**System Requirement Specification for Course Allocation System**

Contents

[1. Introduction 2](#_Toc118028289)

[1.1 Purpose 2](#_Toc118028290)

[1.2 Reasons 2](#_Toc118028291)

[1.3 Parameters 2](#_Toc118028292)

[1.4 Standardised Terms 2](#_Toc118028293)

[1.5 Reference 2](#_Toc118028294)

[2. Description 2](#_Toc118028295)

[2.1 Product perspective 2](#_Toc118028296)

[2.2 User Characteristics 3](#_Toc118028297)

[2.3 Constraints 3](#_Toc118028298)

[2.4 Specific requirements 3](#_Toc118028299)

[3. Functional Requirements 4](#_Toc118028300)

[3.1 Login Details 4](#_Toc118028301)

[3.2 Showing Existing Courses 4](#_Toc118028302)

[3.3 Form Records 4](#_Toc118028303)

[4. Non Functional Requirements 4](#_Toc118028304)

[4.1 Software System Attributes 4](#_Toc118028305)

[4.1.1 Reliability 4](#_Toc118028306)

[4.1.2 Security 4](#_Toc118028307)

[4.1.3 Scalability 4](#_Toc118028308)

[4.2 Performance Requirements 4](#_Toc118028309)

[4.2.1 Recovery Time 4](#_Toc118028310)

[4.2.2 Capacity 5](#_Toc118028311)

[4.2.3 Response Time 5](#_Toc118028312)

[4.2.4 Utilization of Resources 5](#_Toc118028313)

# Introduction

## Purpose

To automate the allocation of students in the university

## Reasons

Courses allocation was done manually and this seemed to be a tedious and time consuming process. Hence to solve the issue we had to develop a web application which will serve as a smooth management of courses.

## Parameters

What the system will do are; it will allow the coordinator to access all the important aspects of the portal, it will have different various login roles: admin course allocator will have the rights to create new course, add/modify student details records, allocation statistics and activity logs.

## Standardised Terms

## Reference

Instructor and INTERNET

# Description

### Product perspective

It is a web which will be built to be part of the larger system. The web will be used by admin-course allocator, students, faculty coordinator and lecturer. The web will be used by the university, it will have to interact with other system and therefore we need interfaces between these systems.

|  |
| --- |
| **Student Information System** |

|  |  |
| --- | --- |
| **Registration System**   |  | | --- | | **Course Allocation System** | |

|  |
| --- |
| **Database System** |

|  |
| --- |
| **Academic Information System** |

### User Characteristics

The students are expected to be internet literate once they have log into the system they can use the basic functionalities of the system.

Admin course allocator is expected also to be internet literate and able to use more complex functionality of the web.

### Constraints

The system runs in the web environment so any web browser can do.

The system shall use MySQL database for all data management tasks

### Specific requirements

#### User Interfaces

It must interfaces icons or wizards

#### Software Interfaces

We must use any web browser to be able to browse and show interest in course allocation system

#### Hardware Interfaces

It must be pc computer to link to the course allocation system

#### Communication Interfaces

We must use interface rather than command line

# Functional Requirements

## Login Details

The system shall be able to verify username and password of the user

## Showing Existing Courses

The system shall show periodically existing courses that are available to be allocated.

The system shall generate courses for each class that has registered and determine the number of students who have enrolled in that class.

The system also will allow the system admin to update the courses.

## Form Records

The system shall have entries for; ID of the course, year, and course type, start date and end date.

# Non Functional Requirements

## Software System Attributes

### 4.1.1 Reliability

The system shall not be down more than 2 times a year

### 4.1.2 Security

1. Firewall protection- The course allocation system shall run inside a firewall
2. Support different roles – The system shall have different roles for users such as the admin course allocator, students, faculty coordinator and lecturers. User who logged in with a given role should only be allowed access consistent with that role.

### 4.1.3 Scalability

Scaling the system to large number of users where large courses will have hundreds of students.

## Performance Requirements

### 4.2.1 Recovery Time

In case of a system failure, redundant system shall resume operations within 30 seconds

Average repair shall be less than 1 hour

### 4.2.2 Capacity

The system shall accommodate 4000 concurrent usrs.

### 4.2.3 Response Time

Average Response time shall be less than 2 seconds

### 4.2.4 Utilization of Resources

The system shall store not more than one million transactions.

If the database grows over this limit, old transactions shall be backed up and deleted from the operational database.