

Redesigning the ICCIT Website

Group 2

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CCT 485: User Experience Design - Qualitative Method

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Executive Summary

Over 12 weeks, our team researched the topic of redesigning the ICCIT website for the University of Toronto, Mississauga. The goal was to develop an updated design that is more user-friendly and accessible while removing unnecessary features. The research phase included an initial user observation where data was collected to answer the major questions of who, what, when, where, why, and how. The initial research served as a starting point for the redesign and gave valuable demographic data. Further qualitative research was conducted via contextual inquiry (CI) methods and participatory design sessions. CI was carried out to observe the user's actions on the ICCIT website, in hopes to better understand the reasoning behind those actions with the final goal of providing insights that would allow us to improve the ICCIT website and better the user experience for future users. Through Participatory Design (PD) sessions and Focus Groups, we took help from the end-users of the ICCIT website in redesigning various pages, allowing us to understand the user's needs and wants through collaborative effort. Thematic analysis was then conducted on the interview transcriptions, where common themes and breakdowns were highlighted as vital redesign tickets.

Design requirements for the new ICCIT website were continuously updated as participatory design continued. Designers also developed low-fidelity prototypes that served as templates for the actual redesign. At the end of the research project, we established key design requirements and points of focus that should be considered when redesigning the ICCIT website's front end. Our key recommendations for the ICCIT website are in respect to the home page, program webpage, and the course description page. For the home page, we seek to improve the overall information architecture and make mental health resources more accessible. For the program web page, we seek to restructure the webpage to focus on content prioritized by students and add a program description that better fits users' needs. Lastly, for the course description page, we seek to include more content to help upcoming and current ICCIT students and restructure the web page to present vital information for visitors.

The ICCIT website being redesigned can be accessed here: <https://www.utm.utoronto.ca/iccit/>.

Initial User Observations

User Observations for ICCIT Website performed within the project group

(<https://www.utm.utoronto.ca/iccit/>)

Users are capable of accessing the information displayed on this page through different means.

The classifications on the board view function, as seen in figure 1, seem to be disorganized and confusing to the users. The divisions categorize various topics into a single group. Programs, faculty, mentorship, scholarships and certificate programs are compiled into the same board.

Through initial user testing within the project group, it was concluded that users (in this case, the project group) are not sure about the main function of this website.

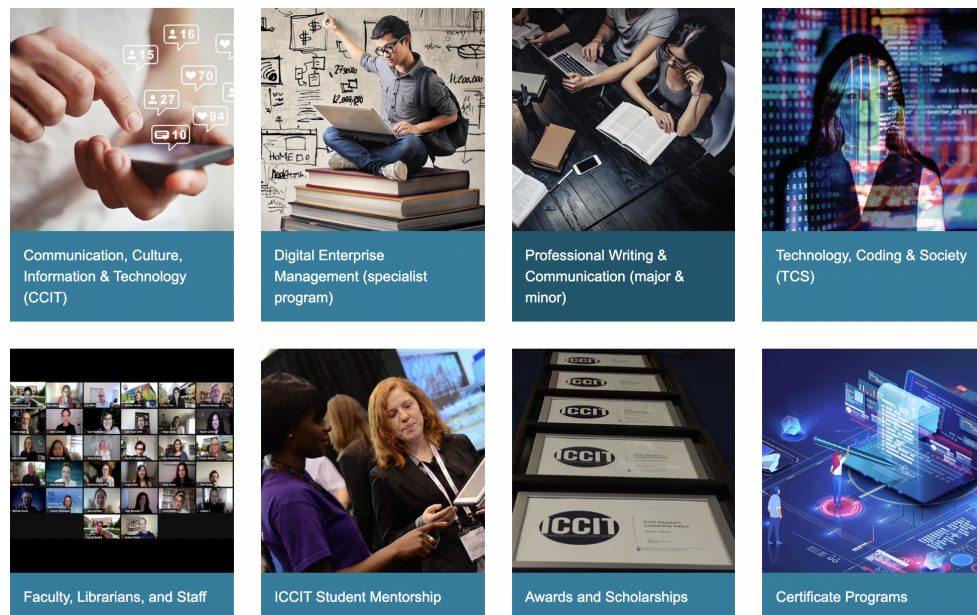


Figure 1: Current Board View Function of the ICCIT Website

What information do you think we need to redesign the website? How can we get it?

We will use contextual inquiry (CI), a qualitative research method, to help us understand users' thought processes when they use the ICCIT website. We will perform CI with possible user groups mentioned below. Discovering participants' thought processes when they use the website will eventually provide us with insight into the underlying issues of the current web page, the user needs, and design requirements. This will help us improve the website for higher usability. The method we will use following contextual inquiry will be participatory design. The participatory design will allow us to address the users' needs and issues identified through

contextual inquiry. It will help us update the design requirements and improve the website to address user needs.

- The possible user groups for the ICCIT website are:
 - Parents of future students
 - Upcoming and current ICCIT students
 - Students searching for faculty information
 - Students looking for opportunities (e.g. internships, certificate programs)
 - Students visit the website during course selection - around July and before the start of each academic year to look for scholarships and rewards
 - Faculty members
 - Prospective organizations the department is collaborating with
 - Prospective job/intern applicants

Identifying Website's Pain Points

This section answers the what, where, who, when, why, and how questions for the ICCIT website which are needed to determine the pain point of the website. This helps us analyze the problems with the website which will eventually help in narrowing down the scope of research for the redesign. The initial user observations were used to answer these questions and build a framework around the necessary steps we will take to further our research, that is, the research methods to use and the user groups to involve in our research process.

What is the problem?

The problem with the website is that it is disorganized with poorly formatted content and confusing navigation, causing users to have a difficult time finding the information/content they want.

Where is the problem?

The problem is experienced on the ICCIT website (<https://www.utm.utoronto.ca/iccit/>).

Who is experiencing the problem?

User groups experiencing this problem include parents of future ICCIT students, upcoming and current ICCIT students, faculty members, prospective organizations the department is collaborating with, and prospective job/intern applicants.

When are the people experiencing the problem?

Current ICCIT students experience problems with the website when searching for the course description and program prerequisites. Future ICCIT students experience problems with understanding the course descriptions given the use of jargon. Parents of ICCIT students experience problems when the webpage provides them with conflicting information and lack of (e.g. financial information).

Why is it a problem?

A disorganized and poorly designed website annoys and discourages users from revisiting the website. The poor web design ruins the university's credibility, giving users the idea that the university is unprofessional. Furthermore, the web page can possibly steer future students away from ICCIT programs and the department can have a difficult time hiring jobs given the complicated navigation of the website.

How are the people currently interacting with the problem?

The current website layout presents problems when finding specific information. When potential users enter the website to find what they are looking for, they may struggle to navigate where they need to go. For example, when future students visit the website, they may try to find faculty information or opportunities within the department (e.g. internships, certificate programs), and the current layout makes these things difficult to locate.

User Research Methods

After we analyzed the pain points of the website using the 5 W's and H method, we wanted to get more information from users to have a better understanding of the “broken parts” of the website in order to fix them for improvements. We decided to use 3 different user research methods to generate insights about the ICCIT website's users, their behaviors, motivations, and needs. Each user research method was built upon the previous research method and were chosen because they were considered to be the most efficient ways to gain maximum insights and to increase the usability and the functionality of the app.

The first research method we used was Contextual Inquiry (CI). For CI, we interviewed the users to understand users behaviors and observed the users using the app. This helped us build the themes and the design requirements we wanted to focus on. We then performed Participatory Design (PD) where users helped us design the website by reorganizing webpages and oftentimes, adding or removing information they considered unimportant. We used the suggestions from the PD sessions to create the website's prototypes that we tested during the Focus Group session. Users commented and discussed the usability of added functions and suggested ways to improve the website to better serve the target users.

After each research session was completed, we came together to analyze the results and create a field report on the findings. Below is mentioned the process we took, the results we got, and the findings and analysis that helped us create a final design recommendation.

1. Contextual Inquiry

Contextual inquiry is the primary research method we will use for our redesign of the ICCIT website, where we think of the interviewees as the master and the interviewer as the apprentice. We plan to observe the user's actions on the ICCIT website and anticipate to understand the goals behind those actions to provide insights. These insights will allow us to improve the ICCIT website and increase user experience for future users. The contextual inquiry will gather user demographic information and ask users to interact with the website, while the interviewer observes and asks for information to understand how and why users do what they do. For virtual contextual inquiry performed, we will record the CI using Zoom or voice recording and users will share their screen with the interviewer. For in-person contextual inquiry, we will record the interaction using a voice recording software. The interviewer will observe user behaviors and how the interviewee is interacting with the website in person. The voice recordings will be transcribed using Otter.ai.

Once the transcriptions are ready, we will code the transcript which will help us generate user work models, affinity diagrams, thematic analysis, and design requirements. These diagrams will analyze and summarize the findings from the interviews which will be used to design and lead the PD sessions (that is, the [second user research](#) method).

CI Template

Interviewee:

Title:

Role:

Institution:

Interviewers:

Place:

Date & Time:

Getting Started

Hi! We are UTM students currently enrolling in CCT 485 - User Experience Design and the final project requires us to conduct user testing on the ICCIT (Institute of Culture, Communication and Information Technology) website in order to seek improvement on the website.

Demographics & Characteristics

- What is your occupation?
- Do you use a laptop? What do you normally use a computer for?
- Any favorite websites? Why?
- Any websites you don't like?
- What other technology do you use on a regular basis (phone, iPod, etc.)? Can you tell us the kinds of things you do with it? What do you like? What don't you like?
- On a scale of 1 - 5 (1 being low and 5 high), how would you rate your technology skills?

Interview Portion of CI

Global Questions

- Goals: What makes a good university department (ICCIT) website? A bad university department website?
- Opportunity: What components of a university department (ICCIT) website wastes your time?
- Priorities: What is most important to you in a university department (ICCIT) website?

General Questions

- Function: What are the most common things you do with the ICCIT website?
- Frequency: What parts of the ICCIT website do you use most?
- Preference: What are your favorite aspects of the ICCIT website? What drives you crazy?
- Failure: How do you work around problems?
- Expertise: What shortcuts do you employ?
- What frustrations do you have with searching up information about programs or contents on the ICCIT website in general? What frustrations do you have about other similar products?

Activities - once you open the website what is the first question you would ask?

EX: how do you look up course information?

- How do you access and view the course content from the ICCIT website? Can you tell us about what that process is like?
- Can you check the admission requirement to the DEM program on the ICCIT website? If not, would that be helpful? If you do, can you show us how you use it?
- What kind of information is displayed on the ICCIT website?

- How would you describe the ICCIT website to someone who has never used it?
- What do you like/not like about the ICCIT website?

NOTE: this is a dynamic section and the prompts below are just suggestions

Suggested Prompts to lead topic discussion for website design

Mental health, diversity (specific topics/features available on the ICCIT website)

Types of Content

- What type of content is provided for you on your course site? Readings, Calendar, Assignments, Forums, Feedback, Chat, Workspace?
- If you can put up content onto the course site, what type of content do you put up and why?
- Is there material you would not keep on the site? Why?
- What frustrates you most about viewing, reading and or sharing course material?

Access & Organize Content

- How do you organize any content for personal use?
- How does the university let you know when content has changed or what's new? Is this way helpful? Could it be improved? How?
- How do you keep yourself organized?

Create/Collaborate on Content

- What kinds of activities do you use the website for? Can you show an example?

Other questions to include

- Whether users need to work on multiple sites at once (and if so, why)?
- How do users currently navigate to/switch between their sites?
- Whether users understand the concept of, and use, browser tabs?

Updated Contextual Inquiry Template

We have used contextual inquiry as the primary method for user testing for the ICCIT website. We thought of the interviewees as the master and the interviewer as the apprentice. We were seeking to observe the user's actions on the ICCIT website and were hoping to understand the goals behind those actions with a final goal of providing insights that will allow us to improve the ICCIT website and increase user experience for future users.

We interviewed users to gather demographic information during the contextual inquiry and asked users to interact with the website to understand how and why users do what they do. This CI testing was performed in a virtual setting. Some were performed through Zoom, where users shared their screen with the interviewer, while a few others were performed in-person, for both using voice recording. The interviewer observed user behaviors in both settings and how the interviewee interacted with the website in person. The voice recordings were later transcribed using Otter.ai. Finally, we used the transcriptions to generate codes to help us understand the various ways that will help to improve the ICCIT website. 4 interviewers (HB, EC, KL, AMT) went into the session and for each session there was only one interviewer. The sessions ran for around 20 minutes each.

Revised CI Template

Interviewee:

Title:

Institution:

Interviewers:

Place:

Date & Time:

Getting Started

Hi! We are UTM students currently enrolling in CCT 485 - User Experience Design and the final project requires us to conduct user testing on the ICCIT (Institute of Culture, Communication and Information Technology) website in order to seek improvement on the website.

Demographics & Characteristics

- What is your occupation?
- Do you use a laptop? What do you normally use a computer for?
- Any favorite websites? Why?
- Any websites you don't like?
- What other technology do you use on a regular basis (iPhone, iPod, etc.)? Can you tell us the kinds of things you do with it? What do you like? What don't you like?
- On a scale of 1 - 5 (1 being low and 5 high), how would you rate your technology skills?

Interview Portion of CI

Global Questions

- Goals: What makes a good university department website? A bad university department website?
- Opportunity: What components of a university department website wastes your time?
- Priorities: What is most important to you in a university department website?

General Questions

- Function: What are the most common things you do with the ICCIT website?
- Frequency: What parts of the ICCIT website do you use most?
- Preference: What are your favorite aspects of the ICCIT website? What drives you crazy?
- Failure: How do you work around problems?
- Expertise: What shortcuts do you employ?

Activities

- How do you access and view the course description from the ICCIT website? Can you tell us what that process is like?
- Can you check the admission requirement to the DEM program on the ICCIT website? If not, would that be helpful? If you do, can you show us how you use it?
- What kind of information is displayed on the ICCIT website?
- How would you describe the ICCIT website to someone who has never used it?

NOTE: this is a dynamic section and the prompts below are just suggestions

Suggested Prompts to lead topic discussion for website design - hooks based on topic discussed for each user

Mental health, diversity (specific topics/features available on the ICCIT website)

Types of Content

- What type of content is provided for you on your course site? Readings, Calendar, Assignments, Forums, Feedback, Chat, Workspace?
- If you can put up content onto the course site, what type of content do you put up and why?
- Is there material you would not keep on the site? Why?
- What frustrates you most about viewing, reading and or sharing course material?

Access & Organize Content

- How do you organize any content for personal use?
- How does the university let you know when content has changed or what's new? Is this way helpful? Could it be improved? How?
- How do you keep yourself organized?

Create/Collaborate on Content

- What kinds of activities do you use the website for? Can you show an example?

Other questions to include

- Whether users need to work on multiple sites at once (and if so, why)?
- How do users currently navigate to/switch between their sites?
- Whether users understand the concept of, and use, browser tabs?

Conclusion

- “Thank you so much for your time! Your valuable input will greatly help us with our research and make the ICCIT website an even better website!”
- Ask if it would be OK to contact them with follow-up questions and/or design review as we move through the project.
- When done, we will implement changes and suggestions accordingly

Results from Contextual Inquiry

Goal of the Transcription

The goal of the transcription is to seek UI/UX improvements for the ICCIT website which will help us understand users' thought processes when they use the ICCIT website. This will eventually provide us insight into the underlying issues of the current web page, the user needs, and design requirements to help improve the website for higher usability.

Link to Codes

https://docs.google.com/document/d/1tWZ0nFohvNW_50uGQnMG8aXvEWWm9cBRJaT1OjCU_0o/edit?usp=sharing

Post-Processing of the Transcription

The transcript of the contextual inquiry was mostly verbatim and was edited for readability but included some full verbatim as we believed it was necessary to capture some sounds like "um," "ah," etc. These sounds reflect the user's emotions and inform whether the user is confused or annoyed at a specific point during the CI. We used Otter.ai, a transcription software to transcribe the interviews. We took the interview recordings and processed them through Otter.ai to get the transcripts. Once that was completed, we went back and re-listened the audio recordings to address any hiccups. The hiccups included adding unclear words, reframing incomplete sentences, and fixing poorly transcribed information. We also removed any identifiers to ensure confidentiality and included the timestamps. We then exported the transcripts using Otter.ai to paste them onto the design report.

Participant Demographics

A total of five participants were observed and interviewed, among which were three current ICCIT students from UTM, a future ICCIT student, and a parent of an existing ICCIT student. All five participants are avid users of technology, where the primary digital device they use is a laptop, followed by mobile devices. They reported above-average confidence in their technological skills and their ability to navigate through various web pages such as retail websites, academic websites, entertainment websites, etc. These participants were selected as we wanted to cater to the website's most regular and applicable users, which we decided were current students, future students, and information gatherers (i.e. those who visit the website solely to get information about the program, such as parents).

Users	Demographics	Technology use	Frequency of website use	Technological skills
U1	Current ICCIT student	School	Frequently	4.5/5
U2	Parent of current ICCIT student	Work	Frequently	4/5
U3	Future ICCIT student	School	First-time user	4/5
U4	Current ICCIT student	School	Frequently	5/5
U5	Current ICCIT student	School	Frequently	3.5/5

Findings from Contextual Inquiry

After gathering data from the CI sessions, we modeled the data into work model diagrams, affinity diagrams, thematic analysis, and design requirements. These models are a summary and an analysis of the information gathered from CI. These findings were used to build upon the Participatory Design protocol.

Work Models for Users

Sequence Models U1,2,3

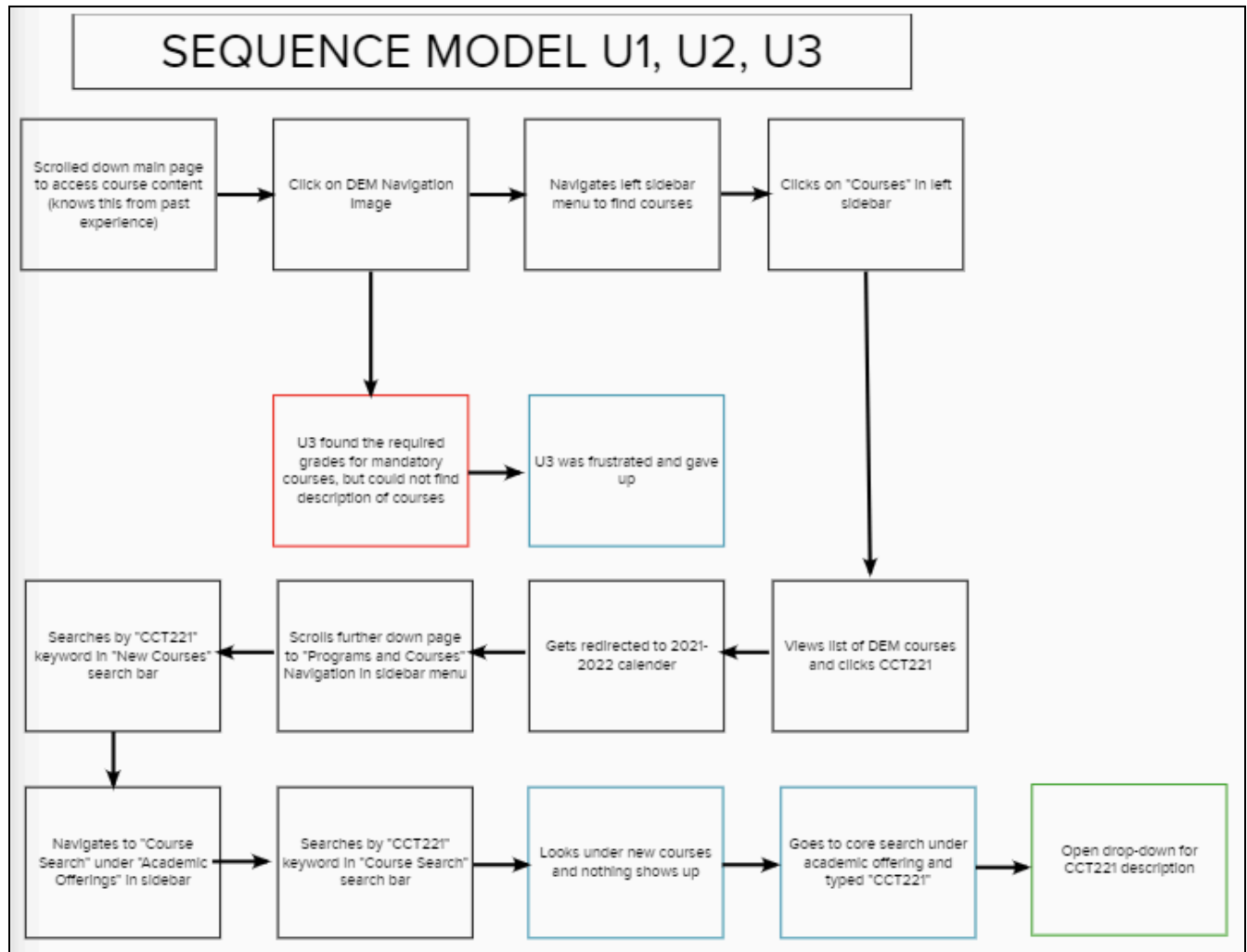


Figure 2: Sequence models for U1,2,3

U1

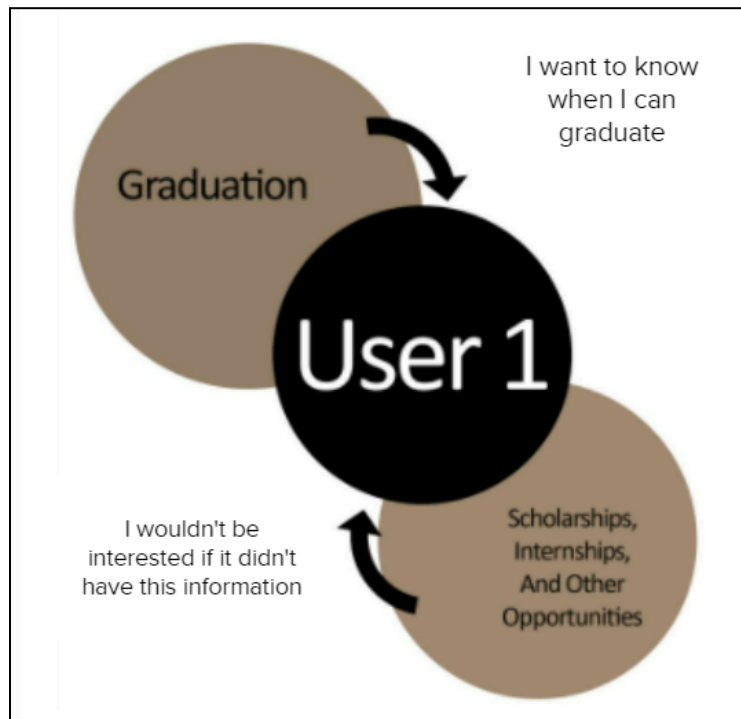
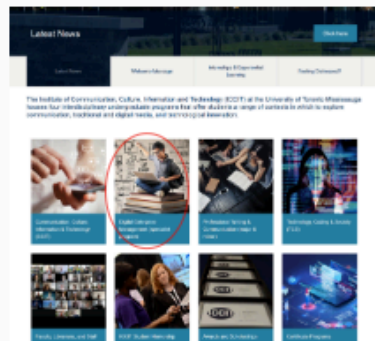


Figure 3: Cultural model for U1

PHYSICAL MODEL U1



Clicked on the 'Digital Enterprise Management (specialist program)' card

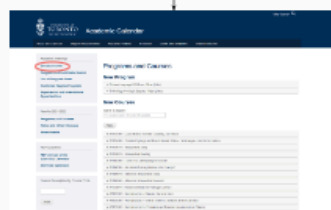


Clicked on 'DEM Courses' on the left menu



Clicked on 'Program and Courses' on the left menu

Led to the 2021-22 course calendar, not the course description, took a while to guess where to go



Realized that those were only new courses so clicked on 'Course Search' under 'Academic Offerings' on the left menu

Clicked on 'CCT221H5' from the course list



Searched for the desired course, CCT221,



Got the course description

Figure 4: Physical model for U1

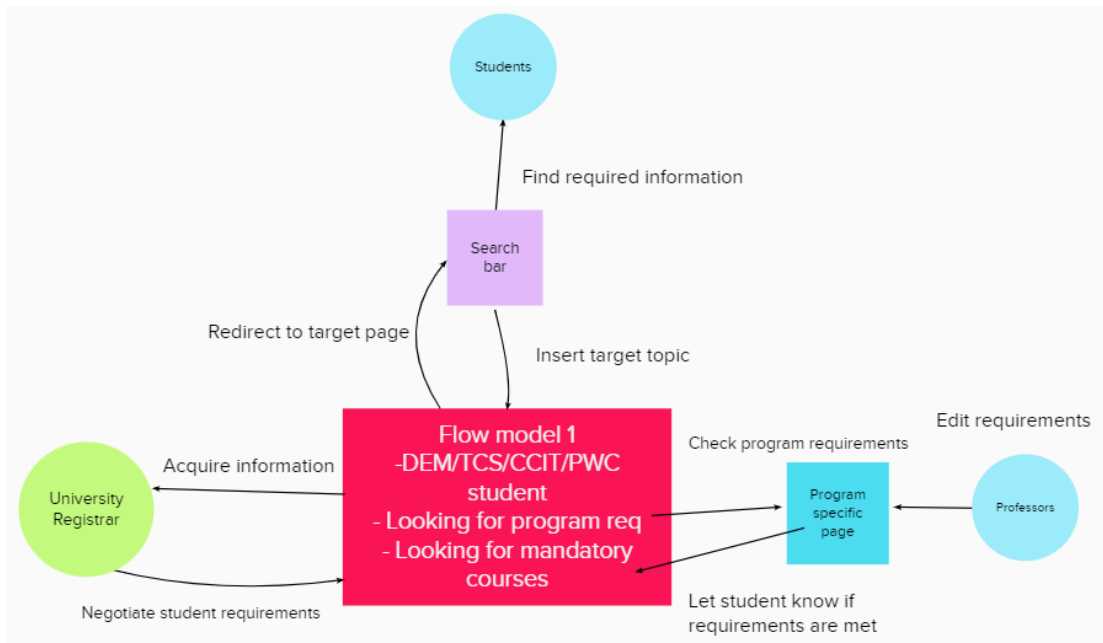


Figure 5: Flow model for U1



Figure 6-1: Artifact model for U1

University of Toronto
Institute of Communication, Culture, Information and Technology

support for current users

search bar; navigation artifact

Navigation

General information

Program specifics; redirects to course specifics

Intent: Acquire personalized requirements for course and programs

Digital Enterprise Management (DEM)

Digital Enterprise Management (DEM) is a specialized program, providing students with the skills and knowledge for utilizing digital technologies to solve business management and organizational problems in creative and innovative ways. Students study, build, and critically analyze enterprise-grade emerging technologies in addition to studying the traditional managerial fields such as finance, law, economics, organizational studies, risk management, design, and project management. Understanding the challenges and demands of managing organizations that use and/or develop digital technologies will prepare students for both traditional and digital enterprises.

