

Product Vision:

Vision Statement:

To deliver a reliable, secure, and easy-to-use course registration system that ensures timely access, accurate information, and seamless interaction between students, faculty, and administrators.

Alignment with Project Goals:

- **Ease of Use:** Intuitive design that allows users to search, register, and manage courses effortlessly.
- **Accuracy & Timeliness:** Real-time course availability and enrollment updates.
- **Security:** Protected student and faculty information. Principle of least privilege implemented so students can not access privileged information / accounts.
- **Accessibility:** Available anytime and anywhere during registration periods.
- **Collaboration:** Supports students, faculty, advisors, and administrators in one integrated platform.

Product Backlog:

User Story 1 – Student Course Search (High)

Story:

As a student, I want to search for available summer courses by department, instructor, or course number so that I can quickly find the classes that fit my academic plan.

Priority & Time Sensitivity Value: High / Full Team Effort or Multi-Day

Justification:

- **Stakeholder Value:** Essential for students to locate and compare classes. Without search capability, registration cannot occur.
- **Business Impact:** Enhances the student experience and directly supports enrollment and tuition revenue.

- **Dependency Considerations:** Depends on accurate course, instructor, and department data in the database. Must be implemented before course enrollment features.
- **Time Sensitivity:** High; search functionality must be available before registration windows open.

Acceptance Criteria:

- Students can search by department, instructor name, or course number.
 - Results show course name, section, instructor, modality, and seat availability.
 - Search updates dynamically when filters change.
 - Students can clear or refine filters.
 - Displays “No courses found” if no results match.
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User Story 2 – Advisor Prerequisite Override (High)**Story:**

As an academic advisor, I want to override prerequisites and enroll students directly in the course registration system so that I can get students enrolled in the correct classes.

Priority & Time Sensitivity Value: High / Full Team Effort or Multi-Day

Justification:

- **Stakeholder Value:** Advisors need to resolve registration blocks.
- **Business Impact:** Improves satisfaction and reduces bottlenecks.
- **Dependency Considerations:** Depends on student and course data.
- **Time Sensitivity:** High; must be ready before registration deadlines.

Acceptance Criteria:

- Advisors can search for students by ID or name.
- View enrolled and blocked courses.

- Override prerequisites for selected courses.
 - Enroll students and display confirmation.
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User Story 3 – Administrator Sets Max Class Sizes (High)

Story:

As an administrator, I want to set and update maximum class sizes for each session so that enrollment automatically closes when capacity is reached.

Priority & Time Sensitivity Value: High / Full Team Effort or Multi-Day

Justification:

- **Stakeholder Value:** Prevents over-enrollment and ensures fairness.
- **Business Impact:** Maintains compliance and classroom capacity limits.
- **Dependency Considerations:** Supports enrollment.
- **Time Sensitivity:** High; must be configured before registration opens.

Acceptance Criteria:

- Admin can set and edit max capacity.
 - Enrollment closes automatically at the limit.
 - Displays clear “class full” message.
 - Updates reflected immediately.
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User Story 4 – Student Drops or Withdraws (High)

Story:

As a student, I want to drop or withdraw from a course so that I can adjust my schedule before the drop deadline.

Priority & Time Sensitivity Value: High / Full Team Effort or Multi-Day

Justification:

- **Stakeholder Value:** Crucial for managing schedules.
- **Business Impact:** Improves utilization and accuracy.
- **Dependency Considerations:** Depends on enrollment system.
- **Time Sensitivity:** High; must be available early in the registration cycle.

Acceptance Criteria:

- Students can view enrolled courses.
 - Select and confirm the course to drop.
 - Schedule updates automatically.
 - Seat availability updates.
 - The system displays confirmation.
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User Story 5 – Instructor Messaging (Medium)**Story:**

As an instructor, I want to message all students enrolled in my class through the system so that I can share updates or materials easily.

Priority & Time Sensitivity Value: Medium / 2–6 Hours

Justification:

- **Stakeholder Value:** Improves communication.
- **Business Impact:** Reduces confusion and administrative overhead.
- **Dependency Considerations:** Requires course and enrollment data.
- **Time Sensitivity:** Needed by the start of classes.

Acceptance Criteria:

- The instructor can send a message to the entire class.

- Students receive messages via system (and optionally email).
 - History is saved.
 - Only assigned instructors can message their classes.
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User Story 6 – Instructor View Roster (Medium)

Story:

As an instructor, I want to view the list of students registered in each of my sessions so that I can prepare course materials and manage class rosters.

Priority & Time Sensitivity Value: Medium / 2–6 Hours

Justification:

- **Stakeholder Value:** Important for prep but not core.
- **Business Impact:** Supports readiness.
- **Dependency Considerations:** Depends on enrollment data.
- **Time Sensitivity:** Moderate; needed before classes start.

Acceptance Criteria:

- The instructor can view assigned sessions.
 - View list of enrolled students with names and IDs.
 - Displays current enrollment numbers.
 - Updates dynamically.
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User Story 7 – Student Schedule Timeline (Medium)

Story:

As a student, I want to view a weekly timeline of all the courses I've registered for so that I can see any conflicting class times before finalizing my schedule.

