



REINVENTING COURSE REGISTRATION

Group 1



INTRODUCTION

Introduction

DePaul University CDM graduate students frequently encounter difficulties with course registration because of the system's intricacy and slowness. These problems make it difficult for them to match their career aspirations and interests with the courses they take.

Problem Statement

CDM graduate students struggle during course registration because they are unsure which courses best align with their interests and goals.

Hypothesis

We hypothesize that an AI-driven course suggestion tool will significantly improve decision-making efficiency and satisfaction among CDM graduate students by automating the process of matching student interests and career goals with suitable courses based on patterns in their academic history and course feedback data.

IDENTIFYING INSIGHTS & OPPORTUNITIES

We used a multidisciplinary approach to this study, using a range of techniques to guarantee a thorough understanding of the difficulties and goals related to course enrollment. In addition to sending out surveys and conducting user interviews, we also watched participants use the present registration system. We tried to record a comprehensive picture of the user experience using these techniques, covering all from specific problems to more general systemic problems.

- View My Classes/Schedule
- Registration Appointments
- Class Search and Enroll**
- Course Cart
- Drop Classes
- Update Classes
- Swap Classes
- Browse Course Catalog
- Planner

Search For Classes i

Additional ways to search

▶ Favorites

▼ Recently Viewed

HCI 450
FOUNDATIONS OF HUMAN-COMPUTER INTERACTION
2 class options available

HCI 430
PROTOTYPING AND IMPLEMENTATION
2 class options available

Delete All

DEPAUL TOOLS

waivers will not be initiated until an Intent to Enroll form has been submitted.

- [IT 411](#) Scripting for Interactive Systems
- [HCI 406](#) Web Site Design for HCI
- [HCI 412](#) HCI Design Fundamentals I
- [IT 403](#) Statistics and Data Analysis

Foundation Courses

The following Foundation Courses are listed in the suggested sequence for the program.

- [HCI 440](#) Introduction to User-Centered Design
- [HCI 450](#) Foundations of Human-Computer Interaction
- [HCI 430](#) Prototyping and Implementation

Students currently taking Foundation Courses may also register for Major Elective Courses if they have successfully completed the prerequisites for those courses.

Advanced Courses

The following Advanced Courses are listed in the suggested sequence for the program.

- [HCI 445](#) User Research Methods
- [HCI 454](#) Interaction Design and Information Architecture
or [HCI 457](#) Information Architecture and Content Strategy
- [HCI 460](#) Usability Evaluation Methods
- [HCI 472](#) HCI Design Fundamentals II

HOME
ABOUT
ADMISSION & AID
ACADEMICS
FACULTY & STAFF
STUDENT RESOURCES
REQUEST INFO
APPLY

Academics

- All Majors & Degrees
- Undergraduate Programs
- Graduate Programs
- Combined Degree Programs
- Certificates
- Online Learning
- Study Abroad
- High School Programs

CDM Schools

- Cinematic Arts
- Computing
- Design

Academic Resources

- [Course Catalog](#)
- [Course Schedule](#)
- [Course Syllabi](#)
- [Academic Calendar](#)
- [Exam Schedule](#)
- [D2L](#)

CDM Home > Academics > Course Info

HCI 450: Foundations of Human-Computer Interaction

Application of engineering and psychological theory to the design of computer systems. Overview of applicable research methods and research on perception, cognition, errors, and screen design. Attention will be given to creating and applying guidelines derived from research.

IT 403 is a prerequisite for this class.

Fall 2024-2025

Section: 701
Class number: 14428
Meeting time: W 5:45PM - 9:00PM
Location: LEWIS 01007 at Loop Campus
Instructor: Peter Hastings | [View syllabus](#)

Section: 710
Class number: 14687
Meeting time: -
Location: Online: Async


Previous Instructors

Peter Hastings



Method Summary

Method of Research: A mixed-methods approach was used to fully comprehend the problems that the students were facing.



