OpenStax, Rice University – Accessibility Conformance Report WCAG Edition

(Based on VPAT® Version 2.5)

Name of Product/Version: OpenStax textbooks

Report Date: August 29th, 2024

Product Description: Openly licensed, free online textbooks.

OpenStax textbooks are openly licensed online textbooks available at no cost to students. Their main value is quality content, which meets the scope and sequence of the course for which they are designed. OpenStax textbooks do not contain software (open or closed), and typically do not require audio/video or user inputs; as a result, some of the evaluation criteria categories do not apply.

Contact Information: https://openstax.org/contact

Notes: N/A

Evaluation Methods Used: Evaluation of the product involved a combination of automated, manual, and functional testing against the applicable success criteria within the Web Content Accessibility Guidelines (WCAG) 2.2 Conformance Level A and AA. Level Access (AA) tested a selection of the product using a representative sample to cover the components and functionality of use flows. Below is a list of the assistive technologies (ATs) used:

- NVDA/Chrome
- ZoomText

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Applicable Standards/Guidelines

This report covers the degree of conformance for the following accessibility standard/guidelines:

Standard/Guideline	Included in Report
Web Content Accessibility Guidelines 2.0	Level A (Yes) Level AA (Yes) Level AAA (No)
Web Content Accessibility Guidelines 2.1	Level A (Yes) Level AA (Yes) Level AAA (No)
Web Content Accessibility Guidelines 2.2	Level A (Yes) Level AA (Yes) Level AAA (No)

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Terms

The terms used in the Conformance Level information are defined as follows:

- **Supports:** The functionality of the product has at least one method that meets the criterion without known defects or meets with equivalent facilitation.
- **Partially Supports:** Some functionality of the product does not meet the criterion.
- **Does Not Support:** The majority of product functionality does not meet the criterion.
- **Not Applicable:** The criterion is not relevant to the product.
- **Not Evaluated:** The product has not been evaluated against the criterion. This can be used only in WCAG Level AAA.

WCAG 2.2 Report

Note: When reporting on conformance with the WCAG 2.2 Success Criteria, they are scoped for full pages, complete processes, and accessibility-supported ways of using technology as documented in the WCAG 2.2 Conformance Requirements.

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Table 1: Success Criteria, Level A

Notes:

Criteria	Conformance Level	Remarks and Explanations
1.1.1 Non-text Content (Level A)	Web: Supports	Web: Non-text content presented to the user in the product has text alternatives that serve the equivalent purpose.
1.2.1 Audio-only and Video-only (Prerecorded) (Level A)	Web: Supports	Web: The product does not contain prerecorded audio-only or video-only media.
1.2.2 Captions (Prerecorded) (Level A)	Web: Supports	Web: The product does not contain any prerecorded synchronized media (video with audio) that requires captions.
1.2.3 Audio Description or Media Alternative (Prerecorded) (Level A)	Web: Supports	Web: The product does not contain any prerecorded video media that requires audio descriptions or a media alternative.

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Criteria	Conformance Level	Remarks and Explanations
1.3.1 Info and Relationships (Level A)	Web: Partially Supports	Web: In most instances, the product ensures that information, structure, and relationships conveyed through presentation can also be determined programmatically or through text. Exceptions include: • There are dialogs without appropriate name and role information such as "My highlights" & "Notes" on the "Highlights Modal". • There are related form controls that are not grouped programmatically with its legend on the pages "Highlight a paragraph in a rex page", "TOC navigation" & "Practice Tests". • Headings that are not programmatically marked up such as "Search results", "Related key terms", "Chapter results" on the pages "Search" & "Practice Tests". • There are headings with levels that do not match their visual level on the pages "Study Guides", "Search" and "My Highlights (MH) modal". • There is content that uses heading markup but does not function as a heading such as "Close" on the pages "Practice Tests" & "Study Guides".
1.3.2 Meaningful Sequence (Level A)	Web: Supports	Web: The product ensures that a correct reading order can be programmatically determined for content whose presentation sequence affects its meaning.
1.3.3 Sensory Characteristics (Level A)	Web: Supports	Web: The product does not contain instructions that rely solely on sensory characteristics such as shape, size, visual location, or sound.

Criteria	Conformance Level	Remarks and Explanations
1.4.1 Use of Color (Level A)	Web: Partially Supports	Web: In most instances, the product does not use color as the only visual means of conveying information, indicating an action, or prompting a response. Exceptions include: • Color alone is used to map a note to its corresponding highlighted text on the "Highlight a paragraph in a rex page". • There is content that uses color alone to visually indicate information on the pages "Study Guides", "Search", “Citation, Footer” and “Highlights Modal”
1.4.2 Audio Control (Level A)	Web: Supports	Web: The product does not include audio that plays automatically for more than 3 seconds.
2.1.1 Keyboard (Level A)	Web: Partially Supports	Web: In most instances, the product ensures that interactive content and functionality is accessible and operable using a keyboard or keyboard emulator. Exceptions include: • Button is not reachable with the keyboard such as "Close" on the "Accessibility related hidden links" page. • Menu button is not reachable with the keyboard such as "Responsive Menu" on the "Accessibility related hidden links" page. • Button is not reachable with the keyboard such as "Go to Top" on the "Highlights Modal" page.
2.1.2 No Keyboard Trap (Level A)	Web: Supports	Web: Where a component can receive keyboard focus, the product allows focus to be moved away using only the keyboard and/or advises users of any non-standard methods required to do so.
2.1.4 Character Key Shortcuts (Level A 2.1 only)	Web: Supports	Web: The product does not use character key shortcuts.
2.2.1 Timing Adjustable (Level A)	Web: Supports	Web: The product does not contain time-limited or time-dependent content.