Enrollment Requirements:

Limited Enrollment – Enrollment in this program is highly competitive. Meeting the minimum requirements does not guarantee admission.

For students applying in 2020-2021 for program entry in the 2021-2022 Academic Year: minimum requirements include the following:

- A minimum of 4.0 credits completed at UoT
- CCT109H5 (with a minimum grade of 65%)
- CCT110H5 (with a minimum grade of 65%)
- MCM101H5 (with a minimum grade of 65%)
- MCM102H5 (with a minimum grade of 65%)

For students applying in 2021-2022 (and beyond) for program entry in the 2022-2023 Academic Year (and beyond): minimum requirements include the following:

- A minimum of 4.0 credits completed at UoT
- CCT109H5 (with a minimum grade of 65%)
- CCT110H5 (with a minimum grade of 65%)
- CCT112H5 (with a minimum grade of 65%)

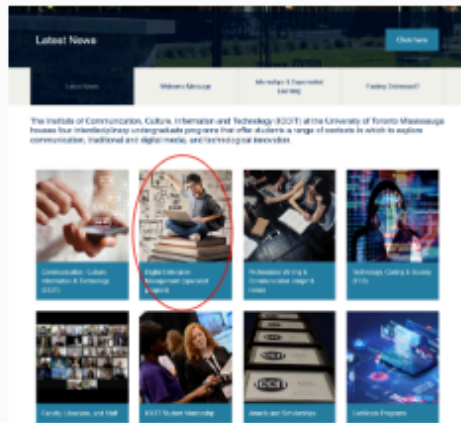
NOTES:

1. Tuition fees for students enrolling in the DEM Specialist Program will be higher than for other

Figure 6-2: Artifact model for U1

U2

PHYSICAL MODEL U2



Clicked on the 'Digital Enterprise Management (specialist program)' card



Clicked on the 'CCT109H5' hyperlink



Continued exploration by clicking 'Course Search' under 'Academic Offerings' on the left menu



