

ASSU Website Design Document

Problem & Goals

- **Problem Statement:**
 - This project aims to rebuild the ASSU website using a modern static frontend with a headless WordPress backend. The current WordPress site on Bluehost is difficult to maintain due to legacy HTML/CSS uploads and a lack of CI/CD or version control. The redesigned site will mirror content from the prototype (<https://jennykwon0712.wixsite.com/u-of-t-assu>) and provide a maintainable, accessible, and responsive interface.
- **Goals:**
 - Finished by the end of August.
 - Editors update content via WordPress only. No direct code or hosting edits unless bigger changes are required.
 - Automatic rebuilds on content changes for specific dynamic pages.
 - Meets WCAG guidelines and works responsively across devices.
- **Future Goals**
 - Implement event calendar and forum
 - Consider completely migrating from WP

Architecture

- **Backend: WordPress (Bluehost)**
 - Maintains content for all dynamic pages
 - WP REST API is used to query page/post content
 - Webhooks plugin sends GitHub dispatch events on publish/update
- **Frontend: Static Site (Hosted on Vercel)**
 - Pages statically generated with getStaticProps
 - Content fetched from WP REST API. Content will be sanitized using Cheerio
 - GitHub Actions used for CI/CD
 - Hosted via GitHub Pages or Vercel

Tech Stack

- Next.js: Static generation + revalidation
- React + Tailwind CSS + Shadcn: UI framework
- GitHub Actions: CI/CD
- Vercel or GitHub Pages: Deployment
- WP REST API: Data source

Static + Dynamic Page Layouts

- /about
 - /assu
 - **/executives:** fetched from <https://assu.ca/wp/wp-json/wp/v2/pages?slug=assu-executive>
 - /staff
- /course-unions
 - /unions
 - /union-resources
- /get-involved
 - /upcoming
 - /initiatives
 - /current
- /gallery
- /awards-and-grants
 - /awards
 - /grants
- /services-and-resources
 - /office-services
 - **/tests:** fetched from <https://assu.ca/wp/wp-json/wp/v2/pages?slug=past-test-library>
 - /resources
 - **/documents:** fetched from <https://assu.ca/wp/wp-json/wp/v2/pages?slug=documents>
 - /handbook:
 - /misc
- **/news:** fetched from <https://assu.ca/wp/wp-json/wp/v2/posts?categories=24>
- /contact-us
- **/faq:** <https://assu.ca/wp/wp-json/wp/v2/pages?slug=faq>

Frontend Components

Component Types

Component	Pages	Screenshot	Specifications
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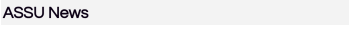
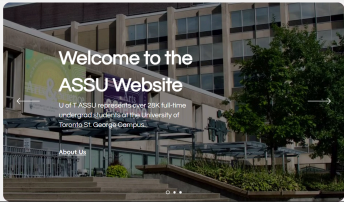
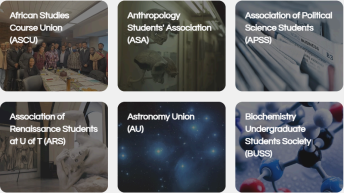
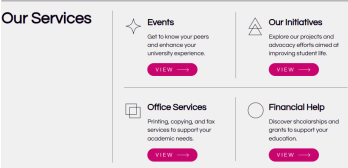
Header	All		Ensure all interactive elements (links, buttons) are navigable using the keyboard (Tab, Enter, Space, etc.). Use proper HTML semantic elements (e.g., <nav>, <button>) for screen readers. Provide alt text for logo. Add ARIA labels and roles (e.g., aria-label="Search"). Clear visual focus states (e.g., outline or border) for focusable elements when navigating with the keyboard. Ensure the header is usable on mobile devices with touch interactions. Implement a mobile-friendly navigation (e.g., collapsible hamburger menu). Support text resizing without breaking the layout. Ensure clickable elements are large enough for easy tapping (e.g., 44x44px minimum touch target size).
Footer	All		Ensure all interactive elements (links, buttons) are navigable using the keyboard (Tab, Enter, Space, etc.). Use proper HTML semantic elements (e.g., <nav>, <button>) for screen readers. Provide alt text for icons. Add ARIA labels and roles (e.g., aria-label="Search"). Clear visual focus states (e.g., outline or border) for focusable elements when navigating with the keyboard. Ensure the header is usable on mobile devices with touch interactions. Implement a mobile-friendly navigation (e.g., collapsible hamburger menu). Support text resizing without breaking the layout. Ensure clickable elements are large enough for easy tapping (e.g., 44x44px minimum touch target size).
Hero Text	All		mobile safe line length + spacing