Techniques Used

- **Surveys:** Distributed to HCI graduate students to gather quantitative data on user preferences and behaviors.
- **User Interviews:** Conducted video interviews to collect qualitative insights into student experiences, needs, and pain points.
- **Observation Tasks:** Observed participants navigating the current registration system to identify user interactions, frustrations, and points of confusion.
- **Focus Groups:** Engaged groups of CDM graduate students in discussions to gather diverse perspectives on the redesigned registration system.
- **Usability Tests:** Evaluated the effectiveness, efficiency, and satisfaction of the redesigned registration system.
- **Goal:** To develop a thorough understanding of the challenges and opportunities in the current course registration process and inform the design of an improved system.

USER INTERVIEWS & THEMES

We conducted video interviews with DePaul graduate students to understand their experiences and challenges with the current course registration system. Collecting qualitative data on user needs, pain points, and areas of improvement.

1. Complexity and Inefficiency in Navigation:

Users need a straightforward, efficient process that minimizes time and effort spent on registration tasks.

2. Need for Streamlined Interactions Within a Single Platform:

Users require a single, integrated platform for all registration-related activities to simplify the process.

3. Desire for Personalization in Course Selection:

Students need a system that adapts to their schedules, learning preferences, and academic goals.

4. Lack of Accessible and Comprehensive Information:

Users need comprehensive, easily accessible course information.

CUSTOMER JOURNEY MAP FOR COURSE REGISTRATION

AWARENESS

Phase #1

- **Customer Action**
Student receives an email about the upcoming registration period.
- **Touchpoints**
University email, DePaul's academic calendar website.
- **Emotions**
Curiosity mixed with apprehension about navigating the registration process.
- **Pain Points**
Anxiety due to previous experiences of a complex registration process.
- **Quote**
"I spend about an hour... It's a bit confusing."
- **Solutions**
Notification system with preliminary course suggestions based on academic progress.

CONSIDERATION

Phase #2

- **Customer Action**
Student explores available courses and requirements on the university's course catalog and degree requirements page.
- **Touchpoints**
University course catalog, degree requirements webpage, department advisories.
- **Emotions**
Overwhelmed by the volume and dispersal of information.
- **Pain Points**
Difficulty in piecing together information from various sources.
- **Quote**
"It's kind of like convoluted trying to find where I can see all the types of classes I'm able to take."
- **Solutions**
A unified platform integrating all relevant information with enhanced search capabilities.

DECISION

Phase #3

- **Customer Action**
Student selects courses and registers through the online system.
- **Touchpoints**
Registration portal, course selection interface, academic advisor emails.
- **Emotions**
Frustration with system glitches and lack of real-time assistance.
- **Pain Points**
Course scheduling conflicts and inadequate system feedback on issues like prerequisites.
- **Quote**
"It's kind of like a multi-step process rather than everything being laid out in one area."
- **Solutions**
AI-powered tool for schedule optimization and real-time problem-solving assistance.

SERVICE

Phase #4

- **Customer Action**
Student receives confirmation of courses and accesses their semester schedule.
- **Touchpoints**
Confirmation email, online student dashboard.
- **Emotions**
Temporary relief mixed with ongoing concern for potential schedule changes.
- **Pain Points**
Uncertainty about course viability and instructor compatibility.
- **Quote**
"Campus connect... I feel like that could really be refined and consolidated."
- **Solutions**
Real-time chat support with AI-driven responses for immediate issue resolution.

