**D102**

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| **Use Case Name:** | Register for class | | **ID:** | **1** | **Priority:** | | High |
| **Actor:** | Student | | | | | | |
| **Description:** | When a student has chosen a class and decided to register for it, they can send that class to the system and they are registered if there is space. If there is no space, they are added to the waitlist, but only if there is space on the waitlist. | | | | | | |
| **Trigger:** | Student wishes to register for a class | | | | | | |
| **Type:** | **External** | | | | | | |
| **Major Steps:** | | | **Information for Steps:** | | | | |
| System receives the class that the student wishes to register for. | | | 🡨 Class that student wishes to register for | | | | |
| System retrieves availability and waitlist information. | | | 🡨 Class availability information  🡨 Class waitlist information | | | | |
| If there is space in the class:   1. Student is added to the class 2. Class availability is updated 3. Student is notified that they were added | | | 🡪 Student class registration  🡪 Updated class availability information  🡪 Class registration notification | | | | |
| If there is no space in the class, but there is space on the waitlist:   1. Student is added to the waitlist 2. Class waitlist is updated 3. Student is notified that they were added to the waitlist at X position | | | 🡪 Student waitlist registration  🡪 Updated class waitlist information  🡪 Class waitlist registration notification and position on the waitlist | | | | |
| If there is no space in the class or on the waitlist:   1. Student is notified that they were rejected | | | 🡪 Rejection notification | | | | |
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| **Summary** | | | | | | | |
| **Inputs** | | **Source** | **Outputs** | | | **Destination** | |
| Class that student wishes to register for | | Student | Student class registration | | | Student database | |
| Class availability information | | Class database | Student waitlist registration | | | Waitlist database | |
| Class waitlist information | | Waitlist database | Rejection notification | | | Student | |
|  | |  | Updated class availability information | | | Class database | |
|  | |  | Class registration notification | | | Student | |
|  | |  | Updated class waitlist information | | | Waitlist database | |
|  | |  | Class waitlist registration notification and position on the waitlist | | | Student | |

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| **Use Case Name:** | Register from waitlist | | **ID:** | **3** | **Priority:** | | High |
| **Actor:** |  | | | | | | |
| **Description:** |  | | | | | | |
| **Trigger:** | Midnight, every night | | | | | | |
| **Type:** | **Temporal** | | | | | | |
| **Major Steps:** | | | **Information for Steps:** | | | | |
| System retrieves class availabilities, class waitlists, and student class registrations | | | 🡨 Class availabilities  🡨 Class waitlists  🡨 Student class registrations | | | | |
| System assigns student to classes and updates class availabilities, class waitlists, and student class registrations | | | 🡪 Updated class availabilities  🡪 Updated class waitlists  🡪 Updated student class registrations | | | | |
| System notifies students of new class registrations and waitlist positions | | | 🡪 Notification of new class registration or updated waitlist position | | | | |
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| **Summary** | | | | | | | |
| **Inputs** | | **Source** | **Outputs** | | | **Destination** | |
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**D101**

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| **Use Case Name:** | Register for a class | | **ID:** | **1** | **Priority:** | | 1 |
| **Actor:** | Student | | | | | | |
| **Description:** | If a student would like to register for a class, they can select that class and attempt to register for it. They are either rejected (if there are no spaces), added to the class (if there are spaces), or added to a waitlist (if there is space on a waitlist). | | | | | | |
| **Trigger:** | Student wants to register for a class | | | | | | |
| **Type:** | **External** | | | | | | |
| **Major Steps:** | | | **Information for Steps:** | | | | |
| Student submits the class that they would like to register for. | | | 🡨 Class that student wants to register in | | | | |
| System retrieves waitlist and availability information about the class that was selected. | | | ~~🡪 Request for information about waitlist and class availability~~  🡨 Information about class waitlist and availability | | | | |
| If there is space in the class   1. Assign the student to that class 2. Tell the student that they have been assigned to that class | | | 🡪 Updated class list  🡪 Student class assignment  🡪 Added to class notification | | | | |
| If there is no space in the class, but there is space on the waitlist   1. Assign the student to the waitlist 2. Tell the student that they have been assigned to the waitlist at X position | | | 🡪 Updated waitlist  🡪 Student waitlist assignment  🡪 Added to waitlist notification | | | | |
| If there is no space in the class or on the waitlist   1. Tell the student they have been rejected from the class | | | 🡪 Rejected notification | | | | |
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| **Summary** | | | | | | | |
| **Inputs** | | **Source** | **Outputs** | | | **Destination** | |
| Class that student wants to register in | | Student | Updated class list | | | Class database | |
| Information about class waitlist and availability | | Class database | Student class assignment | | | Student database | |
|  | |  | Added to class notification | | | Student | |
|  | |  | Updated waitlist | | | Class database | |
|  | |  | Student waitlist assignment | | | Student database | |
|  | |  | Added to waitlist notification | | | Student | |
|  | |  | Rejected notification | | | Student | |

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| **Use Case Name:** | Drop a class | | **ID:** | **2** | **Priority:** | | 1 |
| **Actor:** | Student | | | | | | |
| **Description:** |  | | | | | | |
| **Trigger:** |  | | | | | | |
| **Type:** | External / Temporal | | | | | | |
| **Major Steps:** | | | **Information for Steps:** | | | | |
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| **Summary** | | | | | | | |
| **Inputs** | | **Source** | **Outputs** | | | **Destination** | |
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| **Use Case Name:** | Register from waitlist | | **ID:** | **3** | **Priority:** | | 1 |
| **Actor:** | System | | | | | | |
| **Description:** | Every night at midnight, the system balances waitlists and class registration lists. | | | | | | |
| **Trigger:** | Every night at midnight | | | | | | |
| **Type:** | **Temporal** | | | | | | |
| **Major Steps:** | | | **Information for Steps:** | | | | |
| System retrieves waitlist and class information | | | 🡨 Waitlist and class information | | | | |
| System retrieves student class assignment information | | | 🡨 Student class assignment information | | | | |
| System correctly updates the waitlists and class assignments | | | 🡪 Updated waitlist and class information  🡪 Updated student class assignment information | | | | |
| System notifies students of their new waitlist positions or class assignments | | | 🡪 Waitlist or class assignment notification | | | | |
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| **Summary** | | | | | | | |
| **Inputs** | | **Source** | **Outputs** | | | **Destination** | |
| Waitlist and class information | | Class database | Updated waitlist and class information | | | Class database | |
| Student class assignment information | | Student database | Waitlist or class assignment notification | | | Student | |
|  | |  | Updated student class assignment information | | | Student database | |
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