Image Carousel	/, /unions,		Ensure keyboard navigation: Users should be able to navigate through images using the Tab key, and activate next/previous actions with Arrow keys or Enter/Space. Provide clear focus indicators: Focus should be visible on interactive elements like navigation buttons and image indicators when using the keyboard. Use ARIA roles: role="region" for the carousel container. role="img" for each image. aria-live="polite" to announce image changes for screen readers. Ensure mobile-friendliness: Images and navigation should be easily touchable and responsive across different devices. Provide visible navigation controls: Include clearly labeled next/previous buttons and image indicators (dots or thumbnails) for easy navigation.
Card Grid	/, /unions		Ensure keyboard navigation: Users should be able to navigate through the cards using the Tab key and interact with them using Enter or Space. Use ARIA roles: role="grid" for the container. role="row" for rows and role="gridcell" for individual cards. Provide aria-labelledby or aria-describedby to link card titles/descriptions for screen readers. Ensure focus management: When navigating between cards, focus should move logically, and users should be able to interact with each card's content. Provide responsive design: The card grid should adapt to various screen sizes (e.g., mobile, tablet, desktop), maintaining usability and visual

			clarity. Ensure touch-friendly interaction: Cards should be large enough for easy tapping on mobile devices, with clickable areas at least 44x44px.
Content Grid	/about, /executives, /staff, /get-involved, /initiatives, /projects, /awards-grants, /grants,/services-resources, /office-services, /faq, /useful-links, /map		Ensure keyboard navigation: Users should be able to navigate between grid items using the Tab key and interact with them using Enter or Space Use ARIA roles Ensure focus management: Focus should move logically through the grid items, with each item being focusable and interactable Provide responsive design: The grid should adapt to different screen sizes, adjusting the number of columns or layout for mobile, tablet, and desktop Ensure touch-friendly interaction: Grid items should be large enough to be easily tapped on mobile devices (at least 44x44px touch target size)
Image Card	/, /unions,		Ensure keyboard navigation: Users should be able to navigate through image cards using the Tab key and interact with them using Enter or Space Provide alt text for images: Use descriptive alt attributes to ensure screen readers can describe the images for visually impaired users Use ARIA roles: Ensure responsive design: The image card should adapt to different screen sizes, adjusting the image and content layout for mobile, tablet, and desktop Provide clear focus indicators: Ensure visible focus states on the image card when navigated via keyboard
Button	/, /get-involved, /initiatives, /awards-grants, /services-resources, /faq		• keyboard accessible (supports tab, enter space) • focus ring on keyboard focus/hover • mobile sizing

			• screen reader support using a imported button component does most of this for u already, if u choose to import use shadcn. only thing u would have to do afterwards would be mobile sizing.
Email Capture Form	/, /contact-us	Contact us First name * Last name Email * Write a message Submit	
Blog List	/events	UAC is happening THIS FRIDAY! Join us for a day celebrating incredible undergraduate research across the Faculty of Arts & Sciences—Sciences, Social Sciences, and Humanities! Don't miss out on exciting guest speakers and groundbreaking student projects! OPEN MIC NIGHT It's your final time at ASU Open Mic Night! March 29th 8-10pm at the CofE Eye in Victoria College. Register to perform and ASU to attend with the links in our social! FREE food, FREE foodstuffs, LIVE talent. We hope to see you all there!! If you have any questions please dm us or reach out to the emails listed on the sign-up form :) The ASU Office will be closed for Reading Week from Feb 17th to 24th We will be happy to provide a list of our services and how to reach us by DM or email: studentsuccess@asu.ca Have a great reading week and we'll see you back on campus soon! Ensure keyboard navigation: Users should be able to navigate through blog list items using the Tab key and interact with them using Enter or Space. Use ARIA roles and attributes to ensure screen readers properly interpret the list and individual items. Ensure focus management: Focus should move logically through the blog list items and be clearly visible when navigating via keyboard. Provide responsive design: The blog list should adapt to different screen sizes, ensuring usability on mobile, tablet, and desktop. Ensure touch-friendly interaction: Blog list items should be large enough for easy tapping on mobile devices, with a minimum touch target size of 44x44px.	