Got the course description successfully

Figure 7: Physical model for U2

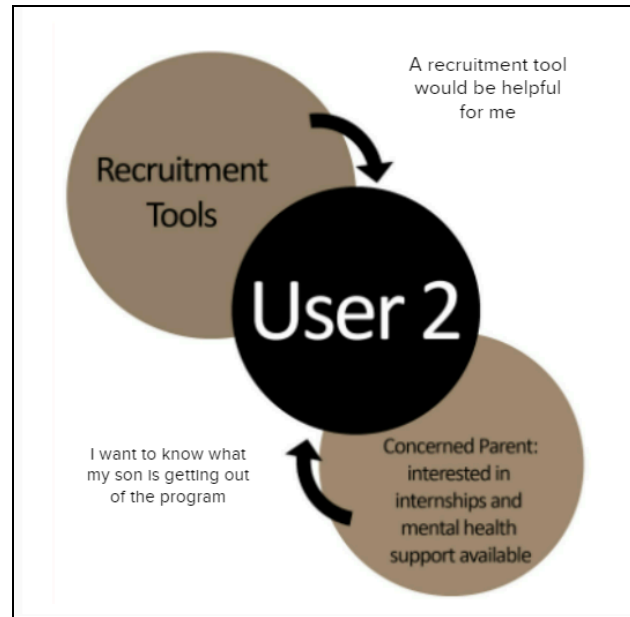


Figure 8: Cultural model for U2

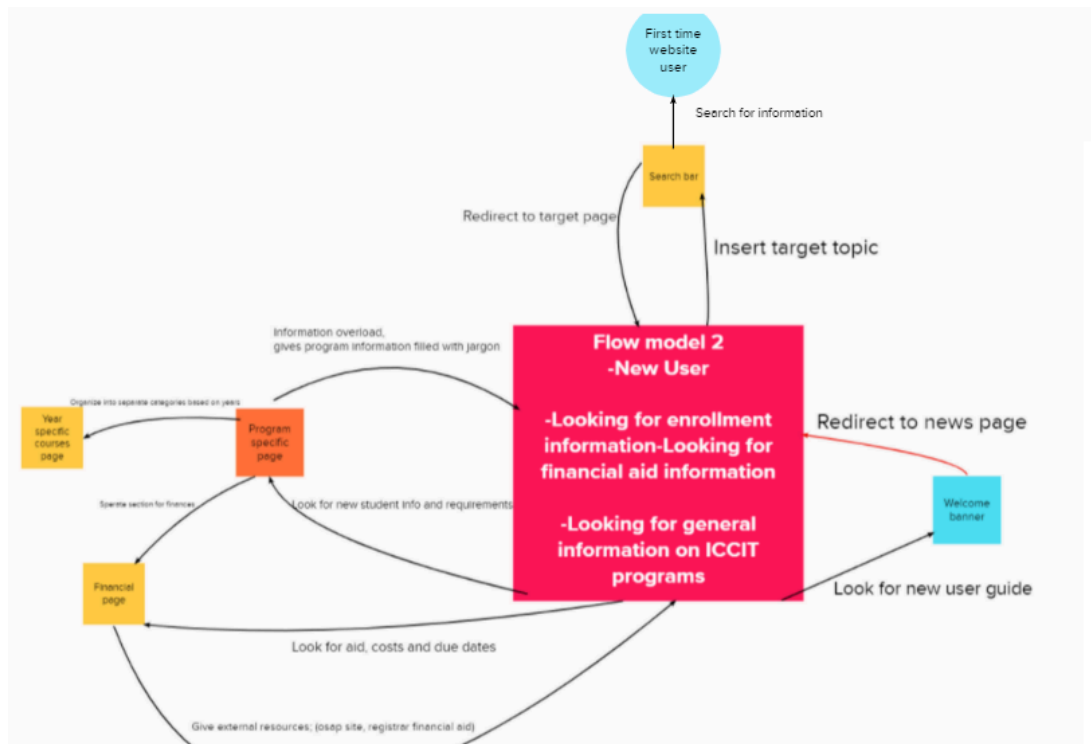


Figure 9: Flow model for U2

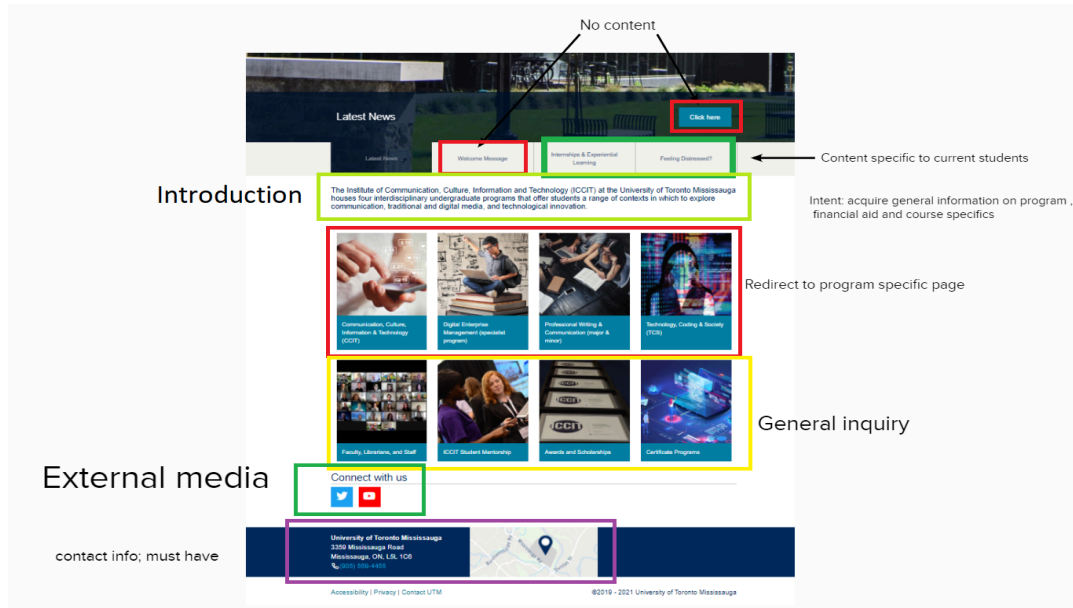


Figure 10-1: Artifact model for U2

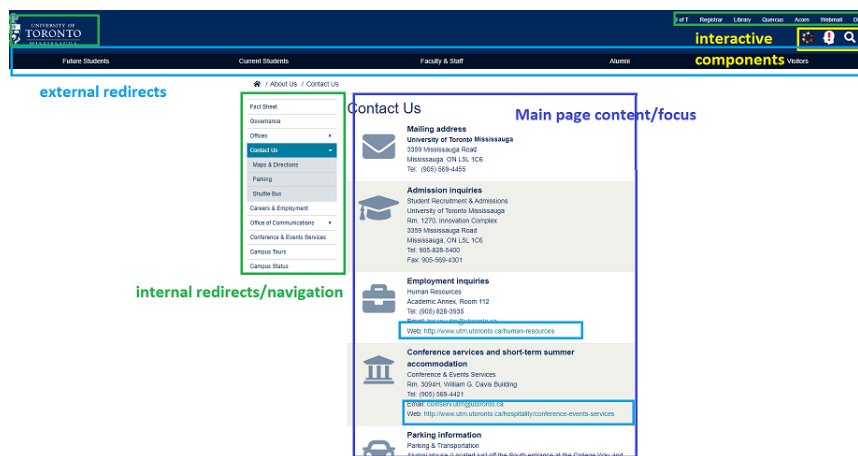


Figure 10-2: Artifact model for U2

U3

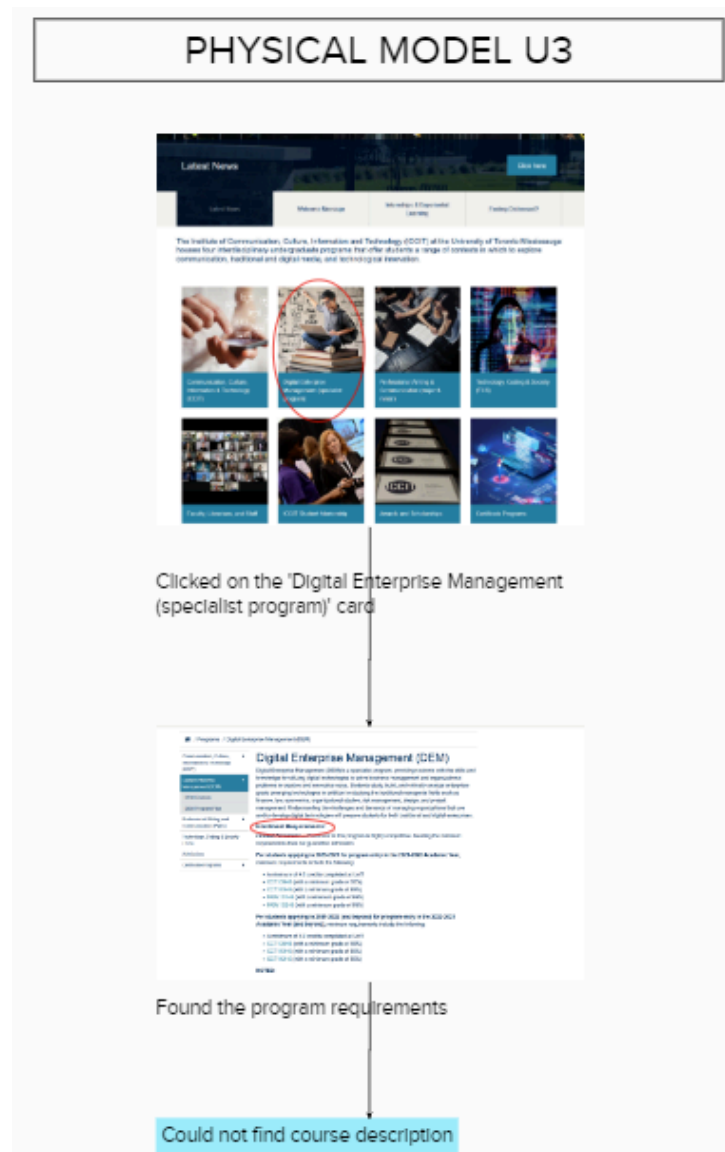


Figure 11: Physical model for U3



Figure 12: Cultural model for U3

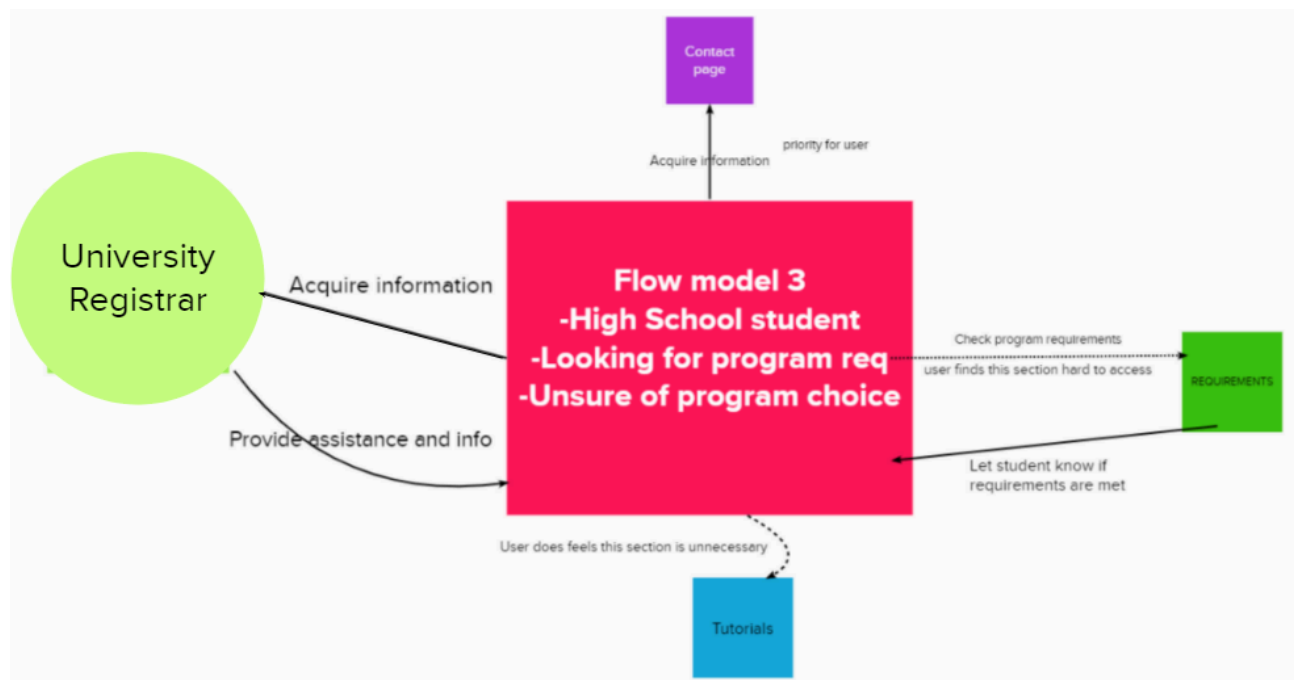


Figure 13: Flow model for U3

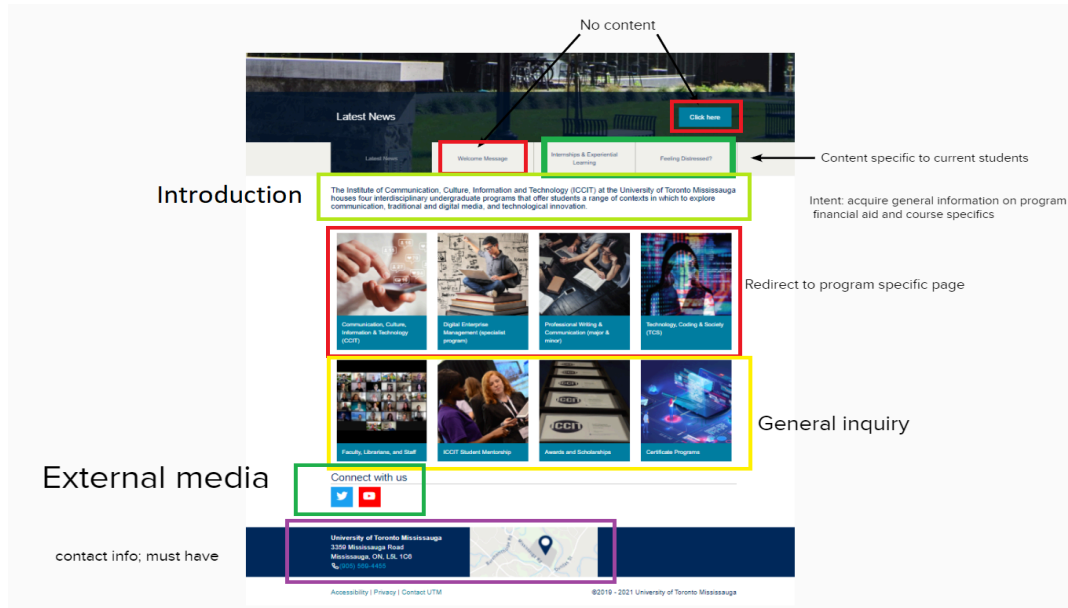


Figure 14-1: Artifact model for U3

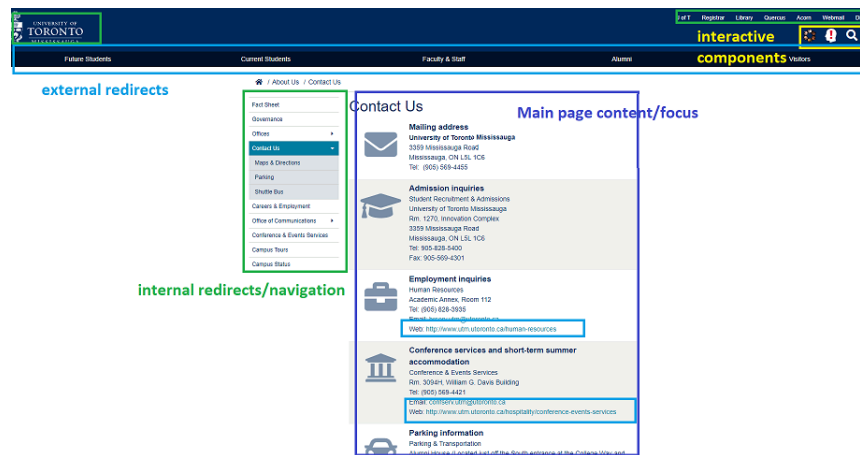


Figure 14-2: Artifact model for U3

U4

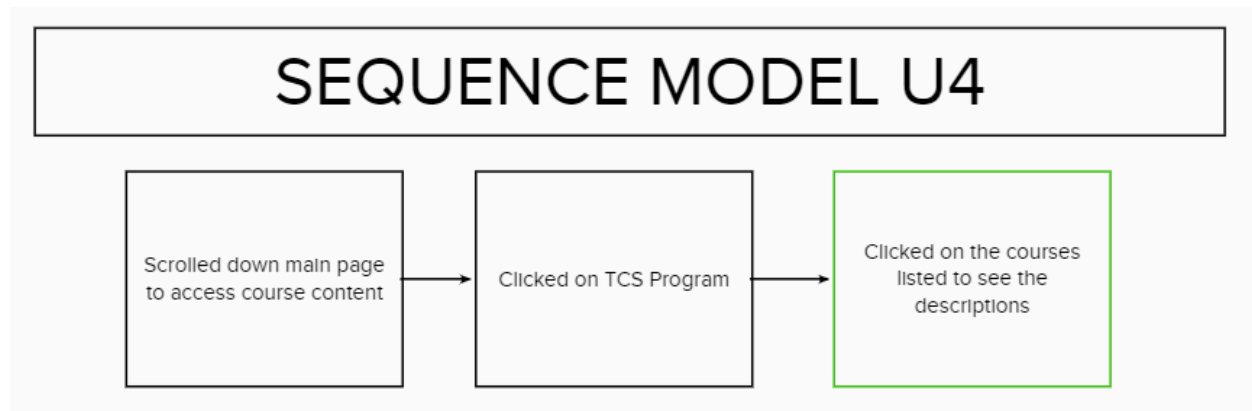


Figure 15: Sequence model for U4

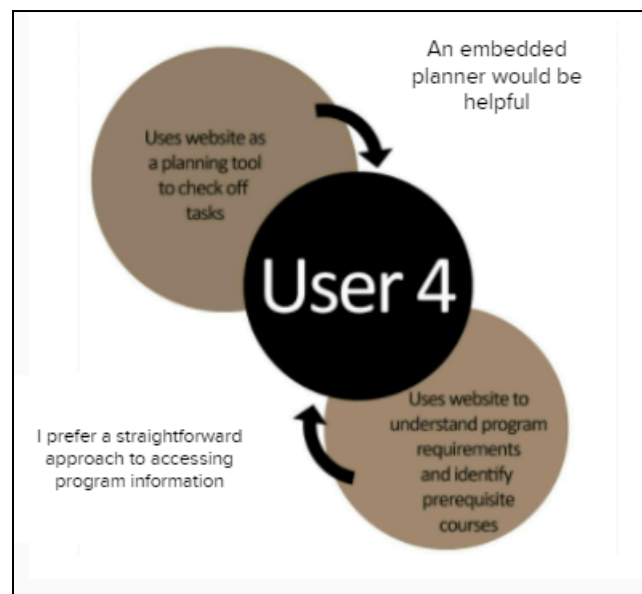


Figure 16: Cultural model for U4

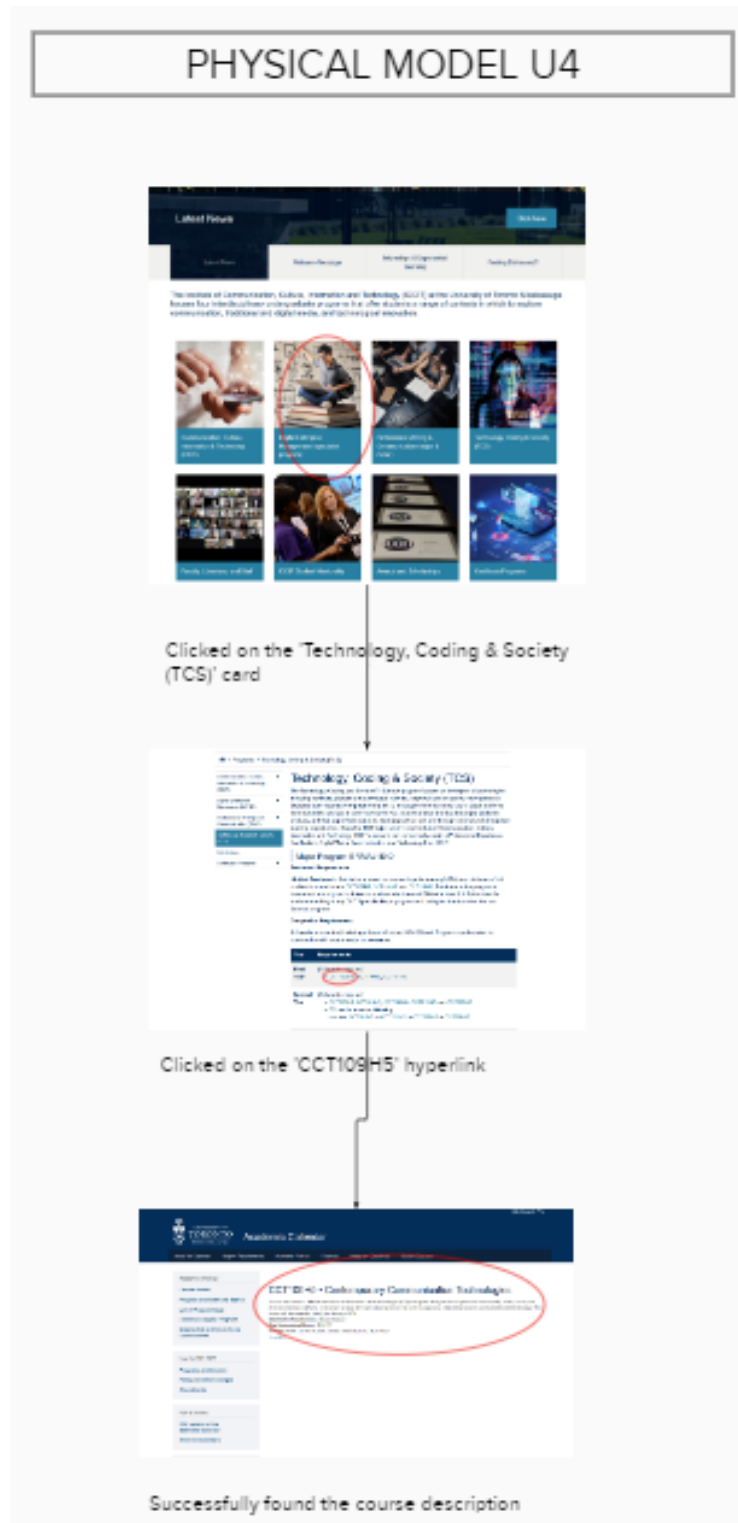


Figure 17: Physical model for U4

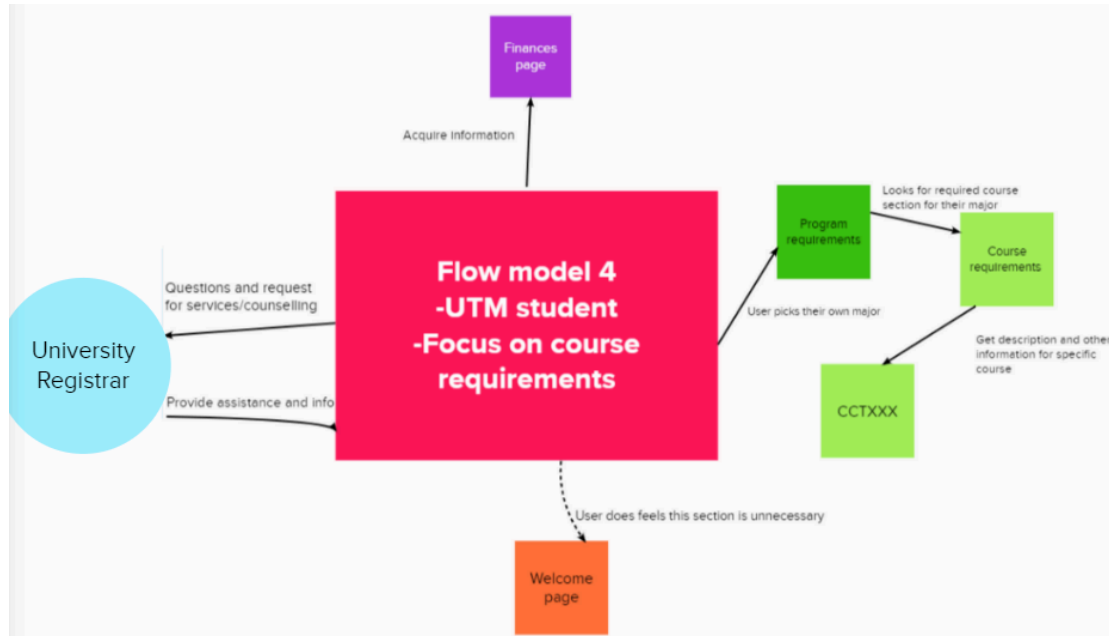


Figure 18: Flow model for U4

useful function for navigation
favourite function on other websites

aesthetics only

Intent: navigate to user's current program of study and find information on the latest course/program requirements

reason for being on website

credit requirements

gives information for course planning

Year	Requirements
First Year	0.5 credit from CCT1000H or CCT1001H
Second Year	0.5 credit from CCT1000H or CCT1001H 0.5 credit from CCT1002H or CCT1003H 0.5 credit from CCT1004H or CCT1005H

Figure 19: Artifact model for U4

U5

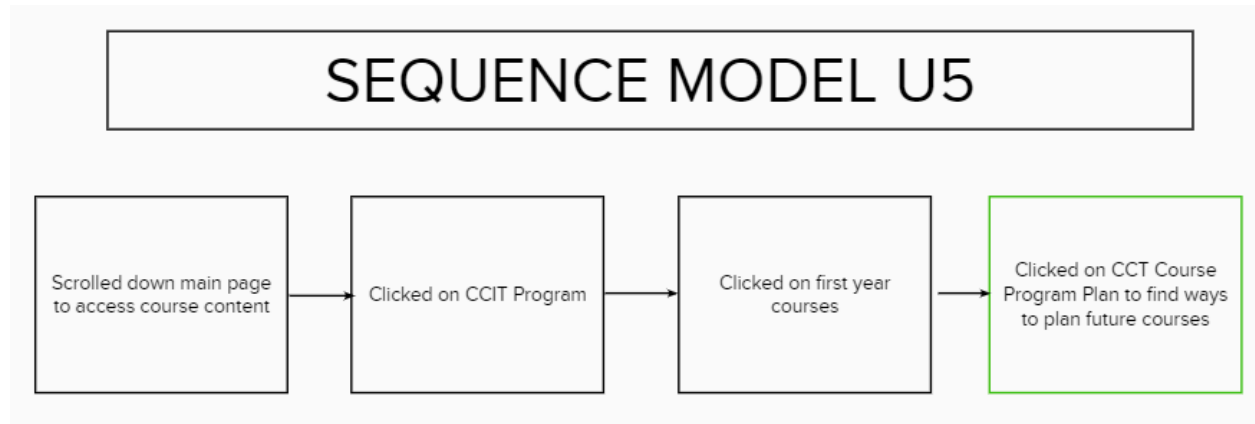
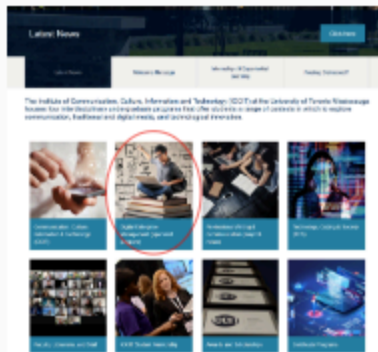


Figure 20: Sequence model for U5

PHYSICAL MODEL U5



Clicked on the 'Communication, Culture, Information & Technology (CCIT)' card



Clicked on the 'CCIT Program Plan' on the left menu



PDF opened showing required courses for all 4 years

Figure 21: Physical model for U5

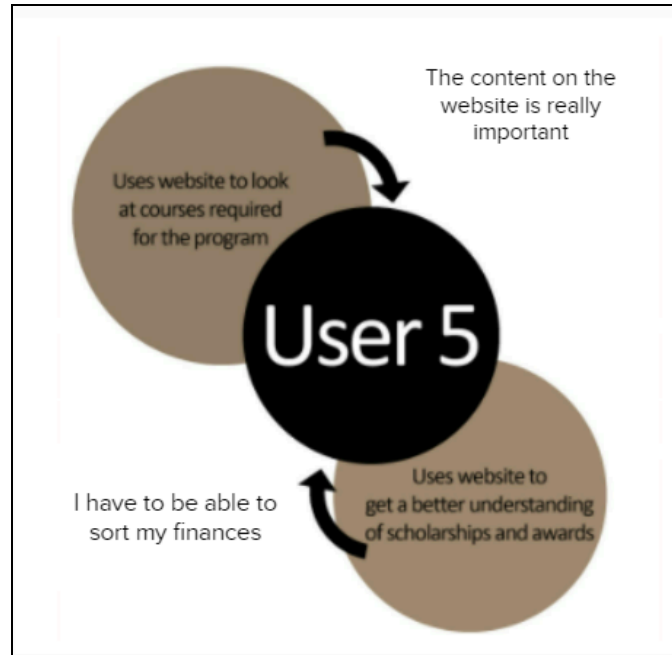


Figure 22: Cultural model for U5

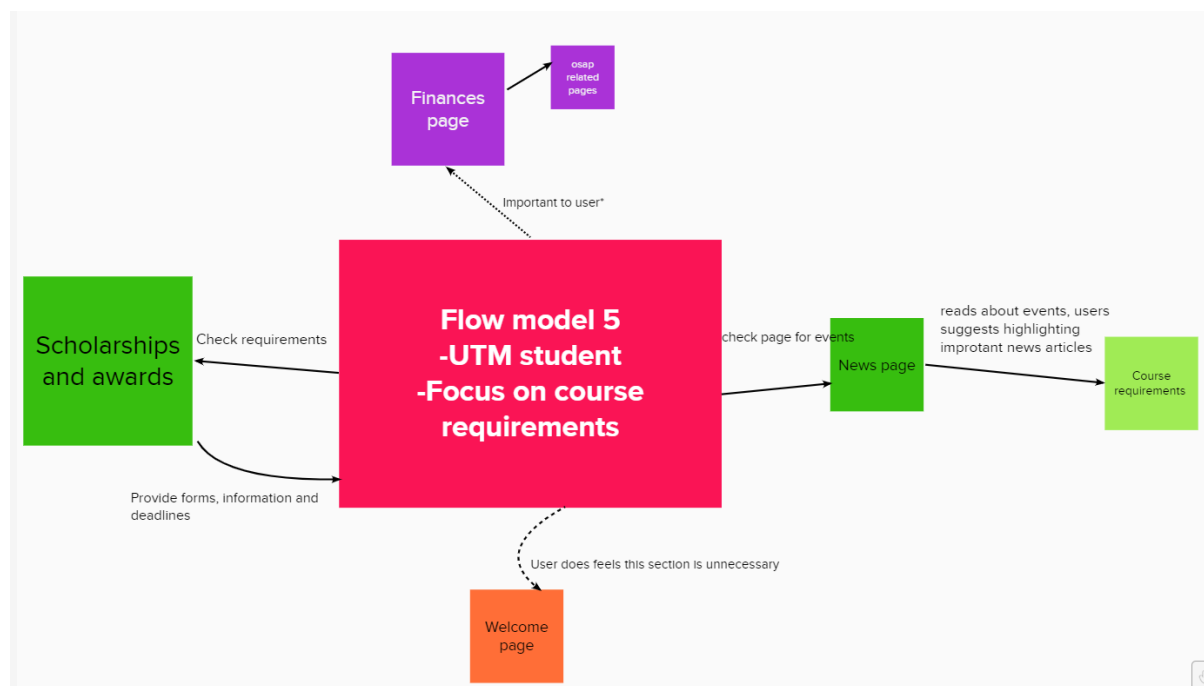


Figure 23: Flow model for U5

useful function for navigation

aesthetics only

intent: Find information on most up to date deadlines and course information

commonly used; gives program information

check requirements

gives information for course planning

deadlines and requirements

Programs

Communication, Culture, Information & Technology (CCIT)

Develop an in-depth understanding of media and digital technologies and their social implications from cross-disciplinary perspectives. Through research-based and hands-on courses, students critically assess the possibilities and consequences of media and technologies and apply their digital skills across multiple platforms.

Major Program ERMAJ1034

4.0 credits are required, including at least 4.0 at the 300/400 level. Program must be taken in consultation with another major or two minors.

Limited Enrollment: Admission is based on academic performance (CGPA) in a minimum of 4.0 credits that must include a minimum grade of B2 per seat in each of CCT1004H and CCT1010H. Each year, the CCIT program sets a minimum required CGPA. This will vary from year to year and is listed, in part, on supply and demand.

All students (pending transfer students) must complete 4.0 U of T credits before requesting this program.

Courses with a grade of CR/NCR will not count as part of the 4.0 credits required for program entry.

Tuition fees for students enrolling in the CCIT Major program will be higher than for other Arts and Science programs.

Listed below are the program entry and completion requirements as outlined in the 2021-22 Academic Calendar.

Year	Requirements
First Year	CCT1004H, CCT1010H
Second Year	8.0 credits required • CCT1004H and CCT1004H and CCT1010H • 0.5 credit from CCT1004H or CCT1004H or CCT1010H or CCT1010H • 0.5 credit from CCT1004H or CCT1004H or CCT1010H or CCT1010H

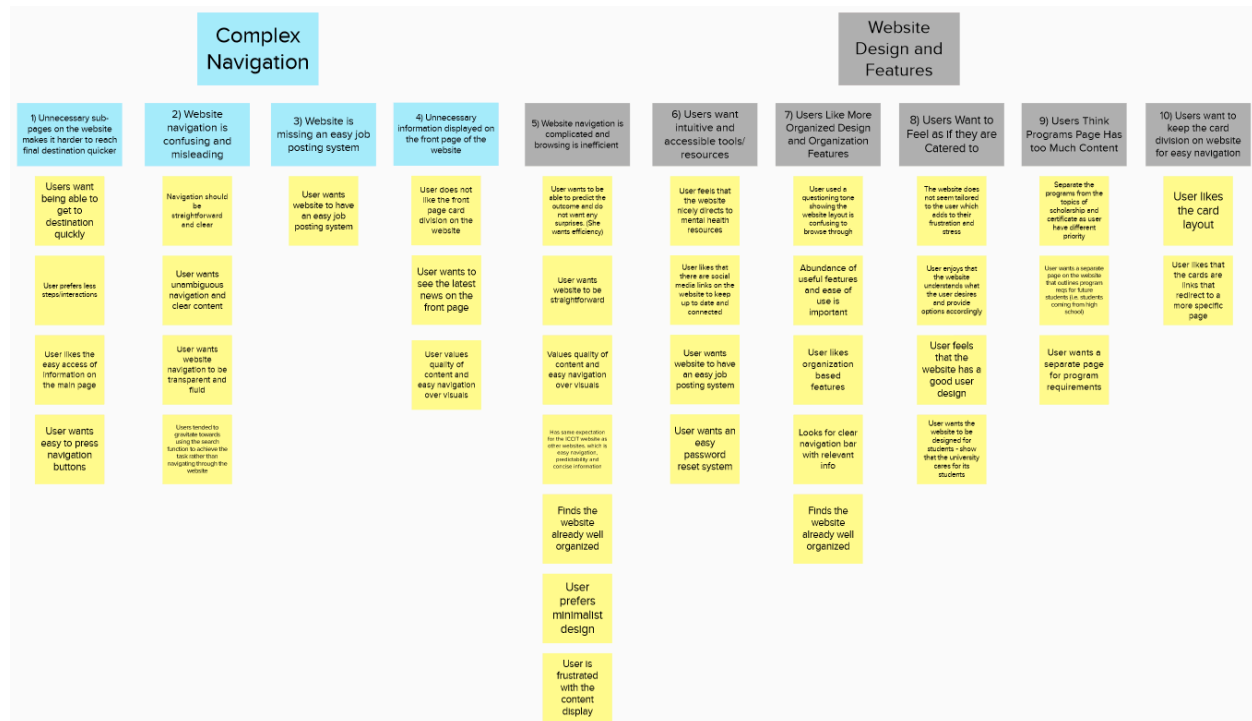
Figure 24: Artifact model for U5

Affinity Diagram

We created an affinity diagram by clustering and grouping the codes from the CI sessions under named groups which helped us in identifying the themes for the thematic analysis. We further mentioned the number of times a code was repeated, if it were repeated, in our affinity diagram to ensure relevant application of the codes in the thematic analysis and finally in our proposed website design.

Link to Affinity Diagram in Mural (named “ICCIT Website Redesign - Affinity Diagram Updated”):

<https://app.mural.co/invitation/mural/universityoftoronto3501/1636525195656?sender=u8b28297dee022d3d33ff1649&key=003aff30-6468-4f84-8cca-700e40317b77>



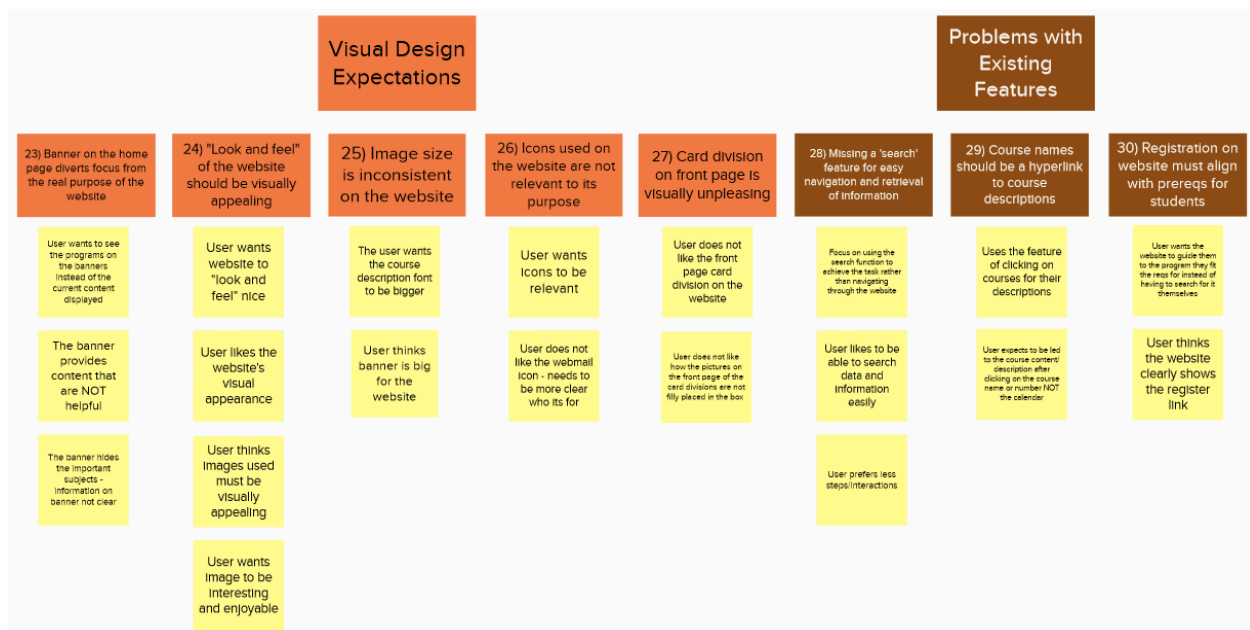
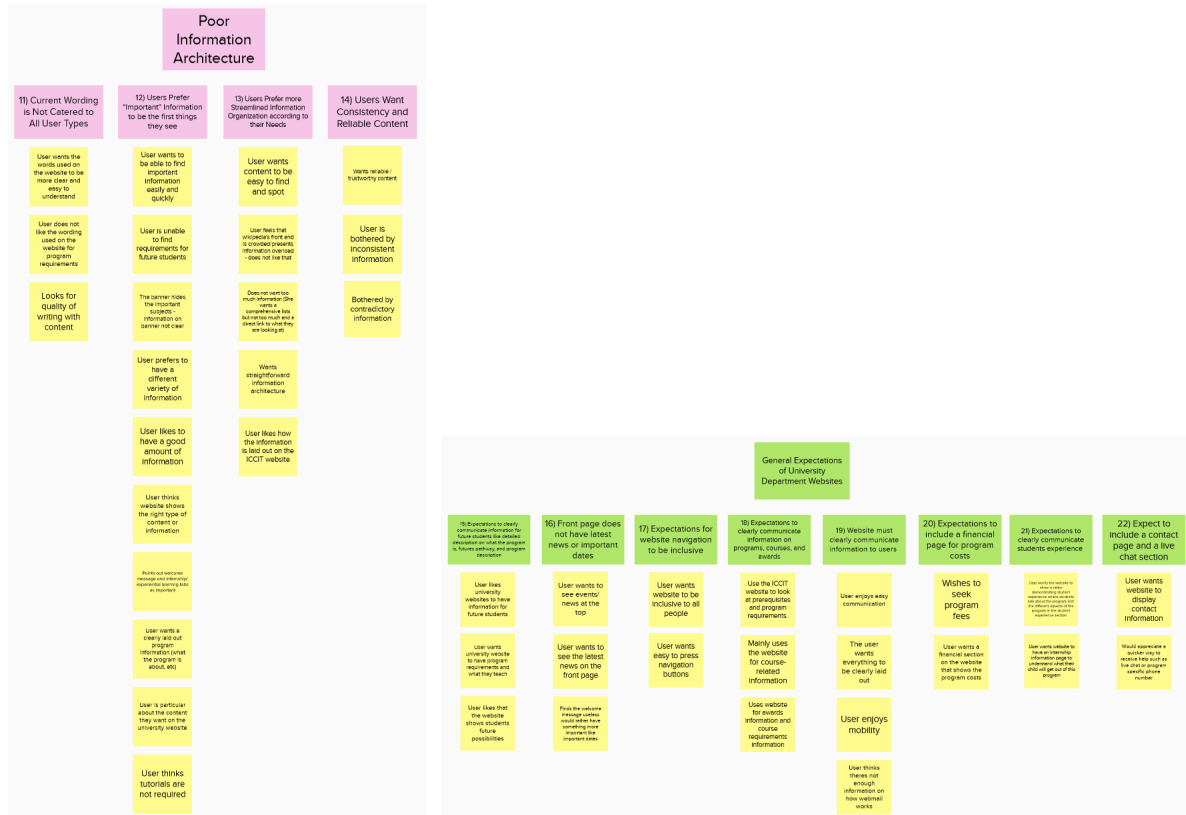