CONCEPT DESIGN GOALS

Ease in decision
making about
course selection

Ease in program
planning

Higher satisfaction
with course choice

UNIFIED REGISTRATION PLATFORM

Degree progress 8/48 credits completed

Your Degree Plan

Spring 2024 Summer 2024 Fall 2024

Winter 2025 Spring 2025 Summer 2025

HCI 406 Website Design for HCI by Sal Berry edit	HCI 412 Design Fundamentals 1 by Krista Kelban edit	HCI 445 User Research Methods by Oliver Alonzo edit
HCI 406 Website Design for HCI by Sal Berry edit	HCI 412 User Centered Design by Craig Miller edit	HCI 552 UX Strategy and Web Analytics by Adam Steele edit
HCI 514 Global User Research by Adam Steele edit	PSY 580 Experimental Design and Implementation by Ronit Sharma edit	HCI 445 Capstone Project by Joseph Wanka edit
DSC 423 Data Analysis and Regression by Chris Wills edit	PSY 404 Perception and Cognition by Martha Rogers edit	HCI 457 Information Architecture and Strategy by Danyell Jonas edit

A single interface that consolidates all aspects of course selection including picking electives, balancing workload, scheduling, degree planning and enrollment.

Suggest electives that align with students' academic goals and interests, taking into account prerequisites and degree requirements.

AI-driven suggestions based on academic history, career goals, and student feedback.

Real-time data analysis to adapt recommendations as student progress.

ADVANCED FILTER OPTIONS

The screenshot shows a user interface for selecting courses. On the left, there's a sidebar with 'Your | Winter' and 'Fall 2024' sections. The main area displays a search bar and a filter panel. The filter panel includes a search bar, a 'Go' button, and several filter categories: 'Research', 'Product Mngt', 'Design', 'Engineering', and 'All'. Below these are 'Electives for you' with a list of course cards. Each card shows the course ID, title, instructor, schedule, and work type. A purple box highlights the search bar and filter categories. A blue box highlights the 'add another course' button. A 'Register' button is at the bottom.

Search for a course or ask something about the program

Fall 2024 2024 Mode Course Category More Go

Research Product Mngt Design Engineering All

Electives for you

- HCI 520**
Learner Centered Design
by Peter Hastings Mon | 5:45pm CST | In-class | LEWIS 01514 solo work | 8+ hours/weekly
- HCD 590**
Human Centered AI Product Design
by Ovetta Sampson Thu | 5:45pm CST | Online | Sync group work | 10+ hours/weekly
- HCI 516**
Behavioral Science and UX
by Christina Hanschke Tues | 5:45pm CST | In-class | 14EAS 00211 group work | 8+ hours/weekly
- HCI 553**
Social Interaction Design
by Bob Konow Tues | 5:45pm CST | In-class | CDM 00200 solo work | 8+ hours/weekly
- Gam 424**
Game Design Workshop
by Brian Schrank Thu | 5:45pm CST | In-class | 14EAS 00505 group work | 10+ hours/weekly
- HCI 511**
Accessibility Considerations in HCI
by Oliver Alonzo Tues | 5:45pm CST | In-class | CDM 00202 solo work | 8+ hours/weekly
- HCI 512**
Design Ethnography
by Cynthia Putnam Tues | 5:45pm CST | In-class | CDM 00206 solo work | 8+ hours/weekly

add another course

Register

Solicit user input for desired preferences (mode of class, their interests)

Request user input and provide Tailored Recommendations

Provide filters for course modality (Online, In-Class, Asynchronous) and scheduling Preferences

Offer options to filter by preferred instructors and degree requirements

PERSONALIZED DEGREE PLANNING

Degree progress 8/48 credits completed

Your Degree Plan

Summer 2024

HCI 412
Design Fundamentals 1

by Krista Klebin Wills

Wed | 5:45pm CST | In-class | LEWIS 01108

introductory | 8+ hours/weekly

[edit](#)

Fall 2024

HCI 445
User Research Methods

by Oliver Alonzo

Mon | 5:45pm CST | In-class | CDM 00206

advanced | 8+ hours/weekly

[edit](#) [new course options](#)

Winter 2025

HCI 514
Global User Research

by Adam Steele

Thu | 5:45pm CST | In-class | LEWIS 01105

elective | 8+ hours/weekly

[edit](#)

HCI 440
User Centered Design

by Danyell Jones

Tues | 5:45pm CST | In-class | CDM 00220

foundation | 10+ hours/weekly

[edit](#)

DSC 423
Data Analysis and Regression

by Thiru Ramaraj

Thu | 5:45pm CST | In-class | LEWIS 01108

elective | 10+ hours/weekly

[edit](#)

[add another course](#)

[Register](#)

Create individual degree plans based on students' academic goals, aspirations, and personal schedules.