Image	/about, executives, /staff, /initiatives, /projects		make sure its accessible (alt, aria-label, caption, etc. google some image reqs for accesssibiliity / screenreading) fallback + error handling (as it loads, make sure a skeleton is generated in the meantime, otherwise show err image if can't load properly) define sizes for responsive layouts (make sure it fills correctly for screen size, make sure it doesnt overlap if screen size too small) for mobile: make sure images dont have horz scrolling				
Link	/union-resources, /awards, /documents, /handbook, /useful-links	ASSU Leadership Application 2024-25	renders using next/link with proper rel and target supports keyboard navigation (ie i can tab to it) highlights current/active link if used for navigation opens external links in a new tab with rel="noopener noreferrer" (open in new tab)				
Multi-Image Carousel	/gallery		Ensure keyboard navigation: Users should be able to navigate through images using the Tab key and interact with carousel controls using Enter or Space. Provide alt text for each image: Use descriptive alt attributes to ensure screen readers can describe the images for visually impaired users. Ensure ARIA roles and attributes: Use proper ARIA roles for the carousel, such as role="region" for the container and role="img" for the images. Ensure responsive design: The carousel should adapt to different screen sizes, ensuring usability on mobile, tablet, and desktop. Ensure touch-friendly interaction: Carousel controls (next, previous) and images should be easily tappable on mobile devices, with touch targets large enough for easy interaction.				
Tab Component	/awards	<table><tr><th>Criteria</th><th>Past Recipients</th></tr><tr><td>ASSU annually awards a \$1500 scholarship to one (1) full-time undergraduate student enrolled in the Faculty of Arts and Science on the St. George campus. ASSU also chooses two (2) \$750 career ops. The award is named after a two-term President of ASSU. To be eligible for the award, you are required to fulfil the following criteria: 1. Must be a full-time Arts and Science student registered on the St. George campus 2. Must have a minimum CGPA of 1.75 3. Must be a 2nd-year student or higher 4. Must demonstrate leadership in extra-curricular activities ON CAMPUS</td><td></td></tr></table>	Criteria	Past Recipients	ASSU annually awards a \$1500 scholarship to one (1) full-time undergraduate student enrolled in the Faculty of Arts and Science on the St. George campus. ASSU also chooses two (2) \$750 career ops. The award is named after a two-term President of ASSU. To be eligible for the award, you are required to fulfil the following criteria: 1. Must be a full-time Arts and Science student registered on the St. George campus 2. Must have a minimum CGPA of 1.75 3. Must be a 2nd-year student or higher 4. Must demonstrate leadership in extra-curricular activities ON CAMPUS		Ensure keyboard navigation: Users should be able to switch between tabs using the Tab key and activate a tab using Enter or Space. Use ARIA roles and attributes for the individual parts of the component. Ensure focus management: Focus should move
Criteria	Past Recipients						
ASSU annually awards a \$1500 scholarship to one (1) full-time undergraduate student enrolled in the Faculty of Arts and Science on the St. George campus. ASSU also chooses two (2) \$750 career ops. The award is named after a two-term President of ASSU. To be eligible for the award, you are required to fulfil the following criteria: 1. Must be a full-time Arts and Science student registered on the St. George campus 2. Must have a minimum CGPA of 1.75 3. Must be a 2nd-year student or higher 4. Must demonstrate leadership in extra-curricular activities ON CAMPUS							

			to the active tab when switching tabs, and focus should be set on the content of the active tab. Provide clear visual focus indicators for each tab and content area when navigating using the keyboard. Ensure screen reader compatibility: Ensure screen readers correctly announce the selected tab and the associated content. Mobile-friendly design: Ensure tabs are touch-friendly, with adequate padding or clickable area (minimum 44x44px). Responsive layout: Tabs should be usable and properly displayed on mobile, tablet, and desktop sizes. Provide clear, distinguishable tab styles: Tabs should have visual cues to indicate which tab is active (e.g., different colors, underline, etc.).
Divider	All		Ensure the divider is visually distinguishable and does not disrupt the content flow. Use semantic HTML (<hr> element) for simple horizontal dividers or create a custom component with proper ARIA roles if needed. Provide sufficient contrast between the divider and surrounding content for visibility. Ensure the divider is fully accessible with screen readers (e.g., role="separator" for custom dividers). Ensure the divider does not interfere with keyboard focus navigation between content sections. Provide clear spacing around the divider to visually separate sections without overcrowding. Ensure the divider behaves correctly on various screen sizes (responsive). Ensure the divider's size is appropriate and does not become too thin on high-resolution screens.

