

# Heuristic Evaluation Documents

## CS SCHEDULER APP

### APP IDEA

An advanced academic scheduling app for Computer Science departments, facilitating seamless schedule creation based on previous years. Features include course information tracking, conflict detection (e.g., courses commonly taken together), faculty assignment alerts, and note-taking capabilities for better planning. Enhance efficiency, reduce errors, and streamline the scheduling process for optimal academic planning.

### Team Members:

#### UX Consultants:

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## **Undergrad Design:**

The undergraduate design focuses on the development of the CS Scheduling Application, a web-based tool tailored to assist the Michigan Tech College of Computing in efficiently creating and managing class schedules. The primary goal is to streamline the scheduling process for faculty, course instructors, teaching assistants, and faculty from other departments involved in scheduling.

The application provides an intuitive interface for scheduling faculty to easily create, edit, and manage class schedules for different semesters.

Collaboration tools are integrated to facilitate communication and coordination among scheduling faculty. Shared views and real-time updates enhance teamwork during the schedule creation process.

Intuitive navigation allows users to seamlessly move between different sections, including course creation, schedule viewing, and constraint management. Clear menu structures and prominent buttons enhance user understanding. The application employs a role-based access control system, ensuring that only authorized users, such as scheduling faculty and administrators, can access specific features and functionalities.

## **User Interface Domain:**

The CS Scheduling Application falls under the category of a web-based scheduling tool for academic purposes. It utilizes a graphical user interface designed to streamline the creation and management of class schedules within the Michigan Tech College of Computing. The interface incorporates features like calendars, lists, and forms to facilitate user interactions.

## **Heuristic Usability Principles:**

### **Visibility of Schedule:**

The schedule information should be clearly visible, allowing scheduling faculty to easily distinguish courses, instructors, and room assignments. Visual cues should make it evident when the schedule is complete or contains conflicts.

### **Simple Design:**

The design should be minimalistic, focusing on essential scheduling elements. Unnecessary complexities should be avoided, ensuring that scheduling tasks are straightforward and not overwhelmed by extraneous details.

### **Contextual Information:**

Provide contextual information within the application, such as units of time, room details, and instructor names. This additional information assists users in making informed scheduling decisions.

### **Color Usage:**

Effectively use colors to differentiate various elements in the schedule. For example, distinct colors can represent different courses, instructors, or types of classes, enhancing visual clarity.

### **Data Mapping:**

Ensure that the displayed schedule accurately maps to the underlying data. Real-time updates should be reflected promptly in the schedule view, providing an accurate representation of the current state of classes and schedules.

### **Gridlines:**

Utilize gridlines in the schedule view to offer a visual reference, aiding in the interpretation of time slots, days, and room assignments. Gridlines enhance readability and help users navigate the schedule effectively.

### **Interactivity:**

Given that schedules may involve numerous courses and instructors, incorporate interactive features. For instance, allow users to zoom in and out on specific sections of the schedule, making it easier to focus on specific details or timeframes.

### **Potential Usability problems**

- 1.If the application has a complex navigation structure or lacks clear pathways for users to perform tasks such as adding courses or modifying constraints, users may struggle to find the features they need, leading to frustration and inefficiency.
- 2.A cluttered or confusing interface can overwhelm users and make it difficult for them to understand the layout and functionality of the application. This may result in users making errors or being unable to complete tasks effectively.
3. If the application does not provide timely and informative feedback to users, such as error messages or confirmation dialogs, users may feel uncertain about whether their actions were successful or if there was a problem.

4. Lack of clear instructions or guidance within the application may lead to user confusion and errors. Users should be provided with clear, step-by-step instructions on how to perform common tasks and navigate the application.
5. Inadequate error handling, such as vague error messages or failure to detect common user mistakes, can frustrate users and impede their ability to complete tasks successfully. Effective error handling should be proactive, informative, and help users recover from errors gracefully.

### **Critical Usability Problems**

1. If the authentication system is unreliable or prone to failures, users may face difficulties logging in, leading to restricted access or data security concerns.
2. Critical issues related to data loss or corruption could result in the loss of important scheduling information, causing chaos and requiring extensive manual efforts to restore the system.
3. If the application fails to detect and resolve scheduling conflicts accurately, it can lead to serious issues such as overlapping classes or instructors teaching multiple courses simultaneously, compromising the integrity of the schedule.
4. If the application has security vulnerabilities, it may be susceptible to unauthorized access, data breaches, or other malicious activities. This could compromise sensitive information and harm the integrity of the scheduling process.