Business problem

Universities and their students face a big problem regarding schedule creation. The current system is inefficient because it's managed manually.

That leads to a high amount of work effort and time consumption. Unoptimized timetables with a big amount of selected courses clashes might be created. Different student groups pose a problem as well. Electives and cross-program courses often overlap, making it hard for students who want to take courses of both programs. Room availability and capacity limits need to be

See more

Purpose of this plan

This plan serves as a blueprint for addressing the business problem described above, outlining the user requirements, data model, and technology that will be used to get things done.

User requirements

Student

Person enrolled in courses and affected by schedule, exams, and room availability.

As a user, I need to:

- Access my personalized course and exam timetable so that I can effectively plan my studies.

- Receive instant notifications of schedule changes or cancellations so that I am always informed.

- View real-time room information for classes so that I can find my class location quickly.

Professor

Academic staff responsible for teaching courses, setting times, and requiring updates on schedule changes.

As a user, I need to:

- Receive updates about room changes or class cancellations so that I can adjust plans smoothly.

- Submit requests for rooms with special equipment so that teaching requirements are met.

- Access finalized schedules for all assigned courses so that I can prepare teaching materials.

Scheduler

Administrative staff responsible for designing and maintaining course, room, and exam timetables.

As a user, I need to:

- Generate optimized timetables automatically so that course and room clashes are minimized.
- Quickly identify and resolve conflicts between courses, rooms, or student groups so that scheduling is efficient.
- Assign rooms based on class size and required equipment so that resources are utilized properly.
- Easily update schedules and broadcast changes so that all stakeholders are informed promptly.
- Track room availability and capacity so that double bookings and overbooking are avoided.
- Review and manage requests from students and professors so that their needs are considered in schedules.

Data model

The tables that will be used to store and provide information.

Person New

This table contains records of people including students, professors, schedulers, and management

Course New

This table contains records of courses offered by the university

Room New

This table contains records of rooms including availability and capacity

Schedule New

This table contains records of scheduled classes with assigned rooms and times

Notification New

This table contains records of notifications sent to persons about schedule changes

Opening Hour New

This table contains records of the university's daily opening and closing hours.

Break Time New

This table contains records of scheduled break times during university hours.

Technology

The apps, flows, and other objects that will be used to solve the business problem.

Course schedule model app ⓘ
Model-driven app New
Schedulers manage timetables, resolve conflicts, and optimize resource allocation in a structured interface.

Student timetable canvas app ⓘ
Canvas app New
Students access personalized schedules, class locations, and receive instant updates about changes.

Professor schedule canvas app ⓘ
Canvas app New
Professors review teaching schedules, receive room updates, and submit equipment requests.

Schedule notification flow ⓘ
Power Automate flow New
Automated alerts deliver schedule and room change updates to users.

Student scheduling copilot agent ⓘ
Agent New
Automates student schedule inquiries and resolves timetable conflicts quickly.

Professor resource copilot agent ⓘ
Agent New
Guides professors through equipment requests and conflict inquiry processes.

Scheduler copilot review agent ⓘ
Agent New
Helps schedulers review requests, analyze conflicts, and suggest optimal changes.

Timetable analytics report ⓘ
Report New
Management reviews scheduling efficiency, resource utilization, and conflict metrics.