Key-Value List	/past-exam-library	ACT ANA ANT APM AST BCH BIO BPM CHC CHM CLA CH COG CSC CSB CRI 240, 242, 247, 248, 249, 270 300, 301 100, 203, 204, 206, 207, 253, 314, 315, 317, 323, 332, 333, 334, 335, 340, 346, 358, 364, 365, 366, 409, 412, 419, 420, 422, 423, 434, 436 346, 351 101, 201, 210, 221, 251, 300 210, 242, 243, 371, 422, 440, 444, 448 120, 130, 220, 230, 260, 270, 303, 328, 351 335 313, 330 130, 136, 151, 206, 210, 217, 220, 221/225, 222, 236, 236, 247, 249, 310, 317, 326, 333, 336, 342, 346, 410, 427 160, 201, 204, 230, 231, 232 332 250, 341 104, 106, 110, 111, 120, 148, 160, 207, 208, 236, 240, 246, 263, 265, 304, 311, 320, 321, 324, 326, 343, 358, 369, 373, 410, 426, 426, 443, 456, 460 327, 328, 331, 343, 345, 346, 347, 348, 459, 460 350, 450	Use appropriate ARIA roles like role="list" for the list and role="listitem" for each key-value pair. Use role="definition" for describing terms and values. Use aria-labelledby to associate keys with their corresponding values, ensuring screen readers can link them properly. Use aria-describedby to provide additional descriptions for values, if necessary, for more context. Ensure key-value pairs are read in a meaningful order. Screen readers should announce the key first, followed by the value. Use distinct visual styles (e.g., bold for keys, normal text for values) to differentiate keys from values. Ensure each key is clear, concise, and meaningful to describe its associated value. Ensure the list is usable on various screen sizes, from desktop to mobile, with responsive layouts. If the key-value list is long, ensure it's scrollable and users can navigate through it using both keyboard and touch. Make sure the list is readable in high-contrast mode for users with visual impairments. Ensure the key-value list adapts to text resizing without breaking the layout or accessibility. Allow users to focus and interact with both the key and value in a way that respects their reading and navigation preferences.
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Accordian	/faq, /documents	Where do I go to get an official UoT transcript? Transcripts can be ordered online via Access or from the UoT transcript centre, located at Enrollment Services, 112 St. George St. Toronto, ON M5S 1A5. For inquiries call: 416-979-2100 Where can I find final exams? Where can I find term tests? Where is the Lost and Found for Sidney Smith? How do I book the Sidney Smith Library? How do I book group study rooms around campus? Where is there a microwave for students to use?	Allow users to open/close accordian items using keyboard (Enter or Space). Ensure focus moves logically through accordian items (use Tab to move between items). Use role="region" for the accordian container. Use aria labels Move focus to expanded content or the next logical element when opening. Ensure focus remains on the correct header or item when collapsing. Provide visible focus indicators on focused headers (e.g., border, background). Make accordian touch-friendly with large clickable/tappable elements (44x44px minimum). Allow users to tap headers to open/close accordian items on mobile. Indicate open/closed states with visual cues like arrows or plus/minus icons. Announce open/closed state to screen readers with aria-expanded. Hide collapsed content visually but keep it accessible for screen readers (display: none or visibility: hidden). Avoid auto-expanding sections to prevent overwhelming users.
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Dynamic Components

- /about
 - /assu
 - /executives: fetched from /staff
- /course-unions
 - /unions
 - /union-resources
- /get-involved
 - /upcoming
 - /initiatives

- /current
- /gallery
- /awards-and-grants
 - /awards
 - /grants
- /services-and-resources
 - /office-services
 - **/tests:** fetched from
 - /resources
 - **/documents:** fetched from
 - /handbook:
 - /misc
- **/news:** fetched from
- /contact-us
- **/faq:**

Page	Component Name	Data Source	Data Type	Method of fetching
/executives	Content Grid, Image	Fetched from https://assu.ca/wp/wp-json/wp/v2/pages?slug=assu-executive	type Executive = { name: string; title: string; };	Use getStaticProps to fetch data during build, filter and clean json data appropriately to fit into data models, then expose to rendered components at view.
/past-exam-library	Key Value List	https://assu.ca/wp/wp-json/wp/v2/pages?slug=past-test-library	type CourseTestEntry = { department: string; courses: string[]; };	Use getStaticProps to fetch data during build, filter and clean json data appropriately to fit into data models, then expose to rendered components at view.
/documents	Accordian	https://assu.ca/wp/wp-json/wp/v2/pages?slug=documents	type DocumentLink = { label: string; url: string; }; type DocumentSection = { title: string; files: DocumentLink[]; }; type DocumentsPageContent = { sections: DocumentSection[]; };	Use getStaticProps to fetch data during build, filter and clean json data appropriately to fit into data models, then expose to rendered components at view.
/news	Blog List	https://assu.ca/wp/wp-json/wp/v2/posts?categories=24	type WPPageContent = { id: 0: int, slug: str, };	Use getStaticProps to fetch data during build, filter and clean json data appropriately to fit into data