Figure 25: Affinity diagram

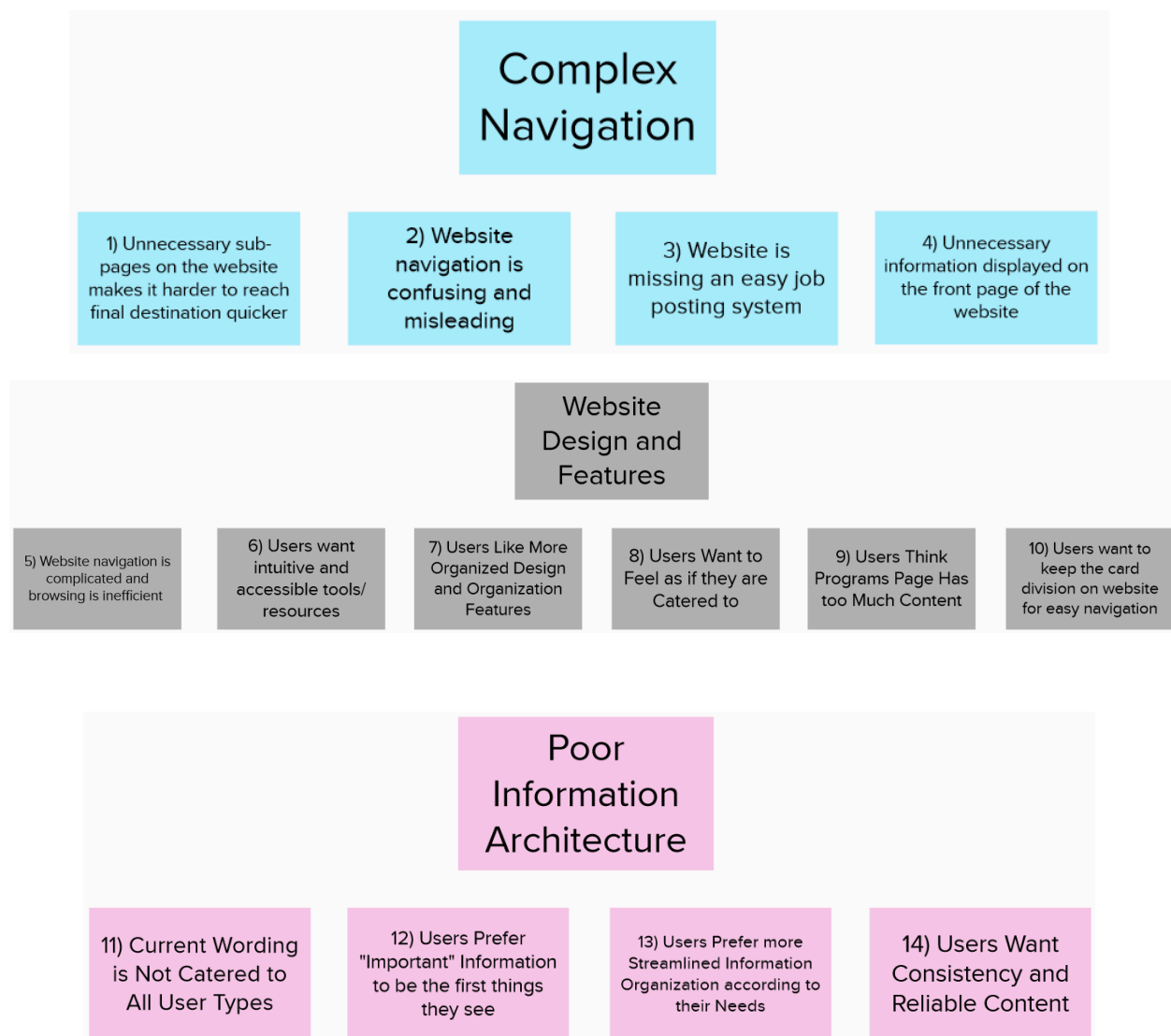
Thematic Analysis

We used the affinity diagram to extract themes from the codes to build a thematic analysis. In the affinity diagram, the codes were grouped into bigger themes and then divided into sub-themes.

The bigger themes are the main themes that we will work around to improve the website.

Whereas the sub-themes reflect the problems with the website. The solutions for these problems will be reflected in the design requirements.

Moreover, we have aligned the design problems from the themes to the examples mentioned by the users in the transcript. We numbered the themes and incorporated these numbers within the transcript for better clarity on design problems.



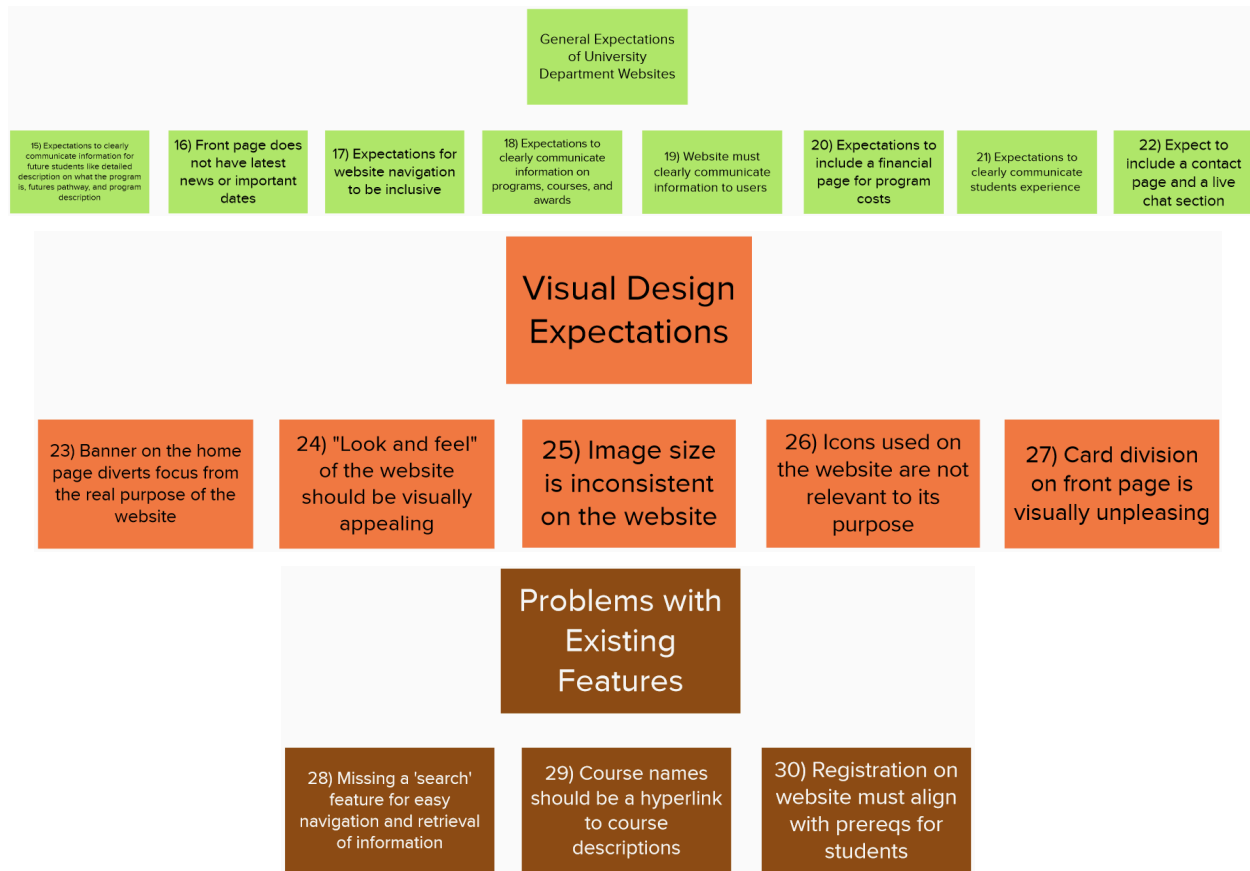


Figure 26: Thematic analysis

User Needs

- User wants a homepage that provides information relating to the programs and courses at first sight
- User wants consistent information throughout the website
- User wants the terminologies used in the website and course description to be easy to understand instead of jargons
- User wants a simple and predictable navigation
- User wants a consistent font, font size, and image
- User wants the images used in the website to be high quality and align with the header it is related to
- User wants the website to accommodate navigations made through mobile devices
- User wants the menu icon aka “hamburger” icon to be more noticeable

CI design requirements

Design Requirements	Themes ¹
<i>UI Elements</i>	
Ensure the font and image size is consistent all over the website	(7) Users like more organized design and organization features
Navigation and navigation bar needs to be simplified and streamlined towards user	(5) Website navigation is complicated and browsing is inefficient
Users must be asked and notified before leaving the website	(6) Users want intuitive and accessible tools/resources (19) Website must clearly communicate information to users
Ensure all buttons are workable and remove any buttons that are unresponsive The various places that users click must be clickable	(6) Users want intuitive and accessible tools/resources (17) Website navigation must be inclusive
The wordings used for program descriptions must be easier and basic, not use technical words. Instead of using heavy terminology, description needs to be broken down into layman terms	(11) Current wording is not catered to all user types (19) Website must clearly communicate information to users
Clicking on a course should open course description	(29) Course names should be a hyperlink to course descriptions
Update icons on the website to commonly used icons for similar representative symbols	(26) Icons used on the website are not relevant to its purpose
<i>Header Page</i>	
On the main page, remove the different divisions for different programs and only include a division for ICCIT programs within which will be included the different programs <i>(We will not include this for the participatory design)</i>	(9) Users think programs page has too much content (13) Users prefer more streamlined information organization according to their needs
User wants latest news to be displayed when they first	(16) Front page does not have latest

¹ Numbers indicate related themes from thematic diagram

open the website	news or important dates
Make the banner on the home page smaller to divert focus to what's important for the website	(23) Banner on the home page diverts focus from the real purpose of the website
Change the images used on the main page to make it more relevant	(24) "Look and feel" of the website should be visually appealing
Images need to be clear and be the same size	(25) Image size is inconsistent on the website (27) Card division on front page is visually unpleasing
Add a search feature on the main page that will help users find information quicker	(28) Missing a 'search' feature for easy navigation and retrieval of information (17) Website navigation must be inclusive
<i>Website Content</i>	
Include a page that breaks down and explains the university specific terminology used	(11) Current wording is not catered to all user types
Less important information (information that is on the website for clarification purposes) must be placed within the webpages not on the home page	(12) Users prefer important information to be the first things they see
Clutter similar information on the website	(1) Unnecessary sub-pages on the website makes it harder to reach final destination quicker
Include videos related to student experience like a video where students describe their experience and what the program is and its different aspects	(21) Must include students experience
Under programs, add a page that will ask user to input the prereqs they currently have and then suggest possible options to them	(30) Registration on website must align with prerequisites for students (15) Must include information for future students like detailed description on what the program is, futures pathway, and program description

Include financial information relevant to courses and programs on their respective pages	(20) Must have a financial page for program costs
<i>External and Internal Weblinks</i>	
Pages that have an external link must open as a different webpage - users must not have to leave the website	(13) Users prefer more streamlined information organization according to their needs
Ensure links are consistent - each time a user clicks on a certain course, they must be led to the course description every time	(5) Website navigation is complicated and browsing is inefficient
<i>Website's Features</i>	
Add an easy to use/navigate job posting system Maintain easy access to mental health resources and social media links	(6) Users want intuitive and accessible tools/resources
Add in a live chat feature for users to receive help	(22) Website must have a contact page and a live chat section
Ensure password reset system is accessible to all user types	(8) Users want to feel as if they are catered to

2. Participatory Design

We will perform PD through participatory workshops that will allow end users of the ICCIT website to be directly involved in the decision-making and alteration process of the website. Due to COVID, our participatory workshop will take place virtually through Zoom through note taking and screen sharing services. We will use Mural for group and individual PD sessions where participants can either draw on the Mural board or use a piece of paper, scan it and upload it onto Mural for the PD session. We will analyze and summarize the findings from these sessions through thematic analysis and design requirements. The thematic analysis and design requirements from these sessions will be an improved and more focused version of the [thematic analysis](#) and [design requirements](#) from CI.

Participatory Design protocol

Who Should Attend?

The workshop should include:

- 3 UTM ICCIT students
 - 2 current ICCIT students and 1 upcoming ICCIT students
- 1 upcoming or current parents of UTM ICCIT students
- 1 webdesigner of the ICCIT webpage
- 1 facilitator

Agenda

- Introduction - the facilitator introduces himself/herself then the participants proceeds on introducing themselves
 - “Hello everyone! Welcome to our participatory design session! We are 4th year UTM students hoping to redesign the ICCIT website for our final project. While we're here, we will work together to sketch the website pages to better serve you, the participants. Thank you for volunteering/choosing to participate in this session.”
 - “Firstly, please tell us your name and how you’re involved with the ICCIT website.”
- Usability presentation - introduce participants to what usability means for them to better understand our objective and expectations

- “Usability is defined as the quality of a user's experience when interacting with products or systems which include websites, software, or devices. Usability is about effectiveness, efficiency and the overall satisfaction of the user.”
- “For example, you are designing a supermarket website that allows users to order their groceries online. We could perform a workshop to see how we can design a website in order to solve the identified issues through earlier research and how we can incorporate findings to build a grocery web page where users can easily order groceries.”
- Objective and expectations - what are we going to do with this workshop? Agenda of what can we expect to happen in this workshop?
 - “In this participatory workshop we are hoping to seek potential solutions to the issues identified earlier through our research. I will go through the issues that we discovered causing poor usability for the ICCIT website, and we will provide you with scenarios to better understand the existing issue. Afterwards, you will work as a group to develop solutions to the scenario or the identified issues, and lastly, the group will present their ideas/solutions.”
- Identified issues
 - “The current ICCIT website is found to have the following problem:
 - Website leads participants to web pages they do not expect (see figure 28)
 - Scenario: Imagine you are a CCIT student and are looking for the course descriptions for the courses you need to take for your program
 - Draw a design that you expect the webpage to land on after you click on the course title
 - Lack of helpful resources on the website
 - Scenario: Imagine you are a current ICCIT student and are currently going through a mental health issue and want to look for mental health resources provided by the university
 - Poor wording (i.e. use of jargon) and poor information structuring such as the banner (see figure 29)

- Scenario: Imagine you are a potential DEM student who wants to know more about the ICCIT department. What topics would you include on the DEM webpage that will help you with this task?
- Front page of the website is visually unpleasing and unorganized (see figure 27)
 - Scenario: Imagine you are a website designer for the ICCIT webpage, how would you design it so that the homepage is organized and visually pleasing?

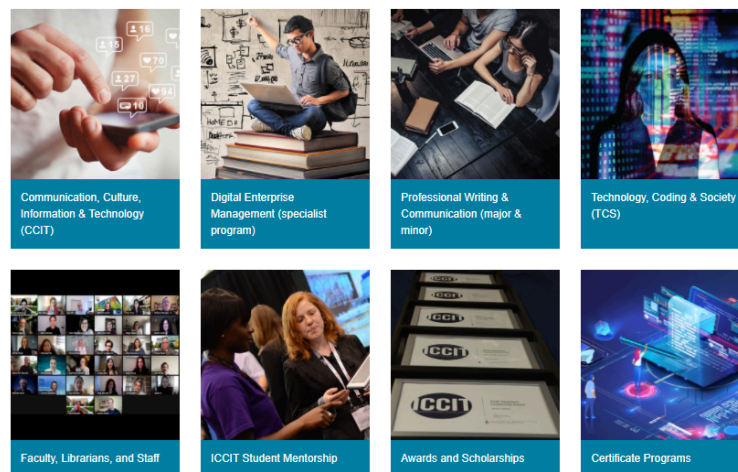


Figure 27: UI elements that need work

Year	Requirements
First Year	(1.0 credit required) • CCT109H5, CCT110H5
Second Year	(3.0 credits required) • CCT204H5 and CCT208H5 and CCT218H5 • 0.5 credit from CCT200H5 or CCT206H5 or CCT210H5 or CCT222H5 • 0.5 credit from CCT205H5 or CCT207H5 or CCT212H5 or CCT250H5 (Students who do not choose CCT250H5 will need to take an additional 0.5 credits to complete the Sheridan Certificate in Digital Communication requirements) • 0.5 credit from any 200-level CCT course
Third and Higher Years	(4.0 credits required) Minimum of four half-credit courses taught at UTM from any 300/400 level CCT/VCC course. One of these half credits must be at the 400 level. Minimum of four half-credit courses taught at Sheridan from any 300/400 level CCT course. One of these half credits must be at the 400 level.

Academic Offerings

Course Search

Program and Certificate Search

List of Program Areas

Combined Degree Programs

Experiential and International Opportunities

New for 2021-2022

Programs and Courses

Policy and Other Changes

Amendments

PDF & Archive

PDF version of the 2021-2022 Calendar

Archived Calendars

Course Description by Course Code

Apply

2021-2022 Calendar

Ontario's response to the COVID-19 pandemic continues to evolve. Changes will likely occur as the province and its municipalities adjust to new data about the virus. In these circumstances, please be advised that changes to the delivery of courses, co-curricular opportunities, programs (including clinical programs or opportunities) and services, may become necessary during the academic year. The University thanks its students, faculty, and staff for their flexibility during these challenging times as we work together to maintain the standards of excellence that are the hallmark of the University of Toronto.

Figure 28: Lead user to academic calendar if click on a course title

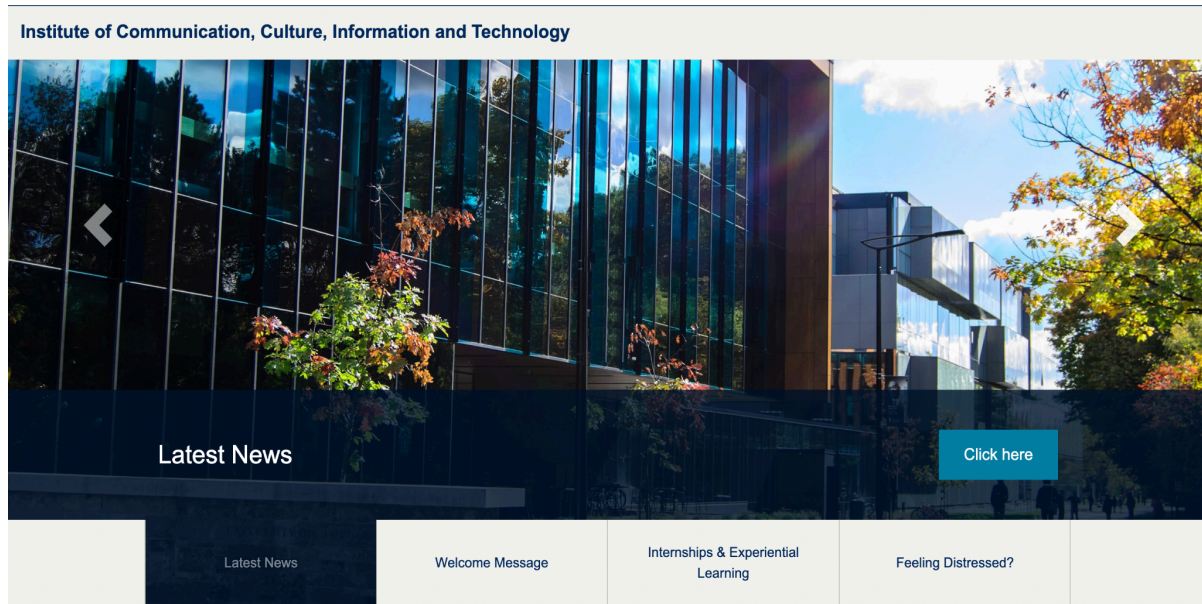


Figure 29: Content on banner does not provide value

- Paper prototyping - the participants will be split into two groups to come up with solutions to addresses the problem posed in the scenario
 - Link to Mural board:
 - Issue 1 -
<https://app.mural.co/t/cct4858902/m/cct4858902/1637199404548/0cd88da65e117c9f54b4c91b490dbb416899d957?sender=u51a1248367a4b68908894150>
 - Issue 2 -
<https://app.mural.co/t/cct4858902/m/cct4858902/1637777909438/fedc183fcbfcd2069796585fd156ebd162714c83?sender=u51a1248367a4b68908894150>
 - Issue 3 -
<https://app.mural.co/t/universityoftoronto3501/m/universityoftoronto3501/>

[1637778182493/2ae054193440434e1331e76128c4ed6113ae3f7a?sender=u8b28297dee022d3d33ff1649](https://app.mural.co/t/universityoftoronto3501/m/universityoftoronto3501/1637778182493/2ae054193440434e1331e76128c4ed6113ae3f7a?sender=u8b28297dee022d3d33ff1649)

■ Issue 4 -

<https://app.mural.co/t/universityoftoronto3501/m/universityoftoronto3501/1637778327826/18eb112506dd40d32e8815df8fac29943ca5a06f?sender=u8b28297dee022d3d33ff1649>

- “Please note that we have labelled pieces of the webpage that are recommended to include and pieces that are irreplaceable on the sample wireframe on Mural.
When sketching out the solution, do not forget to speak out why you decide to do what you did? Or say out loud why you included what you did using sticky notes”
- Present designs - the groups will then present the solutions they come up with
- Review objectives and expectations

Results from Participatory Design sessions

We performed the PD sessions using the PD protocol from week 6 for the 4 design issues that were found through CI. 5 of these sessions were done individually where there was only one participant working on the website design. One session was carried out in a group, which included 3 users. The design changes for each session is outlined below. These design changes will be used to assess design recommendations and will eventually be reflected in the final proposed usable design of the website.

Individual PD sessions	Relationship with the ICCIT website	Design problems participants worked on
P1	Future ICCIT student	4
P2	Current ICCIT student	3
P3	Future ICCIT student	1,2
P4	Parent of current ICCIT student	1,2,3,4
P5	Current ICCIT student	4
Group PD sessions		
P6-8	Current ICCIT students	1,2

Design findings and design changes²

PD Session with an upcoming ICCIT student, P1

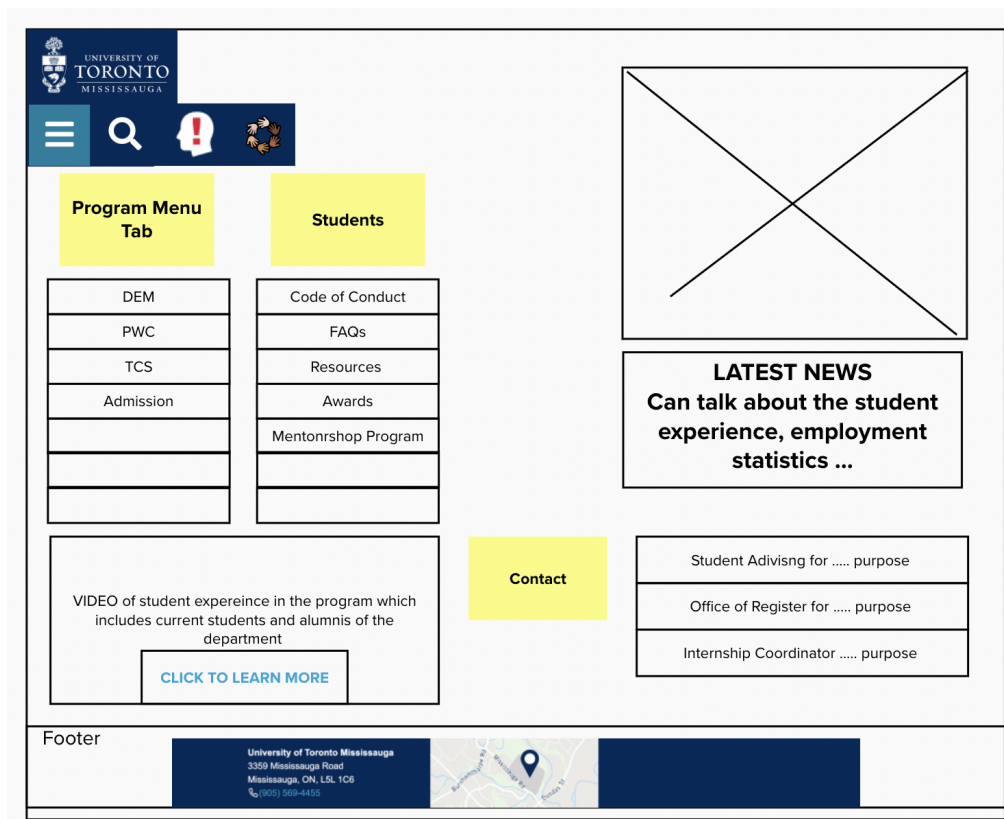


Figure 30: Design changes by P1 for issue 4

Issue 4 design changes:

- The biggest design change brought by the user was how she chose a list-view menu and displayed it on the header of the webpage³. She was inspired by the menu from the current ICCIT webpage and she thought that the program, student and contact were the most important titles to include on the webpage.
- P1 chose to include a list of contacts⁴ as they felt that the information on the website was hard to understand and navigate so having these contacts right on the home page would make it easier for visitors to ask for help.
- P1 liked the banner on the website but said that the banner was too big² and that the information currently displayed was not helpful either. P1 decreased the size of the banner and chose to include topics like student experience and employment statistics to better help visitors understand the benefits of the programs offered by ICCIT.