Priority & Time Sensitivity Value: Medium / 2–6 Hours

Justification:

- **Stakeholder Value:** Helps avoid conflicts.
- **Business Impact:** Reduces errors and requests.
- **Dependency Considerations:** Depends on enrollment and schedule data.
- **Time Sensitivity:** Needed during registration period.

Acceptance Criteria:

- Displays registered courses by day/time.
 - Highlights conflicts.
 - Clickable course details.
 - Auto-updates on changes.
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User Story 8 – Instructor Contact Information Update (Low)**Story:**

As an instructor, I want to update my office hours and contact information so that students can easily reach me during the course.

Priority & Time Sensitivity Value: Low / Less than 2 Hours

Justification:

- **Stakeholder Value:** Improves communication.
- **Business Impact:** Enhances user experience but not core.
- **Dependency Considerations:** Independent.
- **Time Sensitivity:** Low.

Acceptance Criteria:

- Instructors can edit and save contact info.

- Students can view updated info.
 - System confirms updates.
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User Story 9 – Administrator Enrollment Dashboard (Low)

Story:

As an administrator, I want to view a dashboard showing real-time enrollment statistics so that I can monitor system performance and identify high-demand courses.

Priority & Time Sensitivity Value: Low / Less than 2 Hours

Justification:

- **Stakeholder Value:** Useful for oversight.
- **Business Impact:** Informs resource allocation.
- **Dependency Considerations:** Depends on enrollment data.
- **Time Sensitivity:** Moderate.

Acceptance Criteria:

- Real-time dashboard view.
 - Enrollment stats by course and section.
 - Highlight high-demand courses.
 - Auto-refreshes.
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User Story 10 – Administrator Enrollment Reports (Low)

Story:

As an administrator, I want to generate reports showing total enrollment numbers by department so that I can analyze registration trends and plan future offerings.

Priority & Time Sensitivity Value: Low / Less than 2 Hours

Justification:

- **Stakeholder Value:** Supports administrative decisions.
- **Business Impact:** Useful for reporting but not core.
- **Dependency Considerations:** Depends on enrollment data.
- **Time Sensitivity:** Low.

Acceptance Criteria:

- Generate and export reports by department.
 - View total enrollment numbers.
 - Filter by term or session.
 - Exportable as CSV/PDF.
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Product Roadmap

Sprint 1:

- **Core Registration:**
 - User Story 1 (Search)
 - User Story 2 (Override)
 - User Story 3 (Max Size)
 - User Story 4 (Drop/Withdraw)
 - User Story 6 (Roster)

Sprint 2:

- **Communication & Enhancements:**
 - User Story 5 (Messaging)
 - User Story 7 (Timeline)
 - User Story 8 (Contact Update)
 - User Story 9 (Dashboard)
 - User Story 10 (Reports)

Sprint Goal

Sprint 1 Goal:

“Deliver the core registration functionality required for students to search and manage courses, advisors to override prerequisites, and administrators to control class capacities, ensuring registration can open smoothly and accurately.”

Why:

- Build foundational features that enable enrollment.
 - Ensure search, override, capacity, and schedule functions are fully operational.
 - Provide instructors with visibility into rosters.
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Sprint Backlog:

User Story: 1 - Search

- **Priority:** High
- **Est. Effort:** 6-9 Hours
- **Rationale:** Core to registration
- **Stakeholder:** Student

User Story: 2 - Override

- **Priority:** High
- **Est. Effort:** 6 - 9 Hours
- **Rationale:** Enables advisor action
- **Stakeholder:** Academic Advisor

User Story: 3 - Max Size

- **Priority:** High

- **Est. Effort:** 6 - 9 Hours
- **Rationale:** Prevents over-enrollment
- **Stakeholder:** Adminstator

User Story: 4 - Drop/Withdraw

- **Priority:** High
- **Est. Effort:** 6 - 9 Hours
- **Rationale:** Key for student control
- **Stakeholder:** Student

User Story: 6 - Roster View

- **Priority:** Medium
 - **Est. Effort:** 2 - 6 Hours
 - **Rationale:** Instructor prep
 - **Stakeholder:** Student
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Sprint Tasks

US 1 - Course Search

- Database schema for courses/instructors.
- Search filter UI & backend queries.
- Dynamic search result rendering.
- Error handling for no results.

US 2 - Prerequisite Override

- Advisor role authentication.
- Student search by ID.
- Override function and confirmation.
- Notifications/logging.

US 3 - Max Class Size

- Capacity field in session model.
- Enrollment lock at limit.
- Admin interface to set/edit capacity.

US 4 - Drop/Withdraw

- “My Courses” UI for students.
- Drop/withdraw logic.
- Capacity refresh on drop.

US 6 - Roster View

- Instructor dashboard.
- Fetch and display enrolled students.
- Refresh mechanism.

Sprint Plan Summary

Total User Stories: 10

- 4 High, 3 Medium, 3 Low

Sprints: 2 total

Sprint 1: Foundational registration functionality

Sprint 2: Communication and administrative tools

Effort: Balanced across priority levels and capacity

Outcome: A working MVP registration system after Sprint 1, with enhanced features after Sprint 2.