AI enabled course recommendations and plan generation

Onboarding process to collect information on student's personal goals and preferences.

DESIGN PROCESS

Team conceptual
features discussion

Individual
brainstorming

Idea discussion and
brainstorming

Conceptual
integration and
prototype creation

CONCEPT TEST PLAN

Objective:

To evaluate the features' first impressions, attractiveness and alignment to solving the pain points.

Participant Recruitment Criteria:

Participants majoring in Human Computer Interaction at DePaul University.

Concept Testing Method:

Focus Group and Interview

Mode:

Online, via Zoom

Roles:

2 Facilitators, Notetakers/Observers

Concept Testing Process

Warm up questions

FLOW 1

Onboarding walkthrough

FLOW 2

AI Plan generation

FLOW 3

Editing the plan

Questions about overall experience

CONCEPT TEST FINDINGS: POSITIVES

- Better than current DePaul process/tools
- Extra information details
- Recommendations

CONCEPT TEST FINDINGS: THINGS TO CONSIDER

- Learning curve
- Wording issues
- Minor UI fixes
- Confusion during Flows 1 and 2
- Mixed results on some features

MAIN TAKEAWAYS

The tool is an improvement.

Flow 1
(onboarding
process) clarity

Flow 2 (AI
degree plan)
clarity

Increased
context overall.

METHODOLOGY

Objective:

To evaluate the platform's intuitiveness, efficiency, and user satisfaction.

Participant Selection:

Chose participant with Computer Science backgrounds and HCI studies for relevant evaluation.

Testing Procedure:

- Introduction: Briefing on the session's goals and obtaining consent for recording.
- Task Execution: Participant performs specific tasks on the Figma prototype.
- Feedback Collection: Interactive discussion to explore the participant's experience and suggestions.
- Debriefing: Final thoughts and clarification of any unresolved issues.

Testing Environment:

Online testing using Zoom for real-time interaction and communication.

Roles:

Moderators guided the process; notetakers captured detailed observations.

TASKS

1

Onboarding and
Initial Setup

2

Course Selection
and Planning

3

Modifying Course
Selection for Fall 2024

KEY FINDINGS

Task Completion:

- Participant was able to complete all assigned tasks, but varied levels of ease and frustration were noted.
- Specific steps within tasks, particularly in course modification, were less intuitive and required more effort.

Interface Usability:

- There were positive reactions to aspects of the functions and design of the prototype.
- Navigation issues arose during more complex interactions, particularly when modifying the course plan.

User Feedback:

- Participant expressed satisfaction with the straightforward tasks but reported confusion and frustration during flows for AI degree planning and modifying the course plan.
- Suggested improvements included clearer instructions and simpler navigation pathways.

General Observations:

- The platform's overall functionality met the basic needs of course selection and registration.
- Participant's comfort level with the platform increased slightly with use, but specific areas still needed refinement to enhance user experience.

AI Integration Result

ONBOARDING

Collecting essential data to enhance the accuracy of BlueAI-driven course recommendations.

The background is a solid dark blue color. It features several abstract white line art designs. In the top-left corner, there is a complex, multi-line pattern that resembles a stylized leaf or a cluster of lines radiating from a point. In the top-right corner, there is a similar but more elongated and flowing line pattern. In the bottom-left corner, there are several parallel, wavy lines that create a sense of movement. The word "Conclusion" is centered in the middle of the page in a white, serif font.

Conclusion



BY
GROUP 1

Adithyan, Alejandra, Alex, Alyssa, Mehdi, Destini & Unnati