² Superscript numbers and colors correspond to thematic analysis from figure 41

- Lastly, P1 chose to add a video that showed the student experience¹ of current students and alumni of ICCIT as they personally prefer to watch videos to understand rather than read texts.

PD Session with a current CCIT/PWC student, P2

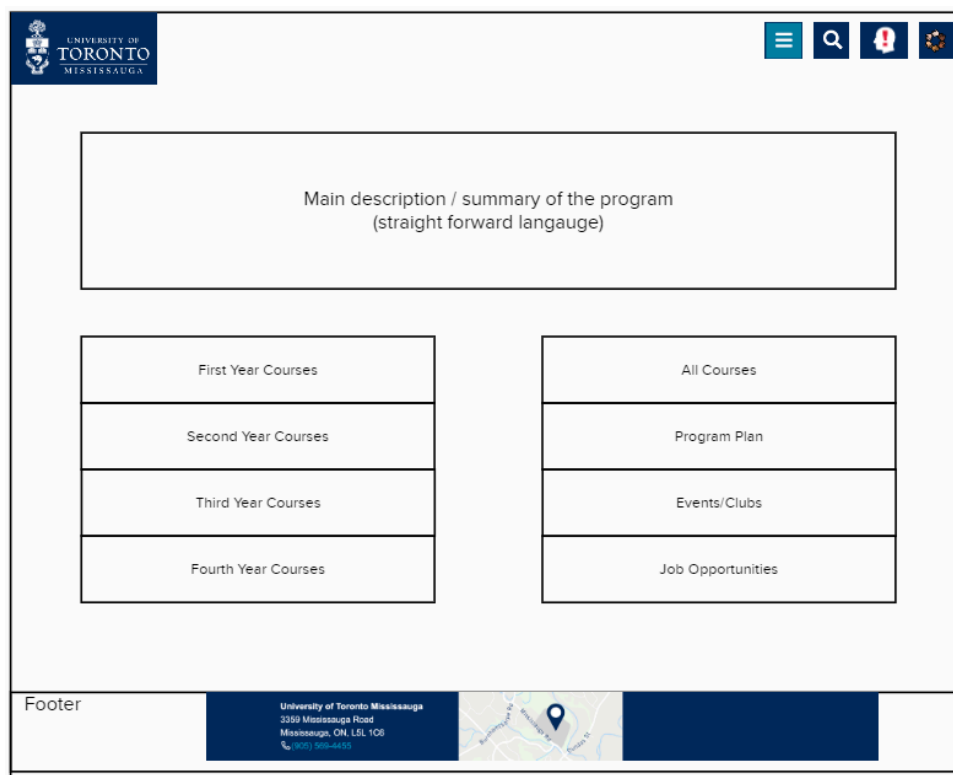


Figure 31: Design changes by P2 for issue 3

Issue 3 design changes:

- Gave more space to the description of the program⁸ (and removed navigation from the side bar⁹)
- Listed the required courses based on year in a table to the left side⁸ (emphasizing that the current organization of courses on the DEM webpage is incorrect, the required courses should be above as they apply to everyone, and the first year minimum grade requirements should be below⁸ as those are specific to a smaller number of users)
- Brought the links that were originally in the navigation to the left⁹, to a main content column towards the right, with important information
- Specifically addressed the importance of having a job opportunities link addressing that students of a certain program should be able to find job opportunities on the program's website⁹

PD Session with a high school student, P3

Issue 1

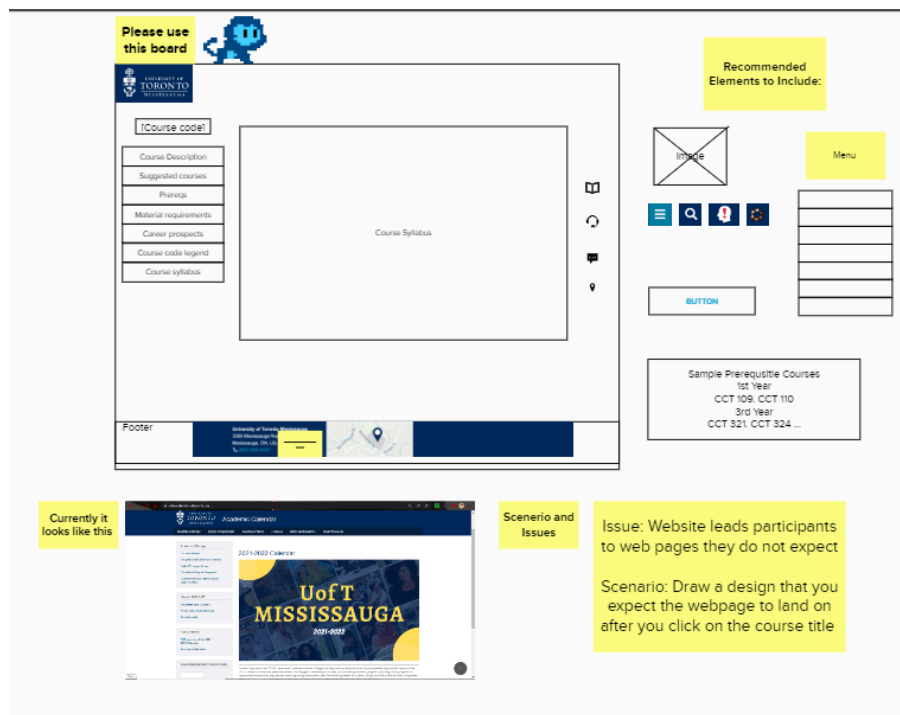


Figure 32: Design changes by P3 for issue 1

- The course code must include:
 - Course description, prereqs, course code legend, chat with registrar¹²
 - Add in career prospects as well¹²
 - Syllabus¹²
 - Requirements for course¹²
- Book icon represents detailed course syllabus¹³
- Instructor and TA information doesn't matter
- Image not necessary will be vague and useless
- Also mentioned to add hyperlink to live chat beside contact information in footer¹³

Issue 2

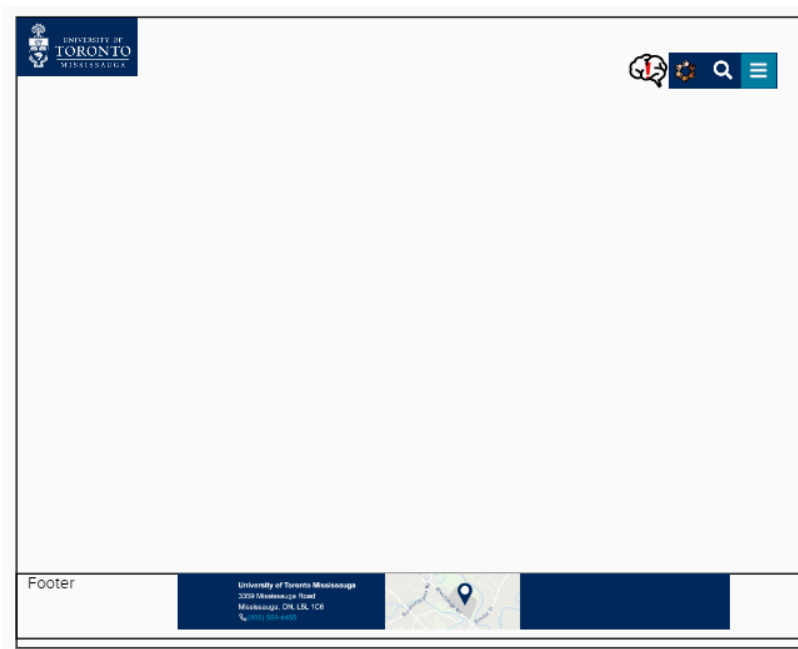


Figure 33: Design changes by P3 for issue 2

- Changed the mental health icon to make helpful resources accessible on the website⁶
- Used a brain with an exclamation mark instead of a head⁶
- Thought this would solve the problem and make it easier to access these resources⁷
- Exchanged this icon's location with "Equity, diversity, and inclusion"⁷

PD Session with a parent of a current ICCIT student, P4

Issue 1

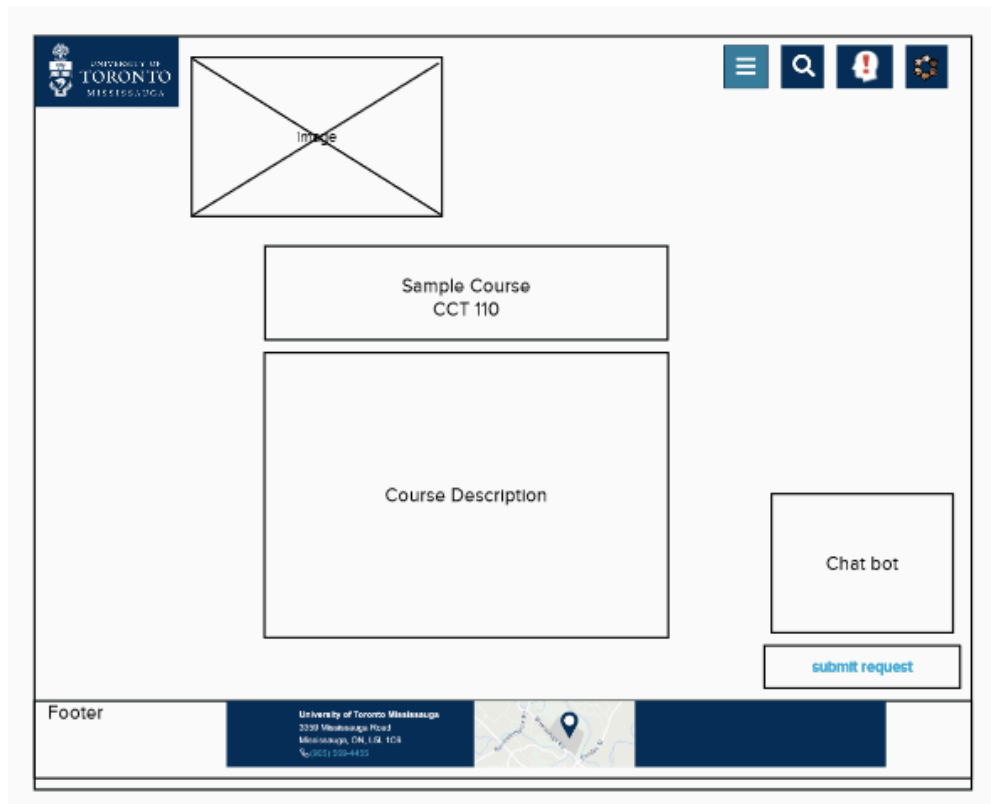


Figure 34: Design changes by P4 for issue 1

Issue 1 design changes:

- Added pic to top left to improve visuals, usually read left to right¹⁰
- Moved basic nav to top right, traditional¹³
- Added chat bot to bottom right to help find what your, very specific¹³
- Added button below chat box to move to next course description within program requirements at current level¹³
- Moved course description to center of screen, should be center focus of page when clicking through¹¹

Issue 2

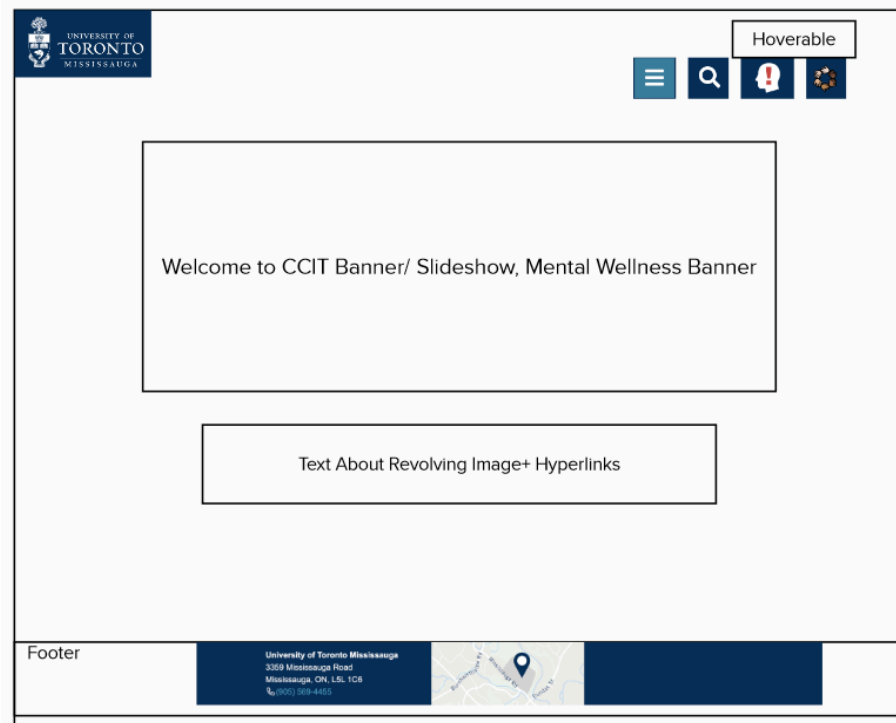


Figure 35: Design changes by P4 for issue 2

User Changes/Notes:

- Nav should be the same as current site, top right
 - Mental health icon should say “Mental Health” when hovered⁷
- Large Sliding Image Banner⁶
 - Welcome to CCIT
 - Have wellness slide
 - Should be clickable⁷
 - Repetition is useful to emphasize⁶
 - Should also be hoverable for accessibility, says “Wellness”⁷
 - Images of physical activity⁶
- Text below talk about whats on current image slide
 - Add hyperlinks⁷
 - People interact better with different mediums (i.e. text, image, icon)
 - Variety of ways to get to wellness page

Issue 3

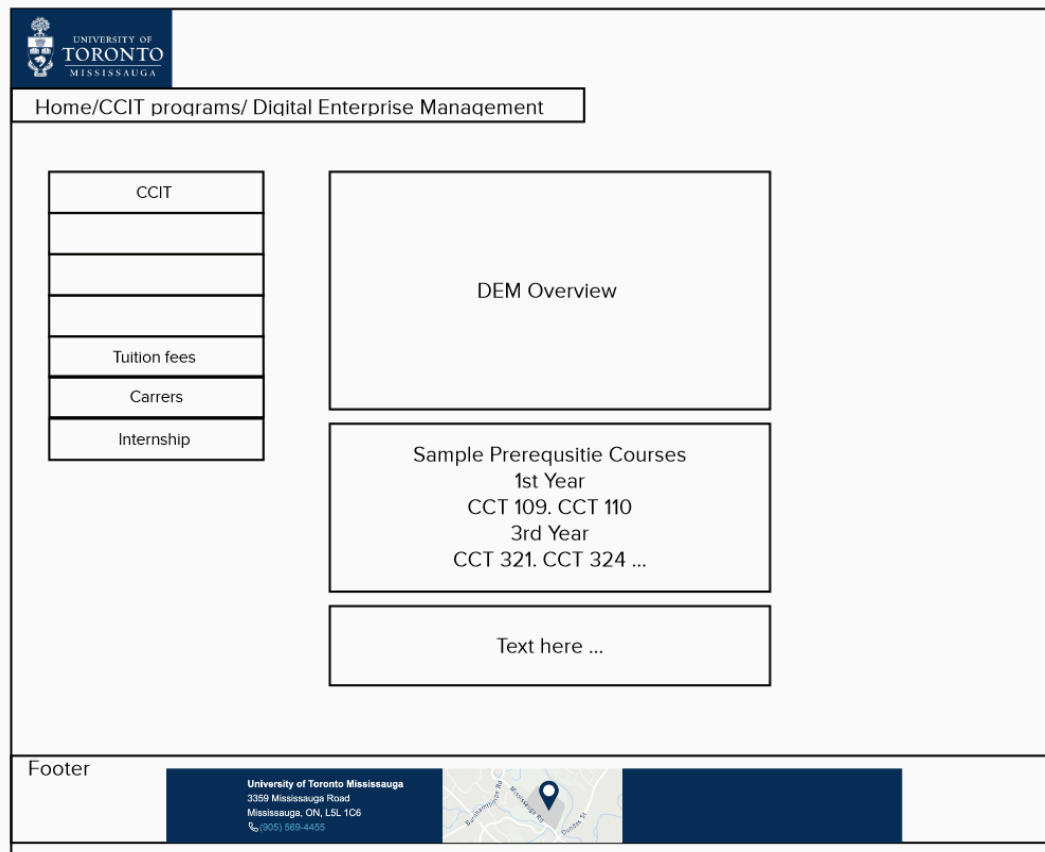


Figure 36: Design changes by P4 for issue 3

User Changes/Designs

- Change “Programs” to “ICCIT Programs” in top nav
- Keep DEM Overview description but reword to be more accessible to different user type, like users from different countries⁹
 - Talk about how it fits within CCIT, relationship to CCIT
 - May cause disconnect otherwise
- Keep Current Side Menu⁹
 - Include Careers, Finance, and Internship Opportunities⁹
 - What do I get out of this degree?
 - What potential work experience can I gain?
- Add Enrollment requirements and Prereqs⁸
 - Courses should be hyperlinks to course description/detail
 - Hover over link should reveal full name⁸
 - Makes more accessible
- Make overall wording more concise⁹
- Expand on meaning on Limited enrollment⁸

Issue 4

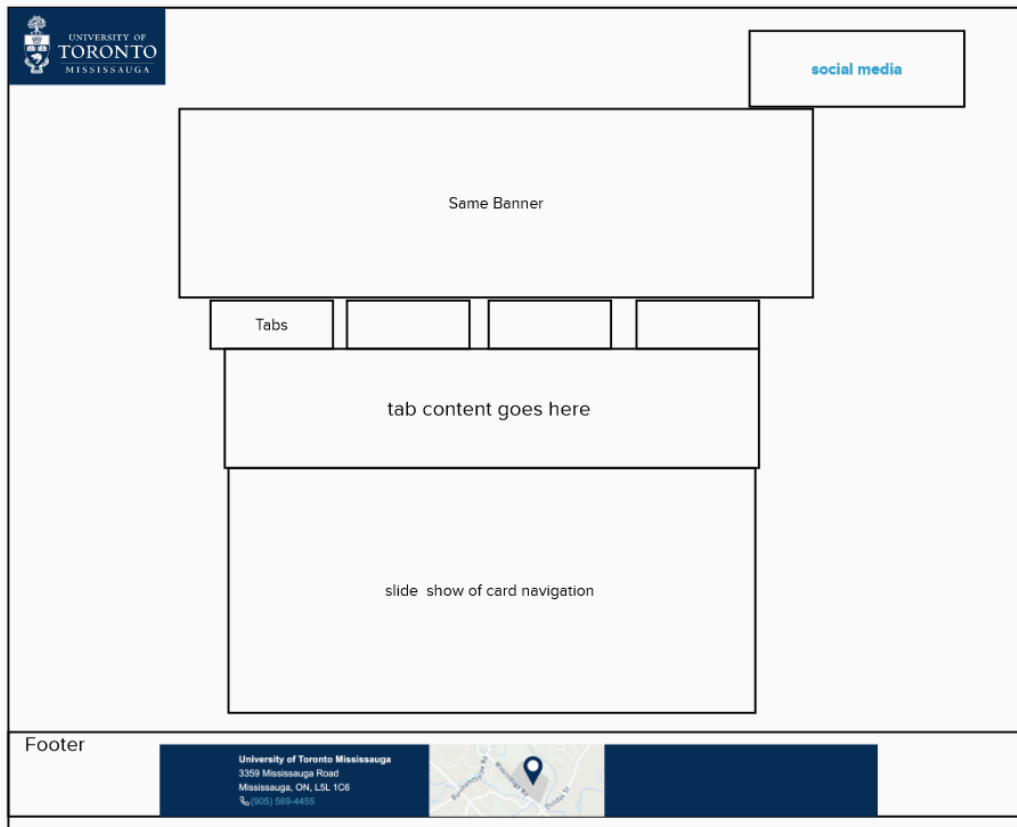


Figure 37: Design changes by P4 for issue 4

User Changes/Design

- Keep Tabs, Keep Banner
- Replace card Layout with slideshow of content displayed in 8 cards³
 - Less busy visually
- Make text description of tabs larger font²
 - More visibility, More Accessible
- Add social media links/buttons top right⁵
 - User believes this is where icons belong
- Image might need to change or made brighter to account for smaller screen sizes, more visually pleasing for smaller screens²

PD Session with a current CCIT student, P5

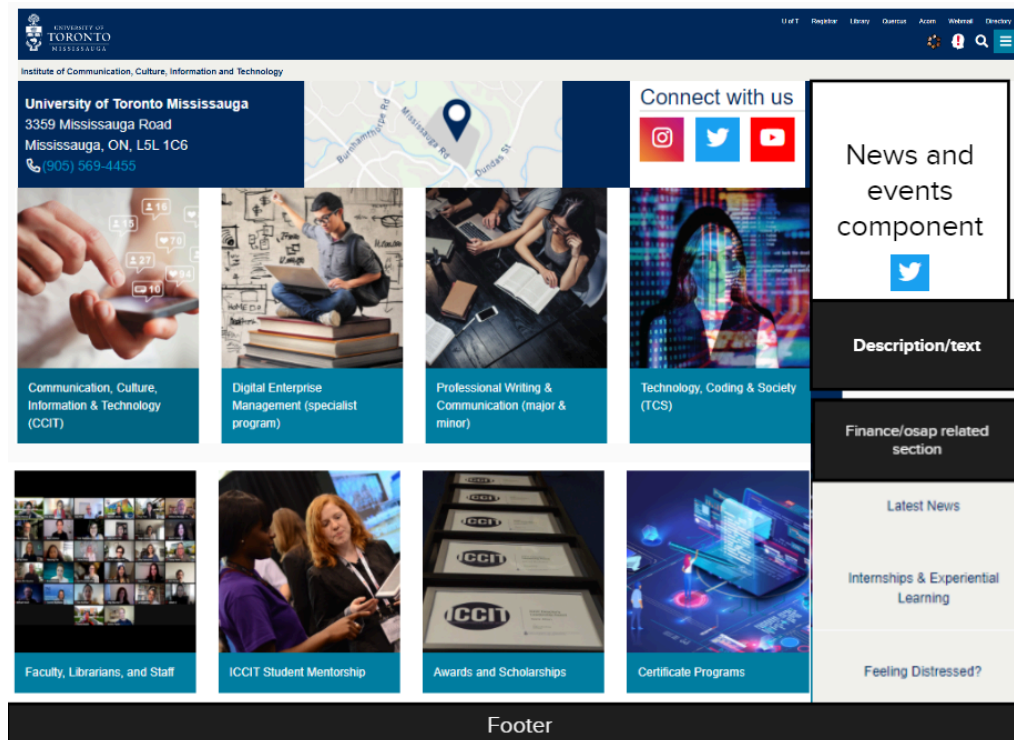


Figure 38: Design changes by P5 for issue 4

Issue 4 design changes:

U5 is a UTM student that has used the CCIT website before, and knows what they want when they get to the page. Their redesign is focused on having all the information front and center, with everything compact and on one page. This is different from the current design where there is a large image banner at the top of the page, forcing users to scroll down to what they want to see. User 5's redesign also changes the contact information from being at the bottom to the top⁵ together with social media links. U5 also suggests having a current, up to date news and events component as well as a finance/OSAP specific section⁴ where students can acquire information.

