unlike | an Existing excel spread sheet which is based on manual scheduling |
| Our product | It creates the DB for the scheduling and provides the user interface that can be accessed by users |

# 

# Stakeholder and User Descriptions

## Stakeholder Summary

|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Responsibilities** |
| MIU | Provides higher education for students | - Provides initial requirement  - Fund the project |
| Registrar | Register students, makes schedule of the courses and sets the blocks | - Check the project feature are met and quality control of the project, create the project requirement |
| Professor  Emdad Khan | Consults on technical and functional requirements | - Check the requirement analysis, design document matches the customer requirements  - Verifies the technologies used are up to date and based on the requirement |
| Project Manager | Manages the project and project teams | * Follow up the status of project * Monitor budget, duration and features are met based on the plan * Handles communication with the customer * Manages issues and risks |
| Project Team | Works on the actualization of the project | * Prepares the requirement analysis and design * Develops and implement product requirement * Test, integration and deployment of the project * Gives user training * Prepares project documentation and user manual |
| Company | Provides customer required product | * Handles the customer issues beyond the project Manager responsibly * Provides human and material resources * Hires Consultant |

## User Summary

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Description** | **Responsibilities** | **Stakeholder** |
| Admins | an employee who is responsible for managing the schedules. | - Add/ delete blocks to schedule database  - Add elective Courses for each block  - Set or on more sequence for each block bases on entry and track  - Sets course perquisites  - Manages the scheduling system  - Add/Delete entries per the academic year to schedule database  - Enters Projection for number of students in the MPP and FPP tracks | Registrar |
| Faculties | A member of certain department of the university that teaches courses | - Updates their profiles  - Sets preference for blocks  - Set course they teach on each block  - View their schedule classes | Registrar |
| Students | Students who is enrolled to take courses | -Registers for course that they are interested in  - select course preference for each block  -*View schedule* | Registrar |

## User Environment

The web application which ease the scheduling process with the simplified user interface will be provided to users to facilitate the scheduling system. Migrate existing excel spread sheet data to the new application.

The University User Community is a large sophisticated community that demands the flexibility and response time that an online scheduling application can provide. The users are educated, computer literate, and in most cases own personal computers in their homes or labs or office. The ability to create and delete entries and blocks for admin, set preferences for course and blocks to teach for the faculty and register for courses for students as well as to view their schedule classes for students and faculty online would greatly streamline the process.

## Summary of Key Stakeholder or User Needs

3.4.1 Needs and Features

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | Problem | Need | Priority | Features |
| 1 | Each Compro entry has a projected number of students entering in the FPP and MPP track. | Compro entries must be sized by number of students and entered into the schedule. | High | Schedule Admin must be able to add or delete entries to the schedule DB and enter a projection for the number of students in the MPP and FPP tracks. |
| 2 | An entry will have a set of blocks with classes that are targeted for the MPP track and the FPP track. | Blocks must be created for each entry and have a sequence number per entry track | High | Schedule Admin must be able to add or delete blocks to the schedule DB and enter one or more sequence numbers for the block based on entry and track. |
| 3 | A Faculty have a set of classes that they may teach | Each course of the class has faculties which faculties give the course | High | Schedule admin assign faculties for each class |
| 4 | A Faculty have one or two areas of specialization | Specialization should be set for each faculty | High | Schedule admin add or delete specialization or each faculty |
| 5 | A Faculty has a preference for which blocks they can teach | Faculties should have preference to give classes per block | high | Faculties should be able to view block preferences |
| 6 | A Faculty need to see the course they are scheduled | Faculties should be able to view their scheduled classes | low | Schedule Admin must able to create schedule for faculties need to view the schedule |
| 7 | A faculty has a Profile | Faculty need to be able to enter their profile | low | A faculty should be able to view their profile and create profile |
| 8 | Students should take some elective courses on campus | Need be able to determine how many number students will be enrolled for each block based on their block where CPT students need to take 4 courses, US residents take 9 elective courses and OPT students take 5 elective courses on campus | High | Schedule admin must be able to put projections for each category |
| 9 | Some 500 level courses have prerequisites which are another course | The Prerequisite should be set first | High | Schedule admin add the set of prerequisite courses for the main course and set the set the sequence |
| 10 | Students need to be able to see the scheduled courses | students should be able to view the schedule | Medium | Students can login to the schedule system and view the scheduled courses |
| 11 | Students need to Register for courses | Students should be able to register for classes | High | Students can register for courses for approved schedule |

## 

## Alternatives and Competition

Existing InfoSys and register Application

<https://infosys.cs.miu.edu/infosys/index.jsp>

<https://register.cs.miu.edu/register/>

# Product Overview

This section provides a high-level view of the MIUsched System capabilities and interface to the schedule Data Base

## Product Perspective

The product is independent and totally self-contained.

Internet

Schedule Database



User pc

MIUSched

## Assumptions and Dependencies

- It is assumed the new application replace the existing legacy Scheduling system

- The MIUSched provides simplified registration interface to support scalability and handle 200 concurrent registration interfaces since the student registration system requests using the PostgreSQL Database

-

# Product Features

- *Login:* Students, Faculty, and Admin shall provide a valid ID and password for entry to the MIUsched.

- Entry Addition: The system shall allow the Admin to add entries

- Entry Cancellation: The system shall allow the Admin to delete entries

- Block Addition: The system shall allow the Admin to add blocks

- Block Cancellation: The system shall allow the Admin to delete blocks

- Block Elective Courses Formation

- Block sequence Number Setter

- Course Perquisites Setter

- Projection Setter for Number of Students

- Profile Creation

- Block Preference Formation

- Block Course Selection

- Class Schedule Viewer

- Course Registration

- Course Preference Selection

# Other Product Requirements

## System Requirements

-The server component of the system shall operate on the university and shall run under the UNIX/windows operating system.

- The client component of the system shall operate on any personal computer.

- The client component of the system shall run on any browser

## Performance Requirements

* The system shall support up to 200 simultaneous users against the central database at any given time
* The system shall complete 80% of all transactions within 2 minutes.

## Environmental Requirements

None.

# Documentation Requirements

- User manual

- Online help

## - Installation Guides, Configuration, Read Me File