			title: str, img_url: str, content: str };	models, then expose to rendered components at view.
/faq	Accordion	https://assu.ca/wp/wp-json/wp/v2/pages?slug=faq	type WPFAQEntry = { question: string; answer: string; }; type WPFAQPage = { faq: WPFAQEntry[]; };	Use getStaticProps to fetch data during build, filter and clean json data appropriately to fit into data models, then expose to rendered components at view.

Alternatives

Options	Advantages	Trade-offs	Cost
Headless WP + Vecel Hobby Plan (chosen)	• Editors keep current Wordpress UI • Automatically update the new website on publish • Frontend website design is completely controlled by students	• Long update times for website updates	Free (up to approx 50k users per month) Pro: 20 dollars a month
Free HeadlessCMS Options (TinaCMS, NetlifyCMS, Cockpit, ApostropheCMS)	• Editors have a UI to publish updates • Direct API integration without having to worry about using a WP API • Website can be hosted for free while still using Rebel domain • Fine-grained access control (roles, drafts, review flows)	• Long update times for website updates • Unlikely but may hit website usage cap • No email/storage integration.	Free
Enterprise HeadlessCMS Options (Sanity)	• Editors have a UI to publish updates	• Long update times for website updates • Expensive	Pricing varies per provider, but generally more or similar price to current bluehost provider.

CMS, PayloadCMS, NetlifyCMS)	• Direct API integration without having to worry about using a WP API • Website can be hosted for free while still using Rebel domain • Fine-grained access control (roles, drafts, review flows)		
Rebuild from Scratch (Next.js + Express API)	• No WP legacy • Open source	• High development cost • Risk missing deadline • Need to manage security risks • Editors will have to talk to technical team to make new updates	Hosting costs vary, but much less than Enterprise HeadlessCMS
Static WP + Bluehost Uploads	• Easiest to implement • No backend development needed	• Little to no control over ASSU website design • Harder to maintain	Free

Implementation Timeline

Aug 3 - 9: Setup + Core Infrastructure	- Onboard team - Connect WordPress REST API - Set up endpoint test calls - Finalize website routes - Configure Vercel deploy - Set up global layout: Header, Footer, Routing - Create utility: fetch + clean WP content using <code>getStaticProps</code> - Setup global css styles + fonts - Set up Cheerio to clean up JSON data - Set up CI/CD with GitHub Actions - Trigger rebuilds on content changes (webhook)
Aug 10 - 16:	- Implement core components or import them from Shadcn instead - Import core images, add to Next.js optimization - Finish wireframe for all routes - Migrate all static content to site

	- Apply CSS + global styling
Aug 17 - 22:	- Continue previous week (TODO: ask how to estimate time properly for a team project)
Aug 23 - 30:	- Pass first MVP back to ASSU, get feedback - Iterate on feedback, polish as necessary - Documentation

Github Link

<https://github.com/utcjcao/ASSU>

1. Todo list
 - a. Standardize team tools
 - i. Jira board
 - ii. List of things to document
 - iii. Make a list of PR requirements before PR
 - iv. Standardize git branch strategy
 1. Main: production ready
 2. Dev: active development
 3. Fix: fixing an issue
 4. Feature: implementing a new feature
 - v. Write out github action list
 - b. Standardize styles
 - i. Fonts
 - ii. Color palette
 - c. Micro components
 - i. Buttons
 - ii. Links
 - iii. SVGS
 - iv. Images
 - v. Hero Image
 - vi. Text Section
 - vii. Hero Text
 - d. Import components, then restyle
 - i. Accordion
 - ii. Blog List
 - iii. Key Value List
 - iv. Tab Component
 - v. Image Carousel

- vi. Multi- Image Carousel
 - vii. Map
 - viii. Vertical Timeline
- e. Macro components
 - i. Header
 - ii. Footer
 - iii. Image Card
 - iv. Card Grid
 - v. Content Grid
- f. Create Pages
 - i.