- Contact information moved from bottom to top⁵
- Social media emphasis⁵
- Removed image banner²
- Removed Welcome message²
- Added finance section⁴
- Added responsive 'News and Events' component⁴
- One pager³

Group PD Session (GPD) with 3 users - current ICCIT students, GPD1

P6 - CCIT major, often use the website

P7 - does not use website much

P8 - CCIT major, have used the website a few times



Figure 39: Design changes by GPD1 for issue 1

Issue 1 design changes:

- Side navigation bar present¹³
 - Different programs, general navigation, pop-up menus
- Created title + course description (1-2 sentences)
 - Enlarged title¹¹
 - Added professor name beside course and ta names¹²
 - Students want to know who is teaching a course
 - Potentially added syllabus¹²
 - Added program prerequisite courses after description, to link to related courses in program¹¹
 - NO IMAGES – not necessary, hard to find relevant images to specific courses¹¹

Issue 2

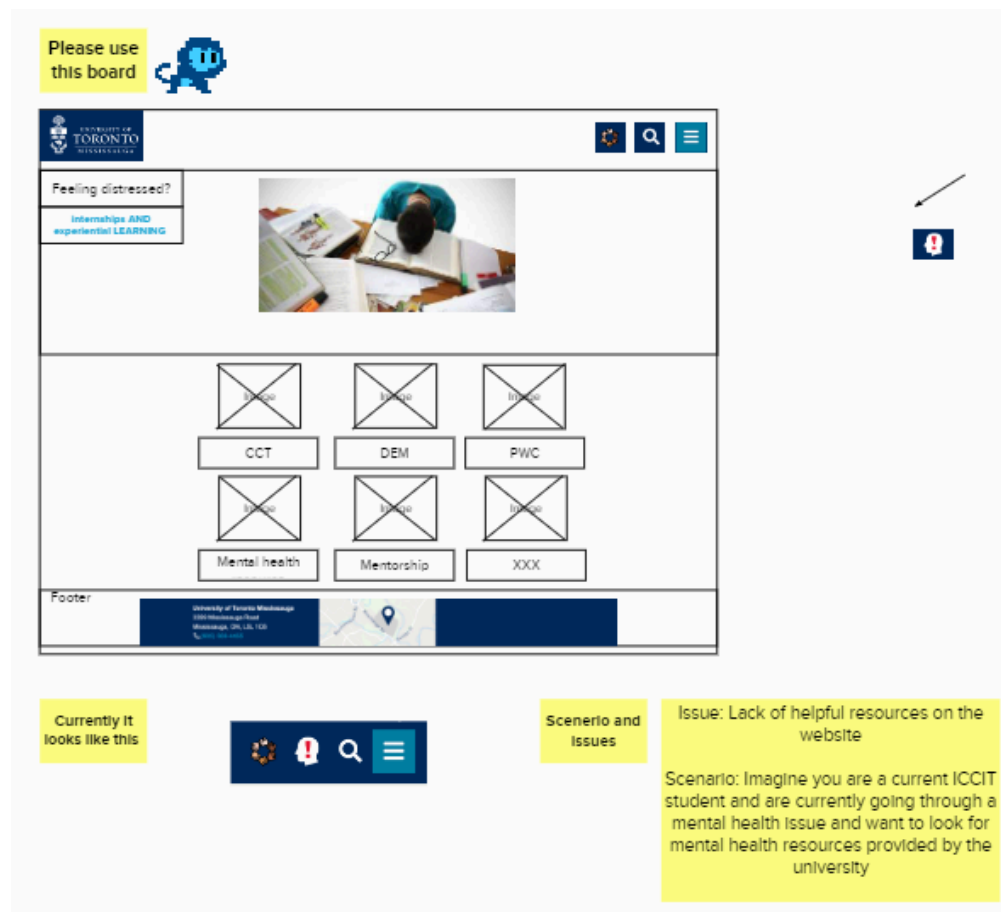


Figure 40: Design changes by GPD1 for issue 2

Issue 2 design changes:

- Added New icon for Mental Health⁶
 - Exclamation mark is like what would it stand for in one's head, a heart would be more appropriate⁶
 - Heart = health⁶
 - Decided to omit icon later in session as a single image/icon fails to encapsulate mental health resources⁶
- Included link to mental health in two places⁷
 - Combined with other main page navigation in card layout
 - Makes sense to have with all important information together
 - Mental health is very important so it should be very visible and obvious and accessible
- Put the mental health thing on the banner on front page or make it obvious instead of having an icon instead of the welcome message⁶
 - Banner is the first thing users see, allows for users to access right away

- Potential image⁶ - current image works, student feeling stressed out surrounded by homework (more relatable, conveys message better)
- Whole banner and image should be clickable⁷
- Feeling distressed is more appropriate wording than saying mental health and will be more relatable to students⁷
- Large banner size to emphasize the importance and visibility⁶

Findings from Participatory Design

We performed thematic analysis and generated additional design requirements after performing the PD sessions. The thematic analysis and design requirements will be used to create wireframes for the focus group.

Thematic analysis

Home Page				Mental Health		
1) Not Enough Student Experience Content	2) Banner Distracts from Important Content and Navigation	3) Front Page Navigation is Inefficient	4) Front Page Lacks Important Content	5) Social Media and Contact Info Should be More Visible	6) Mental Health Should Capture More Attention	7) Mental Health Needs to be More Accessible
Video showing student experience of current students and alumni on front page	Image banner and welcome message should be removed from front page	Front page has 3 list view menus: contact, program, students	Finance and OSAP related section must be on the left side of the front page	For the front page, contact information should be on the top of the page along with social media links	Mental health banner size must be big to emphasize importance and visibility	The whole mental health banner must be clickable
Banner will have topics like student experience and employment statistics	Decreased the size of the banner	Front page should be condensed to one page - no scrolling required	Contact list view menu will have information for registrar, internship coordinator, student advising	Social media links should be emphasized	Replaced banner on front page with mental health resource banner	The wording on the banner must say "feeling distressed"
	Description of home banner tabs should be larger	Hamburger menu moved to the left of the page	On front page have up-to date news and events component on the left side of the page - should be small	Social Media links should be top-right	The mental health banner can have similar image as the one on website	A single image/icon fails to encapsulate mental health resources
	Images are not suitable for smaller screens (brighter images)	Replace card layout with image slideshow			Change mental health icon to a brain and an I	Mental health resources must be accessible
					Mental health resources should also be included within card layout	Mental health icon's position should be changed with equity and inclusion icon
					Include large sliding banner with wellness included	Icons should have Hoverable Title
					Repetition is useful when emphasizing importance	Text should describe images with hyperlinks

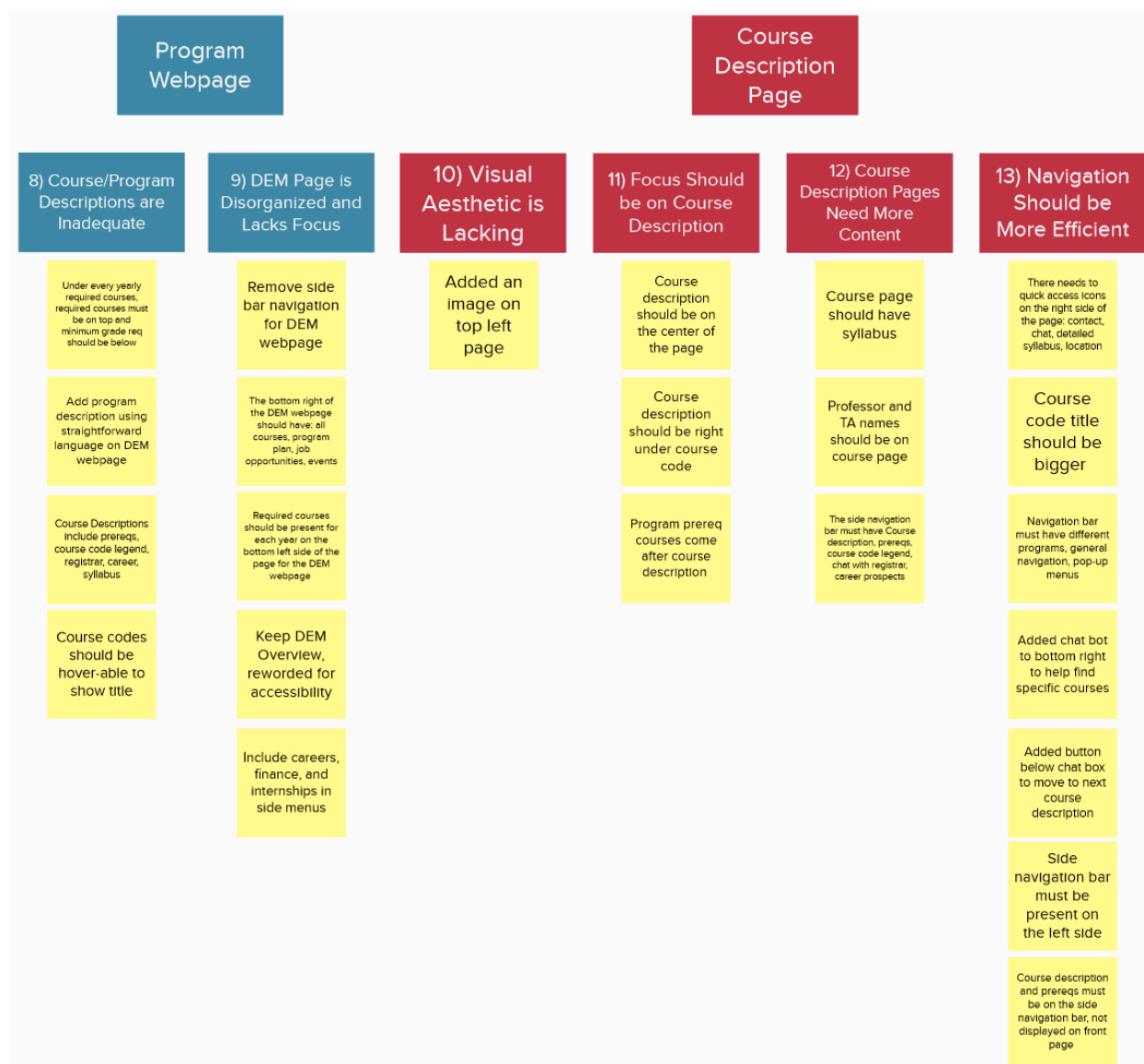


Figure 41: Thematic analysis from the PD sessions

PD design requirements

Design Requirements	Themes ³
<i>Home Page</i>	
Ensure font and writing is tailored to all user types/ is accessible	(8) Course/Program descriptions are inadequate (7) Mental Health needs to be more accessible

³ Numbers indicate related themes from thematic diagram

Navigation and navigation bar needs to be simplified and streamlined towards user	(3) Front Page Navigation is Inefficient
Student experience content should appear either as a video or in the banner	(1) Not enough student experience content
Banner should be removed or greatly reduced in size	(2) Banner distracts from important content and navigation (4) Front page lacks important content
Hamburger menu moved to top right	(3) Front Page Navigation is Inefficient
Social Media links should be moved top right with contact info	(5) Social media and contact info should be more visible
Add News and events component on front page	(4) Front page lacks important content
Card layout should be replaced with tabs and dropdowns to be made more efficient to navigate	(3) Front Page Navigation is Inefficient
<i>Mental Health</i>	
Mental health banner on front page should be one of the main visual focuses	(6) Mental health should capture more attention (7) Mental health needs to be more accessible (4) Front page lacks important content
More consideration should be given to chosen mental health image in banner	(6) Mental health should capture more attention
Have multiple avenues for interacting with mental health resources	(3) Front Page Navigation is Inefficient (6) Mental health should capture more attention (7) Mental health needs to be more accessible
Change mental health icon to a brain and exclamation mark with hoverable title	(6) Mental health should capture more attention (7) Mental health needs to be more accessible
Wording on mental health banner should be “feeling	(7) Mental health needs to be more

distressed”, more relatable	accessible
<i>Program Page</i>	
After each required course follow with minimum grade requirement	(8) Course/program descriptions are inadequate
Language should be more accessible for all user types	(8) Course/program descriptions are inadequate (9) DEM page is Disorganized and lacks focus
Include careers, finance, and internships on side menu, with pages within ICCIT website	(9) DEM page is Disorganized and lacks focus
Add hoverable course title to course code hyperlinks	(8) Course/program descriptions are inadequate
Bottom of page should include information such as required courses, program plan, program events	(9) DEM page is Disorganized and lacks focus
<i>Course Description Page</i>	
Add images to course description page	(10) Visual aesthetic is lacking
Course Descriptions should be placed in the center of the page	(11) Focus should be on course description
Syllabus, professors, and TAs, should be included for courses	(12) Course description pages need more content
Button included to move to next course description	(13) Navigation should be more efficient
Added support/chat bot and contact icons on right of page	(13) Navigation should be more efficient

3. Focus Group

We created the wireframes for the focus group using the PD [thematic analysis](#) and [design requirements](#). We merged the different designs from the PD sessions to create the wireframes. The reasoning behind why each design was chosen are outlined below. We will use these wireframes for the focus group sessions. Once we note down the results, we will use these results to create a thematic analysis and summarize the design requirements.

Focus Group protocol

Introduction

We will run the focus group as a way for users to express their opinions on topics regarding the design of the ICCIT website with intentions to evaluate our design requirements made from participatory design and contextual inquiry. Similar to the participatory design and contextual inquiry, the focus group will also take place virtually on Zoom due to the pandemic. We seek to receive even more broader feedback on our design, taking advantage of the users being able to discuss or walk through the design together with users.

Agenda:

- Participants
 - 4-6 current or upcoming ICCIT students
 - 1 facilitator
 - 2 individual to write down important details of the discussion (to ensure all opinions have been captured)
- Introduction
 - “Hello everyone! Welcome to our focus group session! We are 4th year UTM students hoping to redesign the ICCIT website for our final project. While we're here, we will be discussing which of the design requirements we will be including for the new ICCIT webpage.”
 - “We assure you that the discussion today will be confidential and that all the notes taken by us will be anonymous. Firstly, please tell us your name and how you're involved with the ICCIT website.”
- Prototype

- “This is the prototype we have created based on the rounds of research we have conducted. Please walk through the prototype based on a scenario and issues we will give you.”
- Link to prototype:
- <https://app.mural.co/t/cct485workmodels1534/m/cct485workmodels1534/1638364448675/a746774bddacd61c3ba8c0a3ce728893eedb0d16?sender=ud8a00d7592196df32cc75676>
- Identified Issues
 - “The current ICCIT website is found to have the following problem:
 - Website leads participants to web pages they do not expect (see figure 28)
 - Scenario 1: Imagine you are a CCIT student and are looking for the course descriptions for the courses you need to take for your program. Draw a design that you expect the webpage to land on after you click on the course title
 - Front page of the website is visually unpleasing and unorganized and lacks easy access to resources
 - Scenario 2: Imagine you are a current ICCIT student and are currently going through a mental health issue and want to look for mental health resources provided by the university. How would you redesign the homepage so that it is organized, visually pleasing, and the mental health resource is easily accessible?
 - Poor wording (i.e. use of jargon) and poor information structuring such as the banner (see figure 29)
 - Scenario 3: Imagine you are a potential DEM student who wants to know more about the ICCIT department. What topics would you include on the DEM webpage that will help you with this task?
- Discussion Questions
 - Scenario 1 - Course description page
 - What page do you expect to land on after you clicked on the course title?
 - What kind of content or topics would you expect to see on this page? Why?
 - Based on the prototype we have created, what would you change?

- What do you think the icons on the right do? What purpose does it serve?
- Do you think including “Similar Courses” is a good section to include?
- Scenario 2 - Main page
 - What icon and image would be a good representation of mental health wellness, and why?
 - How important do you think mental health resources are for university students?
 - As a university student, where do you expect to see or access mental health resources? For example, on a main page of a university website or exclusive to program webpages?
 - What kind of content or topics would you expect to see on this page? Why?
 - Based on the prototype we have created, what would you change?
 - Under what circumstance would you view a university department page?
 - What kind of content or topics would you expect to see on the department webpage? Why?
 - What do you think about the organization of the prototype? What would you change? Why?
 - Wouldn't having mental health resources in three different places give a bad image for the program or school? Wouldn't this cause students to go away from the page?
- Scenario 3 - Program description page
 - Under what circumstance would you view a university program page?
 - What kind of content or topics would you expect to see on a program webpage? Why?
 - Would you prefer if the course overview told you information such as skills you will learn? And how is it related to the program? Why?
 - Based on the prototype we have created, what would you change?

Merging designs from PD for Focus Group

How were the designs merged from the PD sessions?

Course description page from issue 1:

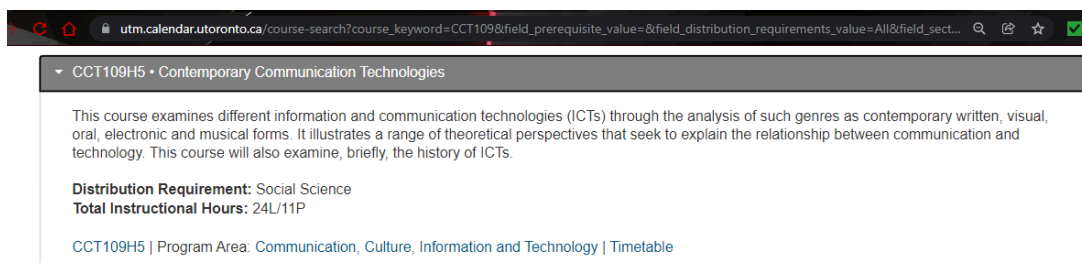


Figure 42-1: Before PD sessions - Issue 1 design

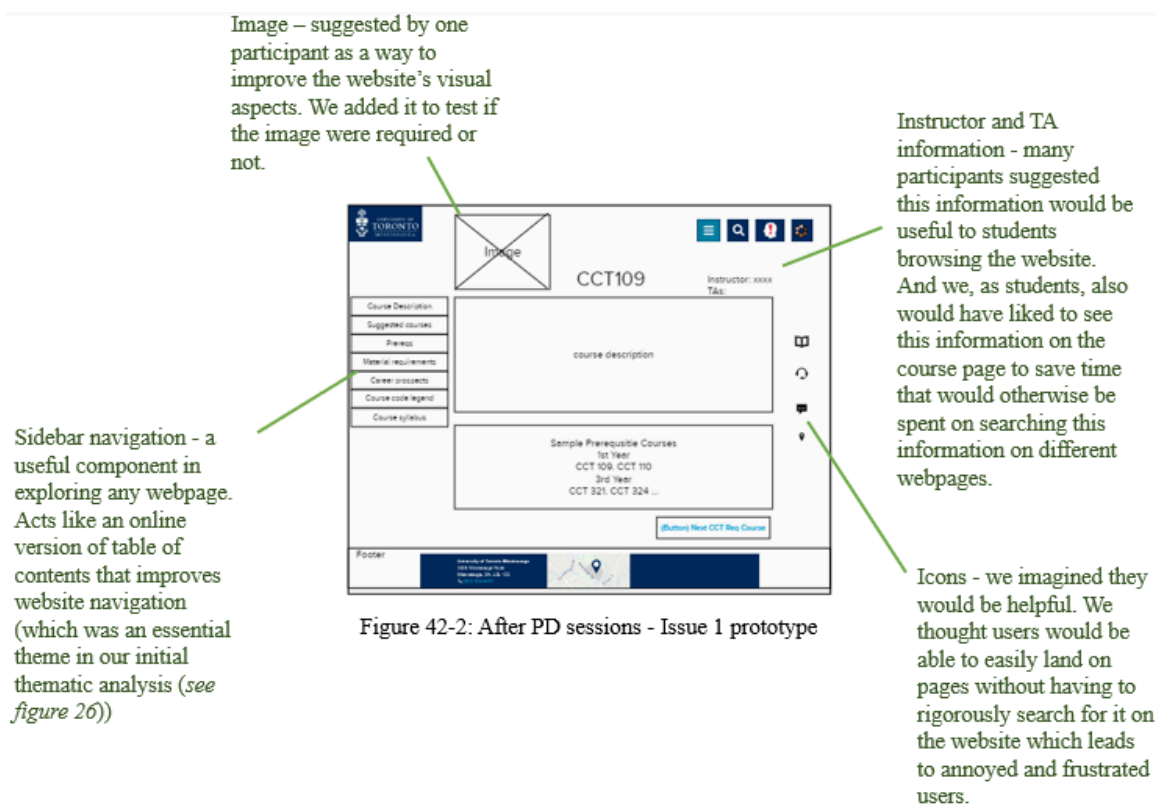


Figure 42-2: After PD sessions - Issue 1 prototype

Home page from issue 2:

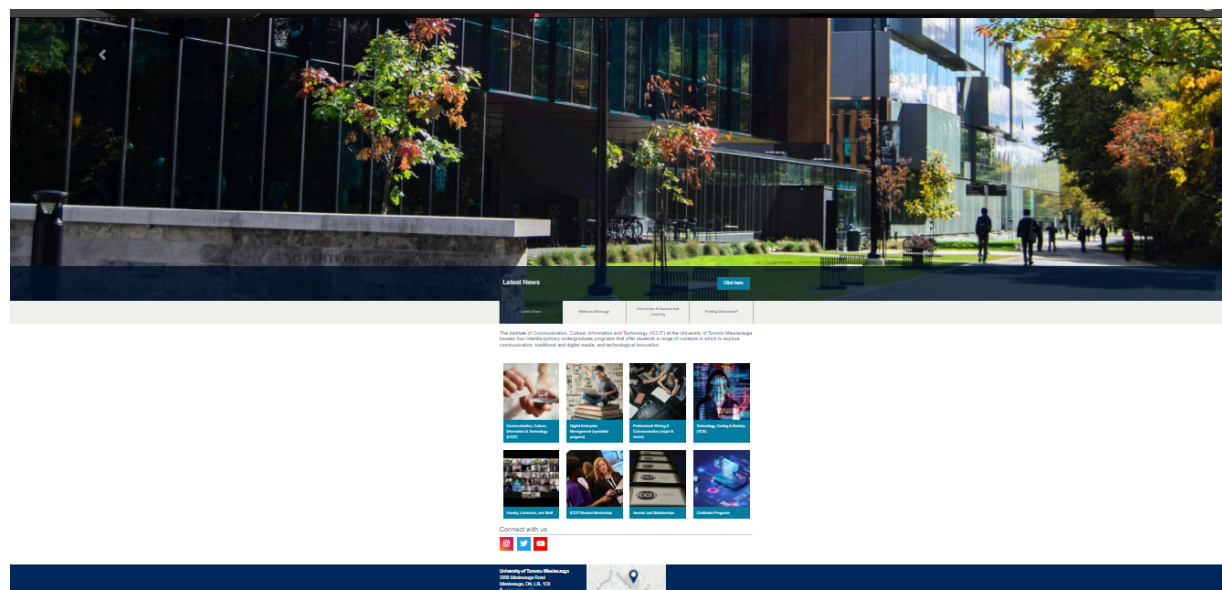


Figure 43-1: Before PD sessions - Issue 2 design

Feeling distressed label and banner image - important suggestion as it connects more to students than plainly saying mental health resources.

Internships and experiential learning tab - recommended in the group PD session. We considered this as an important change and addition to the current design.

Banner changed to a mental health banner - we considered this to be an important change as mental health seems to be an important part of the website. In the CI interviews sessions, it was often repeated that the banner was not important and showed information that was not of use which was part of a major theme in the thematic analysis from figure 26. We had decided to change the banner and the mental health suggestion seemed worthy to keep.

Mental health icon - considered the icon as an easy access to mental health resources. And many users recommended us to keep the mental health icon as it was more appropriate.

News and events - recommended to keep by participants so we decided to move it to the right side of the page. It is considered important but not too important to be placed on top of the page.

“Advising for ... purpose” - placed as a response to participants' concerns about the missing or limited advising or contact registrar feature on the website (as discussed in the thematic analysis from figure 41).

