Admin Generates a Schedule

1.1 Brief Description

This use case allows an Administrator to generate a schedule for one or more entry

1.2 Actors

Admin

1.3 Preconditions

Admin is logged into the system and at the Admin welcome page. The following entity objects exist for the specified Entry(ies)
1. Entry
2. Block
3. Course

1.4 Flow of Events

Basic Flow

User Action	System Response
1. Admin selects the create schedule form	1. The create schedule form is displayed
2.1 Admin enters in the entry or entries for this schedule 2.2 admin modifies default parameters if needed and enters generate schedule	2.1 The system checks that the Entry and Blocks exist and displays the following Schedule Generation Parameters for each entry: - number of MPP and FPP track students - default number of students per section - percent of OPT students per track - number of U.S. Residents per track 2.2 .1 For each entry the system builds and displays a list of blocks. 2.2.2 For each block the system calculates the number of sections required based on the number of students for that block and the number of students per section. 2.2.3 For each section the system finds the best faculty member based on the courses the faculty can teach and their request blocks to teach. 2.2.4. The system displays the number and name of each section with the assigned faculty member and the target number of students for each section.

2.3 admin sets the status of the schedule as either Draft, In Review, or Approved and selects save schedule.	2.3 The schedule status is set and the schedule is saved to the DB

1.5   Post-Conditions

For the success case the new schedule is saved to the DB with the correct status.

1.6   Business Rules

a. Faculty are assigned to the blocks that they prefer
b. Faculty teach the number of blocks set in their profile
c. There are enough sections for all students taking classes in a block
d. If there are not enough faculty for a section the faculty attribute for that section will be set to UNSTAFFED
e. Any Faculty staffed for a section must exist
f. Sections should be targeted for a block per the target Block preference in their course
g. The number of course sections is calculated from the percent of students who want to take that course per entry track. For example, if we assume 50% of the FPP track students want to take WAP in block A, and there are 100 FPP track students for an entry, then their block A should have 2 WAP sections.

1.7   Nonfunctional Requirements -- none