Undergraduate Teaching Session Booking System
Requirements Specification

Revision 362, made 25/01/2014 by tws

1 Problem Description

Apart from lectures, undergraduate students in the School of Computing Science (SoCS) also attend laboratories, examples classes and tutorials for some courses. Each module (e.g. OOSE2, PSD3) has some number of these supplementary sessions associated with it. In some sessions (generally examples classes) all students taking the module should attend a single session. In other sessions (generally labs) the students split up into smaller groups and have their labs at different times throughout the week. The maximum number of students in a single lab session is constrained by the number of available machines in the lab room. Some sessions (generally tutorials) are optional for the students, since they do not contain examinable material. Sessions run at different frequencies: some are once a week, others are once every N weeks, others are one-off events.

SoCS has decided that a new local computer system is necessary for arranging these teaching sessions. After each lecturer has arranged how many sessions are required for that course, then the teaching administrator sets up timetable slots and books rooms (outwith the proposed system). The teaching administrator then enters these sessions into the new system, along with constraints on numbers who can sign up for each session.

For sessions requiring tutors, the tutors will sign up on the system to indicate when they are available. Sessions may be compulsory for all students on a course, or may be optional, or will require students to sign up via the system for one of N equivalent sessions (e.g. labs).

2 Actors

The following actors hav been identified for the system:

Administrator uses the system to manage timetable slot bookings.

Lecturer uses the system to specify which sessions in a course require time slots to be booked by the administrator.

Student uses the system to select timetable slots that they must or wish to attend.

3 User Stories

The user stories for the system are listed at the end of the document.

4 Non Functional Requirements

Security/0 The system shall authenticate users via the MyCampus single sign-on service.

Security/1 The system shall distinguish between lecturers, administrators, tutors and student roles.

interoperability/0 The system shall be implemented as one or more OSGi bundles.

performance/0 The system shall support at least 100 courses.

performance/1 The system shall support at least 10 different session types per course.

performance/2 The system shall support at least 1000 different users.

performance/3 The system shall support at least 20 different timetable slots per session.

performance/4 The system shall support at least 100 different concurrently active users.

As a administrator,
I want to import a list of rooms with capacities and locations,
So that rooms can be assigned to timeslots when booked.

Priority:
Cost: 7

As a lecturer,
I want to specify that a session is a one off, or recurs weekly or fortnightly,
So that I don't have to create a large number of sessions.

Priority:
Cost: 4

As a lecturer,
I want to import a MyCampus course,
So that teaching sessions can be identified.

Priority:
Cost: 1

As a administrator,
I want to assign a room to a timetable slot,
So that room bookings can be recorded.

Priority:
Cost: 8

As a lecturer,
I want to specify that a session is compulsory or optional,
So that students know whether they must turn up.

Priority:
Cost: 5

As a lecturer,
I want to add a session to a course,
So that timetable slots can be identified.

Priority:
Cost: 2

As a administrator,
I want to check that there are no timetable slot clashes between courses,
So that students are able to complete the course.

Priority:
Cost: 9

As a lecturer,
I want to assign a capacity to a timetable slot,
So that timetable slot capacity can be less than the size of the room.

Priority:
Cost: 6

As a lecturer,
I want to specify that a session requires a tutor,
So that the administrator knows to assign a tutor.

Priority:
Cost: 3

As a tutor,
I want to accept a timetable swap,
So that I can help resolve conflicts.

Priority:
Cost: 16

As a
As a lecturer,
I want to check which students haven't signed up for a session,
So that I can nag them to do so.

Priority:
Cost: 13

As a administrator,
I want to assign a tutor to a session timetable slot,
So that students have tutors.

Priority:
Cost: 10

As a tutor,
I want to see which timetable slots I am assigned to,
So that I go to my tutorial.

Priority:
Cost: 17

As a lecturer,
I want to see the details (time, location, students, tutor) or every timetable slot in a session,
So that I know when sessions happen.

Priority:
Cost: 14

As a
As a student,
I want to book a timetable slot for each session of my course,
So that I can take the course.

Priority:
Cost: 11

As a administrator,
I want to cancel a timetable slot,
So that students in the slot are notified not to go to the session.

Priority:
Cost: 18

As a tutor,
I want to request a (one off or permanent) swap for my timetable slot,
So that I can resolve diary conflicts.

Priority:
Cost: 15

As a
As a student,
I want to check that I have signed up for all compulsory sessions,
So that I don't fail the course.

Priority:
Cost: 12

As a student,
I want to to check which sessions I need to choose a timetable slot for,
So that I don't miss a session.

Priority:
Cost: 22

As a administrator,
I want to cancel a whole session,
So that the whole class is notified not to to the session.

Priority:
Cost: 19

As a student,
I want to check that I have no compulsory timetable slot clashes,
So that I don't fail a course.

Priority:
Cost: 20

As a administrator,
I want to to move a student to a new slot,
So that I can create space in a high demand timetable slot.

Priority:
Cost: 21