Figure 43-2: After PD sessions - Issue 2 prototype

“Programs”, “resources”, and “FAQ” breakdown - recommended by different users. We changed the format slightly to what was recommended in the PD sessions as there were different suggestions for the main page layout. We decided to merge the different suggestions to create this design. This clearly highlights what the website contains and where to find the information they require. The three labels we chose are open-ended which were done so consciously. Often users go to websites and have a hard time decoding or understanding the breakdown of labels, so open ended labels help overcome this issue.

Program description page from issue 3:

/ Programs / Communication, Culture, Information & Technology (CCIT)									
Communication, Culture, Information & Technology (CCIT) - ICIT Sheridan Joint Program Migration FAQ - CCIT Courses - CCIT Program Plan - Digital Enterprise Management (DEM) - Professional Writing and Communication (PWC) - Technology, Coding & Society (TCS) - Admissions - Certificate Programs	Communication, Culture, Information & Technology (CCIT) Develop an in-depth understanding of media and digital technologies and their social implications from cross-disciplinary perspectives. Through research-based and hands-on courses, students critically assess the possibilities and consequences of media and technologies and apply their digital skills across multiple platforms. Major Program ERMAJ1034 8.0 credits are required, including at least 4.0 at the 300/400 level. Program must be taken in combination with another major or two minors. Limited Enrollment – Admission is based on academic performance (CGPA) in a minimum of 4.0 credits that must include a minimum grade of B+ per cent in each of CC1109HS and CC1110HS. Each year, the ICIT program will have a minimum required CGPA. This will vary from year to year and is based, in part, on supply and demand. All students (including transfer students) must complete 4.0 U of 1 credits before requesting the program. Courses with a grade of CH/NCH will not count as part of the 4.0 credits required for program entry. Tuition fees for students enrolling in the CCIT Major program will be higher than for other Arts and Science programs. <table border="1"> <thead> <tr> <th>Year</th> <th>Requirements</th> </tr> </thead> <tbody> <tr> <td>First Year</td> <td>(1.0 credit required) - CC1109HS, CC1110HS </td> </tr> <tr> <td>Second Year</td> <td>(3.0 credits required) - CC1204HS and CC1208HS and CC1218HS 0.5 credit from CC1209HS or CC1208HS or CC1210HS or CC1222HS 0.5 credit from CC1205HS or CC1207HS or CC1212HS or CC1250HS (Students who do not choose CC1250HS will need to take an additional 0.5 credits to complete the Sheridan Certificate in Digital Communication requirements) 0.5 credit from any 200-level CCT course </td> </tr> <tr> <td>Third and Higher Years</td> <td>(4.0 credits required) Minimum of four half-credit courses taught at UTM from any 300/400 level CC1/YCC course. One of these half credits must be at the 400 level. Minimum of four half-credit courses taught at Sheridan from any 300/400 level CCT course. One of these half credits must be at the 400 level.</td> </tr> </tbody> </table> NOTES: 300/400-level CCT courses are restricted to students in CCIT programs only. - It is your responsibility to ensure that the prerequisites for courses listed in the calendar have been met. Students without the prerequisite can be removed at any time. No waivers will be granted.	Year	Requirements	First Year	(1.0 credit required) CC1109HS, CC1110HS	Second Year	(3.0 credits required) - CC1204HS and CC1208HS and CC1218HS 0.5 credit from CC1209HS or CC1208HS or CC1210HS or CC1222HS 0.5 credit from CC1205HS or CC1207HS or CC1212HS or CC1250HS (Students who do not choose CC1250HS will need to take an additional 0.5 credits to complete the Sheridan Certificate in Digital Communication requirements) 0.5 credit from any 200-level CCT course	Third and Higher Years	(4.0 credits required) Minimum of four half-credit courses taught at UTM from any 300/400 level CC1/YCC course. One of these half credits must be at the 400 level. Minimum of four half-credit courses taught at Sheridan from any 300/400 level CCT course. One of these half credits must be at the 400 level.
Year	Requirements								
First Year	(1.0 credit required) CC1109HS, CC1110HS								
Second Year	(3.0 credits required) - CC1204HS and CC1208HS and CC1218HS 0.5 credit from CC1209HS or CC1208HS or CC1210HS or CC1222HS 0.5 credit from CC1205HS or CC1207HS or CC1212HS or CC1250HS (Students who do not choose CC1250HS will need to take an additional 0.5 credits to complete the Sheridan Certificate in Digital Communication requirements) 0.5 credit from any 200-level CCT course								
Third and Higher Years	(4.0 credits required) Minimum of four half-credit courses taught at UTM from any 300/400 level CC1/YCC course. One of these half credits must be at the 400 level. Minimum of four half-credit courses taught at Sheridan from any 300/400 level CCT course. One of these half credits must be at the 400 level.								

Figure 44-1: Before PD sessions - Issue 3 design

Navigation bar - changed the menu items to match what the users and participants preferred to have on the navigation menu. We added some of the menu options to ask participants in the focus group if the menu options looked similar to what they would like to see on the program page.



Figure 44-2: After PD sessions - Issue 3 prototype

Program overview - placed it on the top so it is the first thing users see when they open the website. We decided to also include skills learnt in the overview description so students have a clear idea about what the program is and how it will help future students. All the participants from the PD sessions suggested to have the overview on the top of the page.

Table layout for prereq courses - recommended by P2 as they believed table navigation was more usable and clear to understand. Users would be able to easily click on each tab and see the courses listed for each year.

Results from Focus Group

We performed one focus group with ICCIT students. We could only perform one due to time limitations and also because we believed we had reached saturation. However, if time allowed we would like to perform one other focus group to further improve the design for the main page of the website.

We took the results from the focus group and updated the thematic analysis to further narrow down the themes that need work to improve the website.

Participants: Students from ICCIT

U1 - majors CCIT

U2 - majors CCIT

U3 - majors CCIT

Issue 1 - Course description page

What page do you expect to land on?

- Want to see course description immediately and prereqs
- Include Instructor and TA info
- Easy access to other courses
 - Be able to access 110 from 109 description page easily without navigating away
 - Hyperlink could work

What do the icons on the right do?

- Book is probably course description
- Headphones - contact with faculty or support
- Text message icon - similar to headphones maybe?
- Pin - location identifier of utm, lecture hall?

What would you change about the prototype?

- Image can be removed or moved - not sure what image would represent a course, odd position
- Not sure what icons do on right - can be removed or more info needed of what they do

Issue 2 - Main Page

What icon and image could be used to represent mental wellness? Why?

- Icon right is much better than current one
- Hoverable text is a good feature and is very helpful

How important do you think mental health resources are?

- Should be accessible from anywhere, very visible, very important

Where do you expect to see or be able to access mental health resources?

- Main page, and inner pages (program req page)

What would you change about the prototype?

- Not sure what to change immediately
- Mental health should be first image on banner
- Make icon a bit bigger for mental health

Wouldn't having mental health resources in three different places give a bad image for the program or school? Wouldn't this cause students to go away from the page?

- Shows university cares for students
- Does not decrease reputation of university
- Useful for more navigation options and access to mental health

Issue 3 - Program description page

Under what circumstance would you view a university program page?

- After summer, during enrollment period, double checking reqs for upper year

What kind of content/topics do you expect?

- Course req., should be as a table, splitting columns by year, easy to interpret
- Program description would be better too on the options on the left.
- Does this work for all user types?
 - Yes this should work for all user types
 - Description is most important, student experience can be valuable also
 - Potential jobs/careers
 - In the "DEM overview", skills should be included

What would you change?

- Admission tab is missing on the side menu - admission info for future students, and first year students
- Everything else is covered well in terms of content and design

Findings from Focus Group

We performed thematic analysis and generated additional design requirements after performing the Focus Group sessions. This allowed us to make some final observations and get user feedback on our initial prototype ideas that were based on our analysis of our PD sessions.

Thematic analysis

Main Home Page				Program Webpage		
1) Change Mental Health Icon to New design	2) Bring More Attention to Mental Health	3) Mental Health Should Have Multiple Access Points	4) Accessibility Options on Text is Important	5) Current Design Almost All Desired Features	6) Valuable Content is Missing	7) Navigation Requires Efficiency Improvements
New mental health icon is much better than current one	Does not decrease reputation of university	Mental health resources should be on main page and inner pages (program req page)	Hoverable text is a good feature and is very helpful	Everything else is covered well in terms of content and design	Admission tab is missing on the side menu - admission info for future students, and first year students	Course req., should be as a table, splitting columns by year, easy to interpret
Make icon a bit bigger for mental health	Having multiple accessing points for mental health resources shows university cares for students	Mental health resources should be accessible from anywhere, very visible, very important			Potential jobs/ careers is important	Program description would be better too on the options on the left
	Mental health should be first image on banner	Useful for more navigation options and access to mental health			In the "DEM overview", skills should be included	
					Description is most important, student experience can be valuable also	

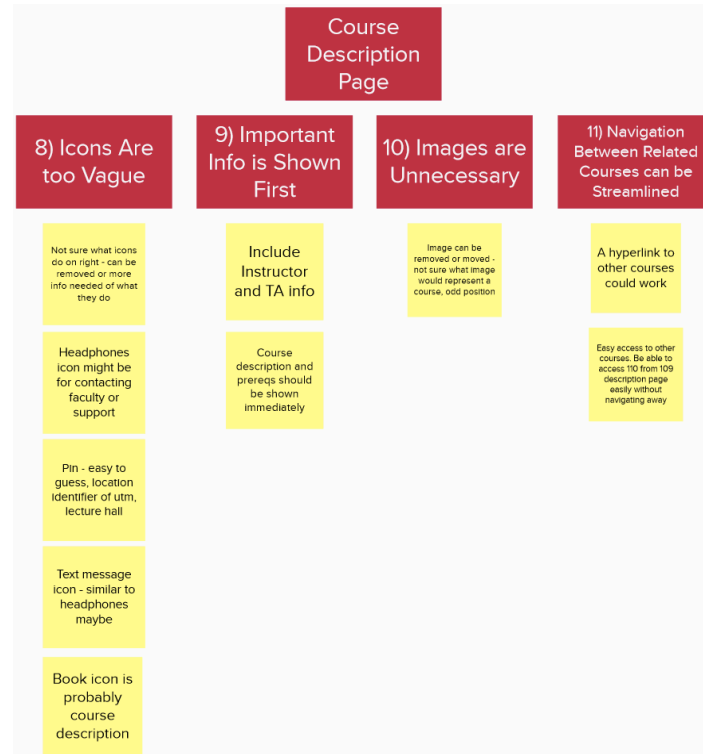


Figure 45: Thematic analysis from the Focus Group sessions

Focus Group design requirements

Design Requirements	Themes ⁴
<i>Home Page/Mental Health</i>	
Change and enlarge the mental health icon to the one displayed on the prototype	1) Change Mental Health Icon to New design 2) Bring More Attention to Mental Health
Include multiple access points to mental health resources (ideally 3)	2) Bring More Attention to Mental Health 3) Mental Health Should Have Multiple Access Points
Mental Health should be first image on banner	2) Bring More Attention to Mental Health
Hoverable text with alt text and titles is very important for links and titles of courses	4) Accessibility Options on Text is Important

⁴ Numbers indicate related themes from thematic diagram

<i>Program Page</i>	
Include mental health access points	6) Valuable Content is Missing 3) Mental Health Should Have Multiple Access Points 2) Bring More Attention to Mental Health
Include admission tab on side menu - directs to admissions info	6) Valuable Content is Missing 7) Navigation Requires Efficiency Improvements
Showcase information about potential jobs and careers	6) Valuable Content is Missing
Skills and student experience is important to include in the DEM overview/description	6) Valuable Content is Missing
Course requirements should be presented as a table, columns being years	7) Navigation Requires Efficiency Improvements
<i>Course Description Page</i>	
Change icons or make them more easily readable so that users better understand their purpose	8) Icons Are too Vague
Include instructor and TA info along with course descriptions and prereqs	9) Important Info is Shown First
Do not include images	10) Images are Unnecessary 9) Important Info is Shown First
Include mental health access points	3) Mental Health Should Have Multiple Access Points 2) Bring More Attention to Mental Health
Add hyperlinks to next and previous courses based on: requirements, years, etc.	11) Navigation Between Related Courses can be Streamlined

Insights & Final Design Recommendations

Having completed the three user research methods, we were able to put together a condensed list of the insights and final design recommendations we had. These insights and design recommendations stem from 3 months of closely observing users using the ICCIT website and its various web pages with the help of different research tools. We recommend the ICCIT department to implement these valuable changes as it would definitely help improve their website and better the user experience.

Valuable Insights

The three user research methods that were chosen were quite helpful in identifying the issues with the ICCIT website. Below, we have summarized the flaws we learnt throughout these research methods and the valuable insights we gained.

The Contextual Inquiry

The contextual inquiry sheds light on some very important flaws with the current ICCIT website. Through coding the transcripts, making diagrams, and running a thematic analysis, we were able to get valuable insight:

1. The homepage was not directly related to the content the users were looking for, and therefore needed to be redesigned for better first impressions
2. There was a lack of consistency in the information on the website which needed to be addressed
3. Complex terminology only used by UTM students and faculty is used on the website which needs to be corrected to be understandable by all users of the website
4. The navigation is overwhelmingly complex and needs to be simplified
5. There is a lack of consistency in font styles, font sizes, and images
6. Not all images on the website are high quality, and some images also do not align with the headers that accompany them
7. Navigations are not properly supported on mobile devices
8. The hamburger icon for compressed navigation is not as prominent as it should be

The Participatory Design

The participatory design was very valuable in understanding how users of the ICCIT website wanted the website to look like. Our team gained valuable perceptions through these sessions:

1. The course and program descriptions currently found on the ICCIT website are inadequate
2. The mental health section of the website is not obvious and needs to be more accessible
3. The navigation on the front page is inefficient
4. There is a lack of information regarding the student experience at ICCIT
5. The banner does not hold valuable information and can be replaced with more valuable information
6. The social media and contact information is not easy to locate on the website
7. There is a lack of valuable content in general on the front page

Focus Group

The focus groups led to some interesting discussions among participants which allowed the team to see many of the issues addressed and shed some light on flaws related to the redesigned website:

1. The expectation of being able to see course description and other courses immediately after clicking a course was met
2. The icons placed to the right of the course description page were unclear and unnecessary
3. The image on the redesigned course page is unnecessary
4. The mental health icon was not large enough and needed to be increased in size and placed at the start of the banner
5. The increased mention of mental health icons did not damage the reputation of the university, and instead improved it
6. The admission requirements are not listed on the program page
7. The banner on the front page must be redesigned to show mental health resources and must be renamed to “feeling distressed”
8. Website navigation for program and course description pages must be streamlined
9. Learnt skills and student experience is important information that should be highlighted in the program pages

10. Multiple points of access for mental health resources is highly desired

Final Design Recommendations

Over the course of the contextual inquiry, participatory design, and focus group sessions, our team got valuable insights on the current website, and has created a list of design recommendations for the final redesign based on those insights.

Please note, the following list describes our general recommendations based on the insights we have gained. More detailed information on each of these points can be found within the observations and thematic analyses we have provided throughout this document:

1. The homepage needs to have a greater focus on programs and mental health resources.
The majority of information on the carousel was considered unnecessary. The news and events section can be moved on the side panel and under the banner.
2. The current banner/carousel needs to be replaced with more important information, that is, mental health resources and program information.
3. There needs to be consistency across pages - hyperlinks need to lead to the expected pages. (E.g. The links to courses in program descriptions should not lead to the course calendar)
4. The language needs to be simpler and more accessible across the website - any user should be able to understand what is being said even if their first language isn't English
5. The navigation is currently complicated and needs to be more straightforward, streamlined, and a single navigation is ideal
6. Icons should better represent the pages/resources they describe and should have hoverable alt text and titles
7. Font styles, sizes, and images need to be more consistent across pages
8. Higher quality images are needed - better shot photographs or vector graphics that will have better visibility on mobile devices
9. The hamburger icon needs to be more prominent
10. The course descriptions and program descriptions need to be more detailed and highlighted with info more inline with user needs
11. The mental health resources of the website need to more accessible and prominent -

having three or more links/buttons (access points) is encouraged

12. The homepage needs to mention more about the student experience within ICCIT - it needs to be welcoming to new students and express how students feel about their programs
13. More contact methods need to be displayed in visible places (E.g. the top left of pages) on the website such as the social media links
14. More information needs to be provided to users so they can get a more accurate impressions of the department/programs and make better evaluations/judgements
15. The hyperlinks on courses need to immediately lead to a page displaying the course descriptions, pre-requisites, distribution and requirements
16. Admission requirements need to be listed on program pages of the website
17. A chat box/bot should be added to help users navigate with specific questions

Appendix A

CI of a UTM ICCIT Student, U1

Calvin 00:03

Hi, may I know your name, please?

U1 00:06

U1

Calvin 00:17

What is your role?

U1 00:23

I'm currently a student at the University of Toronto Mississauga

Calvin 00:32

So we are UTM students currently enrolling at 485 user experience design. And the final project requires us to conduct user testing on the iccit website. I have provided a link for you through the chat earlier. And then this final project seeks to improve the website better by contextual inquiry analysis.. The next question I have for you is do you have a laptop and what do you normally use a laptop for?

U1 01:12

I do have a laptop. I normally use it for either school or for other things like movies or TV shopping online stuff like that. I also use my laptop everyday and almost throughout the day too

Calvin 02:23

Any favorite websites and why?

U1 02:32

Um No, not really. I don't have any favorite sites. Um, I like ones that are easy to navigate though. Like once I have good menus. And I know where I'm gonna go each time I click on my mouse

Relates to issue 2

U1 03:03

Sorry. Oh could be Aritizia. Yeah. So it's like a website for a clothing store. Very cool clothing brand and like I like their website because their menus, like really comprehensive and I know where like I can go where I want to go

Calvin 03:36

To the next question, any websites you don't like?

U1 03:41

Um, I don't really like the **Amazon** website. I find it really confusing. Especially the homepage. I never use their menu and I yeah, it does not look appealing to me when I go on the website. It's very cluttered

Calvin 04:06

What other technology do you use on a regular basis like iPhone iPods and can you tell us the kinds of things you would do with it?

U1 04:19

Um, I also use my iOS on the iPhone. I normally just use it to text other people and to use social media like Instagram or Snapchat. Um, I also have an iPad. I only use that to watch movies or maybe FaceTime with other people or to write notes sometimes. And then I also have my laptop, which as I said earlier is mostly for work in school

Calvin 06:34

So on a scale of one to five, one being low and five being high. How would you rate your technology skills?

U1 06:42

Um, I would say like, five, four and a half, like, pretty good.

Calvin 06:49

Okay. on to the next interview portion regarding global questions to the website. So what do you think makes a good university department website?

U1 07:09

Like, it's just nice to have a lot of information, I guess, like, but, um, yeah, I don't really go on the website unless I'm looking for specific information and it's easy to navigate. So like, I know where I'm going. I know that if I click on a certain button that I like, I'm going to find the information that I want. Yeah.

Relates to issue 5

Calvin 07:44

What do you think makes a bad university department website?

U1 07:50

No information or like when the content is poorly written? There's not enough information and I've noticed that sometimes the buttons don't work. Um, yeah.

Calvin 08:09

What components of a university department website like functionalities within the universe Department website are not needed or waste your time?

U1 08:58

Um there's nothing that I can think of right now. That's on the website that I would think is not important. Okay.

Calvin 09:15

So what do you think is most important on the ICCIT Department website?

U1 09:38

Um again, like the information making sure that like everything is like, consistent is a big thing. I found that like, a lot of times like going through different pages of the year university websites like they sometimes say different things which can get really confusing? Yeah, I think the biggest thing is like the actual content rather than, like how it looks. And making sure it's easy to find.
Relates to issue 14

Calvin 10:16

What are the most common things you would do with the iccit Website?

U1 10:37

Um, I would mostly just look at my program, like the my program page, and kind of look at the requirements and like for example, what specific courses that I'm required to take in order to get my degree, and get my program, like, finish up my program? Um, I think that's mostly it. Like, that's what I would normally look at, I'd also probably look at like, maybe like, scholarship, or like, internship, post, things, like the opportunities. And like, see if I can look more into that. I think those are the two things.

Relates to issue 9

Calvin 11:26

What are your favorite aspects of the iccit? website? Or what drives you crazy?

U1 11:43

um, I like how, at the bottom half of the page, do we have like the cards that kind of divide, like the major programs and like, important subjects that like most students would want to look at? I do not like that. Like, I don't see it right. When I open the page, though, I find I personally think

that the banner is a little bit too big for this style of website, like, I want to immediately look at the content that's like down down at the bottom half of the page. And like, as a first user, like, I would not even realize that that would be there. And that will kind of draw me away from looking at the website.

Relates to issue 23,25

Calvin 12:38

How would you access and review the course content from the ICCIT website? Can you tell us step by step what you clicked on?

U1 12:59

Um, so okay, if I were to go on the website, the first thing I would do is probably from looking for course content, I would probably scroll down. And then I would go to my program, which is the so I click into the DEM card. And now I'm on the DEM page. And then I see that on the left menu that says "courses." So I'll click that. And so now I'm given the list of all the DEM courses. And then I would just click on one of them. So if I were to click on CCT221. I'm led to like the 2021 2022 calendar, and not the course content description.

Relates to issue 29

Calvin 14:00

Is this the end?

U1 14:03

So I wasn't given the course page. So I guess I would go further down. So now I would go to see programs and courses under the 2021-2022 calendar. And then I would search by keyword. So for CCT 221. Nothing comes up under new courses. So then, I would go to core search under academic offerings and then type in CCT 221 and then I can run the course description now.

Relates to issue 28, 2

Calvin 15:10

So what kind of information is displayed on the ICCIT website?

U1 16:04

Um, so from my understanding, it gives you information about the ICCIT like core programs. So like, since our MGD, PWC programs And I guess it just gives you information about those programs, as well as like, maybe their faculty. Yeah, that's, that's what I think it's mostly just about, just get some information about the programs and the stuff.

Calvin 16:41

So how would you describe the iccit website to someone who has never used it?

U1 17:04

Um, so I would just say that, like, oh, it's the website for the cool for the, for the department. So it'll have like, information about, like, programs and like, as I said, programs and the staff and maybe like, more information about like, department and maybe events?

Relates to issue 7

Calvin 17:31

So if you were to design this website, what would you delete? Or what would you add?

U1 17:41

um, I would definitely make the banner smaller. Or I would maybe find a way to make the stuff at the bottom like those nine cards, like, more visible right when you go on the page. I'm also not really a big fan of the menu items and at the top right corner. Um, they're kind of confusing. And then like, there's also a menu that also will like a hamburger that will pop up. And this seems kind of unorganized in that sense. Like I'd prefer if maybe everything was all out across the screen or if everything was in the hamburger menu. Yeah, I think those are my two big things.

Calvin 18:34

Thank you so much for your time!

Appendix B
CI of a Parent of a Future University Student

Eric 0:10

For the recording, what is your name?

U2 0:15

U2.

Eric 0:21

So we are UTM students currently enrolled in CCT485 user experience design at UTM. Our final project requires us to conduct user testing on the iccit website. We want to improve the website through our testing with different users. So first let me ask, what is your occupation?

U2 0:24

Senior recruitment consultant at OPTrust.

Eric 0:31

Okay, do you use a laptop? Or desktop?

U2 0:37

Both.

Eric 0:38

And what do you use them for?

U2 0:40

Work.

Eric 0:43

Okay. Do you have any websites that you like?

U2 0:50

That I normally go for work or for entertainment?

Eric 0:53

Anything like anything specific that you just like, enjoy navigating this website?

U2 0:57

Oh, yeah. So LinkedIn,

Eric 0:59

LinkedIn? Why do you like this website?

U2 1:02

It's very well organized. I use LinkedIn for recruitment. So it's called LinkedIn recruiter is an application within LinkedIn. It lets you be organized. So I can post a job and then relax to organize the people that are applying. And also I can conduct searches on the people that have applied on the entire database to see a best match for the job that I'm seeking to fill.

U2 1:32

So I like the fact that it has a lot of features that are user friendly, ready, it's very easy to use, doesn't take a lot of time. Now another thing that the system has, has a little built in AI, which I like. So it recognizes after a while what I'm doing and it will give me options.

