

# Comprehensive Report on WCAG 2.2 AA Standards

## Introduction

The Web Content Accessibility Guidelines (WCAG) 2.2 aim to make web platforms accessible to all users, including individuals with disabilities. At the AA compliance level, these guidelines ensure your platform is user-friendly and inclusive, particularly for students and tutors who may rely on assistive technologies. For THUtorium, accessibility is critical for fostering equitable educational opportunities.

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## Key WCAG 2.2 AA Accessibility Standards

### 1. Perceivable

*Ensure information is presented in ways users can perceive.*

- **Text Alternatives:**  
Provide alt text for all images (e.g., tutor profile photos, course content visuals).  
*Action:* Audit all existing images and add descriptive alt attributes.
- **Adaptable Content:**  
Structure content logically (e.g., headings for session summaries).  
*Action:* Use semantic HTML tags like `<h1>` for titles and `<p>` for paragraphs.
- **Contrast Minimum (Success Criterion 1.4.3):**  
Ensure a 4.5:1 contrast ratio for text and backgrounds.  
*Action:* Check the color palette for course listings, buttons, and feedback forms.

### 2. Operable

*Ensure users can navigate and interact with content easily.*

- **Keyboard Accessibility:**  
Every functionality should be accessible via keyboard.  
*Action:* Test the platform to ensure navigation works using only the keyboard.
- **Navigation Consistency:**  
Provide a consistent navigation menu (e.g., "My Courses," "Find a Tutor").  
*Action:* Review and standardize navigation elements.
- **Focus Indicators (Success Criterion 2.4.7):**  
Visible focus indicators must be present for interactive elements (e.g., links, buttons).  
*Action:* Update CSS to highlight elements when tabbed.

### 3. Understandable

*Make content and interface predictable and easy to understand.*

- **Error Identification and Suggestions:**  
Clearly highlight and explain errors during form submissions (e.g., message field or login forms).  
*Action:* Implement error feedback like "Email field cannot be empty."
- **Language of Page (Success Criterion 3.1.1):**  
Declare the platform's language using the `<html lang="en">` tag.

### 4. Robust

*Ensure compatibility with assistive technologies.*

- **ARIA Roles:**  
Add ARIA roles to complex widgets like chat, calendar, and session booking forms.  
*Action:* Implement ARIA landmarks for regions like "main content" and "footer."
  - **Browser and Assistive Technology Testing:**  
Validate compatibility with screen readers (e.g., JAWS, NVDA) and browsers.
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## Evaluation of THUtorium Against WCAG 2.2 AA Standards

1. **Strengths:**
    - Platform uses semantic HTML for structuring most content.
    - Accessible form fields are partially implemented (e.g., labels for inputs).
  2. **Gaps Identified:**
    - Inconsistent color contrast for buttons and text.
    - Limited keyboard accessibility for dropdowns and navigation menus.
    - Missing alt attributes for some images.
    - No focus indicators for certain interactive elements (e.g., the search bar).
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## Actionable Recommendations

1. **Update Visual Design:**
    - Enhance contrast between text and background.
    - Use accessible color combinations for buttons (e.g., submit or cancel).
  2. **Improve Keyboard Navigation:**
    - Ensure the search bar, dropdown menus, and pop-ups are fully operable via keyboard.
    - Add logical tab order to maintain focus.
  3. **Enhance Error Feedback:**
    - Provide real-time error messages and suggestions for input fields.
  4. **Implement ARIA Roles:**
    - Add ARIA attributes to key interactive elements like chat windows, calendar tools, and buttons.
  5. **Test Assistive Technology Compatibility:**
    - Conduct regular testing with screen readers, magnifiers, and browsers.
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## Priority Areas for Immediate Consideration

1. **Navigation and Keyboard Accessibility**  
*Impact:* Enables users with physical impairments to navigate the platform.
  2. **Contrast and Text Readability**  
*Impact:* Supports users with visual impairments or color blindness.
  3. **Error Feedback in Forms**  
*Impact:* Helps users with cognitive disabilities or limited technical skills.
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## Next Steps

1. **Development Team Presentation:**
  - Provide a detailed walkthrough of WCAG 2.2 AA requirements.
  - Showcase examples of accessible and non-accessible features on THUtorium.
2. **Implementation:**
  - Begin with high-priority areas (e.g., navigation, contrast, and keyboard functionality).
  - Establish a timeline for integrating accessibility features across the platform.
3. **User Testing:**
  - Engage users with disabilities to test new features.
  - Gather feedback for further improvements.
4. **Continuous Monitoring:**
  - Schedule periodic accessibility audits to maintain compliance.