Eric 1:53

Okay. Are there any websites you can think of that you don't really like?

U2 2:01

That I don't really like, Yes. So there are some university websites for job postings that make it very difficult to post at all. So I think what it is, is whatever they're using to... For example, if I'm new to the system, and I want to register there's no problem, but if I go back, and I've forgotten my password, it takes too long to get the password working again. So for me to get access, it takes a while the second time or third time I go in. There seems to be a delay on when you can get access to reset your password

Relates to issue 6, Relates to issue 3

Eric 2:53

And what other kinds of technologies do you use on a regular basis? Like do you use iPhones, iPads?

U2 2:59

Yes, I have a workphone that is iPhone as well as my personal phone is an iPhone. I use an iPad for looking at Facebook so for personal use. I also use a laptop to play once in a while.

Eric 3:19

Okay. And then on a scale of one to five one being low and five being high, How would you rate your technology skills?

U2 3:31

So not a five I would say that I'm quite pretty good. Maybe being be three to four. So I find it easy to learn a thing so something i don't know i can do research or find my way around till I get what I want.

Eric 3:49

Okay. So, I just have a couple of questions before we get started on going through the website. What do you think makes for a good university department website?

U2 5:10

Okay, well, I say the look and feel. So it's nice to look at a website and see that it has a nice picture, for example, that makes it interesting, right enjoyable. It also that the menu bar is visible, and it has information that is relevant to the, to the website. So for example, and it's relevant to different people. So I can see here that it has ACORN, which is what students use as well as Quercus, right? It has webmail, all of these are student driven menus, there is a directory so I can look for more information there is a library, the registered in UofT main website. So all of this on all of these links on the menu bar makes sense. So it seems like that's something that as a student, I would like to see this thing that it has, it has latest news and it tells you where you can find in latest news by clicking on the link, which makes it accessible, easy to use. Also beside that's on the menu at the bottom, it has a welcome message and information and internships on experiential learning. And it also has the wellness section which is great, right? If you feel in distress, where can you get click on it and you get resources right away? Yeah, another thing that I that I see it has other icons, which again related to mental health support and another one is your involvement and commitment with Equity Diversity and Inclusion. Another one is this the main menu, so conventional main menu as well as sub right links that I think it makes sense to be there that catches your eye right away, you know, click on the link is going to normal menu bar, you just click on the link on this, like that word for a student it will be good to have.

Relates to issue 24, Relates to issue 4,16,17 and 19, Relates to issue 6, Relates to issue 7

Eric 7:17

Okay, so what do you think is most important to you in a university department website?

U2 7:33

So they didn't get into the information right away. So having this beautiful links at the top, or information at the bottom of the like the welcome message of the latest news, those are important things to see on our website right away. So you don't have to click, click, click to get more. In other websites, you have to go into the regular search menu, type the information that you that you're looking for, and they'll give you your i don't know whatever it finds. It could be a congress of articles on what you're looking for.

This way is easy. Right away, you know, you want to go to acorn, there's your link to click on it. And it's visual right. I also like the fact that the equity, the mental health, and the equity and diversity and inclusion are included because it also makes it very welcoming for people to know that UofT and this department in particular cares for their students. That's that's very key right now. That's always fun, but at the present moment that's key.

Relates to issue 13, Relates to issue 17, Relates to issue 8

Eric 8:39

Okay, some general questions before we get into the activity. general questions about the website okay. So what are the most common things you think you do with this department website?

U2 8:57

As a student?

Eric 8:59

No, as you

U2 9:02

Well, if let's say this is something that my son or daughter is interested in attending and I want to learn more about the Institute of Communication culture Information Technology Department, then I will go into an area here where it tells me more about it, so for sure right away I will be into this welcome message. Then I would like to learn more about these internships because this also adds value to the program. It is a program at UofT which is great, but also what else can my son or daughter get out of attending this program. Do they have an internship or an experiential learning? Which is great. I also like the fact that equity and diversity is here as well as mental health. So there is extra support that my son or daughter might need at some point, so its good to know for me that it's in there. I like also, in terms of the department, I like to see that the register link is in there, because that's sometimes a place where I want to go find out information about the university.

Relates to issue 21

Eric 10:20

And what parts of this website would you think that you use the most? Or what parts of this department page?

U2 10:32

Yeah, I found to be focusing as a parent, I will be focusing on the bottom. So latest news, welcome message, internship. Why the latest news, I want to know what my son or daughter would also be exposed to in terms of news, I want to see what the values of the department or the

university are with respect to the news tells me what they support and what they want their students to engage in. So as a parent, I will be interested in that.

Eric 10:59

Okay. You've already spoke a bit about what you like about the website. Is there anything you don't like immediately?

U2 11:10

I wouldn't say I don't like I'm just curious about how webmail works. See here, we start is that email for the students or is the webmail for, for someone wanting to leave a message like myself? I'm not a student. I want to find out something and it just hit webmail. That's the only one that I I don't know what it is. So that's the only one I know. And I, by the same token, I don't mean, I don't like it. I just I'm curious about it.

Relates to issue 26

Eric 11:42

Do you have any frustrations about searching up information about programs or content on this website? Or any frustrations you have about like other similar Products? Or similar websites?

U2 11:59

Yeah. I notice in this one, I do like how the website is set up. I do like the links. Right. And I mentioned to you earlier, I guess even within the links, I can see the content, and I like the visuals. But all the other pages have. I'm wanting to that I'd like to find things that I can click on. Right away. So I like that. So that makes it the search makes it easier. Yeah, sorry. What was your question?

Eric 12:36

I was just wondering like, do you have anything, any frustrations of searching information specifically on the iccit page?

U2 12:44

So the only thing that I would say, and I would like to know why this is information about the program itself. So it might be part of the welcome program? I haven't I haven't, you know, gone through it yet. So it might be there already was telling me in it. That's right. See, I click and there's information about communication, culture, CCIT, and other parts that are part of this problem of this department, digital enterprise management or the professional writing communication major or minor. So this information in here for a parent to look and find out more about the program, the programs that this department offers, and I'm glad that there was a welcome message from the director of the faculty of the department.

Eric 13:31

Okay, so we're on the website. How do you access and review course content from the iccit website, and can you tell us about what the process is?

U2 13:48

Yeah. Let's say I want to go to the digital enterprise specialist. Right. This is a program that, you know, my son has for some interest, I want to know more about it. Here's where I find out what the program is. So it tells me what the digital enterprise management, DEM program is all about. What are the enrollment requirements? And it tells me you know, what are the courses, what are the minimum passing grades that will be required for good standing in terms of the course itself. If I click on the link it should have a description. So the description here says to be a little bit small but the font should be a little bigger. Yeah. I'm glad that it also says what the instructional hours are, what's the program area, so all of that is fine. I think it would like to see as I said the font a little bit. This could be visually could be a little nicer in my view that's all. You can also do a course search, which this is something I guess, if I know specifically what course I'm looking at. But it's not necessary if I'm just focusing on CCIT. But I guess that other people might want to do that. So you have all these programs, and certificate search, or combined degree programs. So sort of a lot of information in here to find out if this is so you know, if this is something of interest for a parent.

Yeah. I guess the only thing that I didn't see right away, and that's something that a parent would like to know is how much it cost. It only says that it's limited enrollment. completion requirements for first year, second year and higher years. I think as a parent, I would like to know how to weigh and have an idea of what my budget is gonna look like, in terms of the cost? Somewhere else that I haven't clicked, but I didn't see that right away. That's something I think might be of interest to a parent.

Eric 16:17

Okay, yeah.

U2 16:19

And I'm glad that you mentioned here, all the things like the awards and scholarships, or, you know, some people can access or the student mentorship, which is good to know. Follow this other part of your webpage here, where it says certificate programs, the faculty and librarians and secretaries, and so on. It's important to have it here, right on the site.

Eric 16:46

Okay. And how would you describe, I guess, this website, or this iccit, specific website, to someone who has never used it before?

U2 17:04

I would say it's user friendly. I do like, as I said earlier, on the main website, now you have a nice page display with a photograph to get you a vision of what university looks like the campus. And like the links that you have on the top right hand corner, and the ones that you have at the

bottom. Because it's easier so you can go right away into areas that will be applicable for you as a parent. And also as a student, because there is acorn and quercus and I know, that's what students use to access information for the courses. I will say that of the courses, it's the second picture, I went when I wanted to welcome a message. I like to see that there is a visual, there is a video recording of the director in charge of the department welcoming people to this program. And I like all the visuals that you have the icons, visuals that you have underneath, describing each program within this department, as well as the awards and scholarships. My view, the only thing that is missing is that **there should be some financial information** or program cost.

Relates to issue 20

Eric 18:22

Okay. If you could, let's say put more content onto the site yourself. What kind of content would you like to see?

U2 18:33

Yeah, just financial. I mean, that's the only thing because you don't want to overpower in and have a lot of information here apart from what you have. Because otherwise it becomes too. It comes you know, noisy, it becomes too cluttered. And people are not mine might be you know, as the client has to go to the website has too much information, information overload. So it's better to have the visuals and to keep it to a certain minimum. There might be benchmarks out there as to what makes a website look and feel so appealing for someone. And I said sometimes less is more.

Eric 19:18

Okay. So what kinds...

U2 19:37

I just have one comment. I just thought about. **You have the welcome message from the department. Right? Yep. And one thing that I've seen in other websites that might be good here, they have the student experience. So you have a video of our students to describe in the program and how they have gone through the program and you know, and even have Yeah, How they have gone through the program, what they felt about the program. And so it gives another future student an idea of, you know, the, how the program was, were there any challenges and so on?** Okay, yeah, I will add that in if I could.

Relates to issue 21

Eric 20:20

Is there anything on the website you think that should be removed? Any content that you think is unnecessary for this website?

U2 20:32

Not in my view, I think all the things you have here are good. Okay, so how will you have in here about connect with us? So you can, you know, access to where, or and keep up to date with information, right. And this is YouTube? Yeah, so that's good, as well, because people like to be informed or to be following. Some people like to follow, right. So this is this is good to have the Twitter and YouTube linked, because people like to follow this, you know, now we're more into news and updates. So we'd like to see if the department is going to tweet about something we want to know about it. So that's good to have. Yeah, so I think the only thing that I see missing here is the student experience. It should be a video or audio or a video that has one student introducing or what I have seen in others is different students talking about the program. So they could be talking about different aspects of the program.

Eric 21:39

Okay. Well, I think that's all I wanted to cover and all the questions I want to ask. So thank you.

Appendix C

CI of a High School student

Hira: Hello, what's your name?

U3:: My name is (-)

Hira: Okay, so we are UTM students currently enrolled in CCT 485 - user experience design. And the final project requires us to conduct user testing on the iccit website in order to seek improvement for the website. So, I would like to know, what's your role? What do you do?

U3:: I study. In high school

Hira: Okay. What grade are you in?

U3: 12

Hira: So you're probably looking at universities right now and is that why you're interested in university websites?

U3: Yeah.

Hira: So do you use a laptop?

U3: Yeah.

Hira: What do you normally use a computer for?

U3: School work

Hira: Okay, and do you have any favorite websites?

U3: Google Docs

Hira: And why is it your favorite?

U3: Because it helps me do multiple tasks in a short amount of time.

Hira: Okay, and what websites do you not like?

U3: My school's website.

Hira: And why?

U3: Because it has very little information. And it's very hard to get through.

Hira: Okay. And what other technology do you use on a regular basis?

U3: My phone

Hira: And what do you do with it?

U3: Communicate with others

Hira: What do you like? What do you not like about it?

U3: I like that it helps me communicate easily.

Hira: Okay, and on a scale of one to five, how would you rate your technology skills?

U3: 4

Hira: Okay, so what do you think makes a good university department website and a bad university department website?

U3: If it doesn't have information for new students on its website, then that's a bad website. And another thing that would make it bad would be if it's hard to guide through. So things like which are in very sublinks sort of, they're not like in front of you. Things like where you can contact the registrar register or something.

Relates to issue 22

Hira: Okay, and what about a good website?

U3: The opposite of it. So everything is easy to go through, you have the contact information right on the top or the bottom of the page, and you have multiple breadcrumbs, but the important ones are outlined instead of someone having to look through each group of contents and look for the one that they're looking through, for example, for engineering, how to apply there, for example. So we should know where to apply for instead of going through the whole website and then finding out in a smallest hidden place.

Hira: Okay, and what components of a university department website wastes your time?

U3: The tutorials which are useless

Relates to issue 12

Hira: And what's most important to you in those websites?

U3: The requirements for the program or what they teach or yeah... basically that's it.

Relates to issue 15

Hira: On the ICCIT website, how would you access and view the course descriptions from this website? Can you tell us what the process would be like, if you could teach me?

U3: I guess you press on the icons for example where it says CCIT and DEM and etc. You have the course description there

Hira: Can you check what the admission requirement is for the DEM program?

Did you find it? Can you show how you found it?

U3: You need the 4 courses laid out here with a minimum grade of 65%.

Hira: Okay, so what are the most common things you would do with this website?

U3: Umm, look for the programs that we're aiming to get into and look at their requirements and how to apply and what courses are taught and stuff

Hira: And what are the most important things for the website? So what do you think is most important on the department website?

U3: Having all the information laid out just like it is in front of me. So I can just press on for example, DEM and look at the description and what stuff about DEM and then other courses

Hira: Okay, what are your favorite aspects of this website? And what drives you crazy?

U3: Umm, the pictures aren't fully in the frame so that's kind of annoying when it's just black lines.

Relates to issue 27

What do I like about it? And I like that I can just access all information from the main page, for example CCIT, I can just open the link, then I get to what I want to look at.

Hira: Okay, so how would you describe this website to someone who's never used it?

U3: It has many pictures, which makes it feel less overburdened, as you can see, like, as if they're just throwing everything on you, looks better. And some things that could be bad about it, though, like, I don't know, I can't really think of something that would be bad, except that like, for example, in Program requirements, the wording they use is too hard for a student coming outside of Canada and they have never studied here, they were to look at the website, they might not understand some things. As it uses words that are too specific to people who are studying here because of the way they're taught things.

Relates to issue 11

Hira: Okay, so what do you think you would add to the website?

U3: A separate sub link basically for the requirements to get into the program, instead of just putting it out there on

Relates to issue 9

Hira: Are you talking about current students or future students?

U3: Future students. Instead of putting it on the same page or bottom of the page, so I just had to scroll up to find it and look for it even though they could just put a sub link on the left side of the page with the other things it's easier to look for the enrollment requirements so looking at something so wordy, just makes you not want to read anything

Hira: Okay, can you find me requirements for future students?

U3: I've no idea where it is. It is a bad website.

Relates to issue 5, 8

Hira: Can you tell me what you're doing?

U3: Trying to find the requirements to get into the program.

It doesn't have the requirements.

Hira: Okay, so how about you go to this page and then try finding it from there.

U3: I can't find it.

Hira: Okay, to reiterate, what do you think, if you were applying for the DEM program using this website, what would you add to this website more specifically?

U3: I would have the program requirements, a link for the program requirements on the main page of the ICCIT website. And even though we have so many things here, for example, CCIT, DEM, and so many things, there should be another link here or sub link *here* basically that outlines the program requirements or even a video. And then within that, then they can just put all the programs that are offered under iccit. So that if someone wants to get into for example Professional Writing and Communication, they have this same link for all the programs, but if they don't meet the requirements they can know which program the requirements they meet for and apply there instead.

Relates to issue 30

Hira: Okay, so you would say something like adding admission requirements for the program?

U3: Yeah, something quick under one minute though.

Hira: Yeah, anything you would want to remove?

U3: Not really.

Hira: Okay. Thank you so much for your time. And we might contact you with follow up questions or design reviews as we move through the project. Is it okay for you?

U3: Sure.

Hira: Thank you so much.

Appendix D

CI of a UTM ICCIT Student, U4

00:00 Kevin

Your name, please.

00:01 U4

My name is U4.

00:04 Kevin

What is your role?

00:05 U4

I'm currently enrolled at the University of Toronto Mississauga.

00:10 Kevin

So we're students enrolled in 485, which is user experiences. And the final project is us asking people for feedback on a redesign of the ICCIT website. I sent you the website through a link in the chat. And this project seeks to improve the website better by contextual inquiry analysis. So my first question for you is, do you have a laptop or computer? And what do you normally use a laptop for?

00:43 U4

I don't have a laptop or computer and I mainly use my computer for school related activities. And then apart from a lot playing video games on the side.

00:53 Kevin

Do you have any favorite websites? And why?

00:57 U4

I would say my most favorite website would probably be Google just because of its simplicity and how easy it is to get the answers you need and fast.

01:07 Kevin

Is there anything that you don't like about Google?

01:12 U4

Um, maybe one thing from I guess you could say its simplicity is too simple. Like there's only a search option. And like that you don't really know what's going to turn out at the end.

01:30 Kevin

What other technologies do you use on a regular basis?

01:36 U4

Apart from my computer and phone, I use my TV, I guess, when I'm watching movies, or anything like that, I use my wireless charger for my phone. I use my headphones for listening to music. And that's pretty much it. I only use my computer mainly.

02:03 Kevin

Are there any websites that you don't like?

02:07 U4

Oh, um, I would say I don't really like Wikipedia. I just don't like its layout and how the information is portrayed in front of us. I'm like, it's not that simple as Google where you can simply search like some of the data and information on Wikipedia is not reliable or trustworthy. And not unlike the layout of it.

Relates to issue 14

02:29 Kevin

On a scale of one to five, one being low five being high, how would you rate your technology skills?

02:37 U4

A solid five.

02:39 Kevin

Okay, on to the next interview portion. We had just some questions about the website that we sent you. Or you should have seen it before. So first, what do you think makes a good university department website I

02:55 U4

I think what makes a good university portal, its simplicity and how fast a student can get access to the resources that they want, without digging too much around on the website. So if they have a question or some simple inquiry that they need solved, they shouldn't spend like 30 minutes browsing on the university's website trying to find an answer to it should be pretty straightforward.

Relates to issue 1

03:20 Kevin

Are there any components of the department website or functions that you think are unnecessary or waste your time? And if there aren't any, then you can just say that you can't think of anything right now.

03:35 U4

I guess I would say on the UTM main website for information technology, like there's a welcome message. And I don't really see how that's, that's useful for information. If, if a student is trying to get information that's not really useful for them on the Information Technology website. And I'd rather have another tab that I don't know, shows up to date information or something that's highly in demand as well, other than a welcome message.

04:06 Kevin

What do you think is most important on the website that you're looking at?

04:13 U4

I think the most important thing on the website when you scroll down the different tabs and sections that you can click on for the different departments. And that pretty much like you know, narrows down your search to find your answer to anything that you need.

04:29 Kevin

What are the most common things that you use? Or do you use the department website?

04:37 U4

With the department website, I would probably use it mainly to get more information on courses I'm enrolling in and then also Yeah, that's pretty much I use mainly to see what courses that I need in the courses, their descriptions and stuff like that. What I need to enroll in

05:00 Kevin

Could you describe how you would access and review the course content? So just step by step, what do you click on?

05:07 U4

So pretty much I will go on the, obviously, my department's page and then narrow it down to my section that I'm in. So let's just say I'll be in TCS, I would just click on that, and then it will show the different courses that I need. Just like CCT, CCT, 110 111, all that stuff. Other than Yeah, we'll just click on the courses themselves, and they'll have like descriptions of it. And that's all based off of.

05:33 Kevin

So how would you describe the website to somebody who has never used it

05:39 U4

somebody that hasn't used it, I guess it would be like a main hub where you can get information about your course or program. So if you aren't too sure about the course or program that you want to enroll in, this will be like a good place a good start to get more information as to the backgrounds and give you a better understanding of which path you should take.

05:59 Kevin

If you were to design this website, what would you delete or add?

06:05 U4

um, as I said before, are probably delete the welcome message, I don't think that's, you know, I don't think that should really take up an entire tab at the top. But then, overall, the layout is nice and how, like, you know, they have different sections for like, the different courses and stuff like that. But on the main page, like there's no quick access to student help, I would say like, there's nothing that I can, you know, directly link with, like student help. There's only a phone number, which I don't like, and Twitter and YouTube, they don't have any other text or any other phone number that you can call for your specific program.

Relates to issue 10, Relates to issue 22

06:46 Kevin

Okay, that's very good. Thank you very much for your time.

06:50 U4

No worries. Enjoy your day.

Appendix E

CI of a UTM ICCIT Student, U5

00:00 Kevin

Can I have your name, please.

00:01 U5

Sure my name is U5.

00:04 Kevin

What is your role?

00:07 U5

I'm a student at University of Toronto Mississauga.

00:12 Kevin

So we're currently asking students for a user experience design project, just asking for feedback on the iccit. website. And so my first question for you is, do you have a laptop? And what do you usually use your laptop for?

00:31 U5

No, I do not have a laptop. I usually use a computer instead.

00:40 Kevin

What do you use your computer for? And do you have any favorite websites?

00:46 U5

I use my computer mostly for YouTube, because it gives me so much like different type of information.

Relates to issue 12

00:56 Kevin

Are there any websites that you don't like?

00:59 U5

And none come to my mind currently, because I have like a select few I want to use. So I don't care too much.

01:11 Kevin

What other technologies do you use on a regular basis?

01:16 U5

I'm not using my computer. Usually, I'm on my phone.

01:23 Kevin

What do you like or not like about these products? Like your phone?

01:29 U5

I can say the charging because iPhone charging is not that good. So privacy, the battery life needs to be increased on these.

01:40 Kevin

True. So on a scale of one to five, one being low phi being high? How would you rate your technology skills?

01:50 U5

I'll probably say like 3.5. I said no more than the average person, but not more than the experts stop being perfect again in the middle.

02:04 Kevin

Okay, so onto the next portion. Just some questions about the ICCIT website specifically, what do you think makes a good university department website?

02:15 U5

Something that's easy to access, which gives clear indication of how to get to my course curriculums for missing any information or courses that I need, which would be the best way I would want my website to be.

Relates to issue 1

02:30 Kevin

What do you think a bad university department website is

02:38 U5

something that wouldn't be organized, something which would be difficult to navigate through too many redirections of a website will be kind of difficult for the average person to navigate through.

02:55 Kevin

Is there anything on the website right now that you think is unnecessary? Or time we say?

03:03 U5

Right now? I don't really think so because it's fairly organized.

03:14 Kevin

What do you think is the most important thing on the department website? And what are the most common things that you use it for?

03:26 U5

So some of the reason I use it for is the awards and scholarship programs, I would want to see those because I would want to see how my averages compared to the origin of scholarship programs, as well as the Information and Community Technology programs. I will look to find out which courses I really need. And I must like I knew which I require, like the CCT and Vcc courses my fourth year.

Relates to issue 18

04:00 Kevin

What are your favorite aspects of this website?

04:05 U5

My favorite aspect is very easy to contact the University about issues that I might be facing with OSAP or great issues. If I have any. I can seek extra help.

04:26 Kevin

Now in the process of using the website, could you tell us a little about the process that you will usually take step by step. So say you wanted to find out more about some course content. Where would you click?

04:42 U5

Sure. So I will click that. Communications culture information technology, which is see see it? Yeah. And then I would go to my first year courses

05:04 U5

I would see my first year I will be required to take CCT 109 H nine and CCT 110 h five for my major for science programs

05:24 Kevin

so based on your understanding what kind of information is displayed on the website

05:34 U5

it shows a limited enrollment, shows a joint program and shows a CCT Course Program Plan, which I use frequently, because it shows that you plan your academics, how to build your skills, build a network and build a global mindset and for planning your future for my future after I'm done with my university experience.

06:01 Kevin

So how would you describe the ICCT website to someone who has never used it?

06:08 U5

I would say it's a very easy site to navigate through. And it's essential if you want to succeed in your university experience.

06:17 Kevin

If you were to redesign this website, is there anything you would delete or add?

06:23 U5

Some of the things I would delete would be no I would add is if there's important events, it would probably be highlighted at the top informing a view but if you want to have the potential of how important these events are for communication and Glog network you're building

06:44 Kevin

That's good. Thank you so much for your time.

06:48 U5

No problem.