Criteria	Conformance Level	Remarks and Explanations
2.2.2 Pause, Stop, Hide (Level A)	Web: Supports	Web: The product does not contain content that moves, blinks, scrolls, or auto-updates.
2.3.1 Three Flashes or Below Threshold (Level A)	Web: Supports	Web: The product does not contain flashing content.
2.4.1 Bypass Blocks (Level A)	Web: Supports	Web: The product provides skip links and other mechanisms to bypass blocks of content repeated on multiple pages.
2.4.2 Page Titled (Level A)	Web: Partially Supports	Web: Most pages of the product provide titles that adequately describe their topic or purpose. Exception includes: • The page title is not descriptive of the content present on the pages "Accessibility related hidden links", "Error Messages" & "Highlights Modal".

Criteria	Conformance Level	Remarks and Explanations
2.4.3 Focus Order (Level A)	Web: Partially Supports	Web: In most instances, pages of the product can be navigated sequentially with a focus order that matches the logical reading order. Exceptions include: • The focused element is not on the text that has the note added on the page "Highlight a paragraph in a rex page". • When activating any link on the navigation, focus does not update to the top of the updated content on the page "TOC navigation". • There are dialogs that do not receive focus when they appear on the page "My Highlights (MH) modal". • The focus order is illogical for elements on the pages "Text size resizer" & "Search". • Focus does not move to the top of the updated content when user activates the 'Continue' control on the page "Practice Tests". • The user must navigate backward to reach the modal, if the user activates the tab as soon as the selection is made, it will redirect to the next focusable element in the paragraph on the page "Highlight a paragraph in a rex page".
2.4.4 Link Purpose (In Context) (Level A)	Web: Partially Supports	Web: In most instances, the product ensures that the purpose of links can be determined from the link text alone or in combination with the surrounding or programmatic context. Exception includes: • There are links with identical accessible names that navigate to different locations such as "Momentum" on the page "Search".
2.5.1 Pointer Gestures (Level A 2.1 only)	Web: Supports	Web: The product does not require multipoint or path-based gestures for operation.

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2.5.2 Pointer Cancellation (Level A 2.1 only)	Web: Supports	Web: The product ensures that functionality on pointer down-event is completed only when the user releases the pointer or allows the user to abort and/or undo the action.
2.5.3 Label in Name (Level A 2.1 only)	Web: Supports	Web: The product ensures that when interface components have visual labels that include text, the provided accessible name contains the visually presented text.
2.5.4 Motion Actuation (Level A 2.1 only)	Web: Supports	Web: The product does not contain functionality that requires device motion or user motion.
3.1.1 Language of Page (Level A)	Web: Supports	Web: The product ensures that the default human language used on each page can be programmatically determined.
3.2.1 On Focus (Level A)	Web: Supports	Web: The product ensures that interface components do not initiate a change of context when receiving focus.
3.2.2 On Input (Level A)	Web: Supports	Web: The product ensures that interactive components do not initiate a change in context when the component setting is changed unless followed by an explicit user action such as activation of a button or link unless the user has been advised of this behavior before use.
3.2.6 Consistent Help (Level A 2.2 only)	Web: Supports	Web: Help mechanisms occur in the same order relative to other page content in the product.
3.3.1 Error Identification (Level A)	Web: Supports	Web: Where the product automatically detects input errors, the item or field in error is identified and the error is described to the user in text.

Criteria	Conformance Level	Remarks and Explanations
3.3.2 Labels or Instructions (Level A)	Web: Partially Supports	Web: In most instances, where user input is required, the product presents adequate labels or instructions for successfully providing that input. Exception includes: • The instruction to turn off browse mode wasn't announced anywhere by the screen reader on the page "Highlight a paragraph in a rex page". • There is a form field like "Add a note" that relies on the placeholder attribute to supply their accessible name on the page "My Highlights (MH) modal".
3.3.7 Redundant Entry (Level A 2.2 only)	Web: Supports	Web: The product does not request redundant user-entered information in multi-step processes.
4.1.1 Parsing (Level A) Applies to: WCAG 2.0 and 2.1 – Always answer 'Supports' WCAG 2.2 (obsolete and removed) - Does not apply	Web: Does Not Apply	For WCAG 2.0, 2.1, EN 301 549, and Revised 508 Standards, the September 2023 errata update indicates this criterion is always supported. See the WCAG 2.0 Editorial Errata and the WCAG 2.1 Editorial Errata.

Criteria	Conformance Level	Remarks and Explanations
4.1.2 Name, Role, Value (Level A)	Web: Partially Supports	Web: In most instances, the product contains user interface components whose name, role, state, and value can be programmatically determined, and whose state, properties, and value, where applicable, can be programmatically set. Exceptions include: • There are show/hide controls without appropriate name, role, and state information on the pages "My Highlights (MH) modal", "Accessibility related hidden links" and "Citation, Footer". • There are radio buttons without appropriate role information on the page "My Highlights (MH) modal". • There are elements with invalid ARIA attributes or values on the pages "Search" & "My Highlights (MH) modal". • There are accordions without appropriate role and state information on the page "Search". • There is a dropdown without appropriate state information such as expanded/collapsed on the page "Practice Tests". • There are buttons like "Add", "Edit" & "Delete" without appropriate role information on the page "Highlights Modal".

Table 2: Success Criteria, Level AA

Notes:

Criteria	Conformance Level	Remarks and Explanations
1.2.4 Captions (Live) (Level AA)	Web: Supports	Web: The product does not contain any live synchronized media (video with audio) that requires real-time captioning.
1.2.5 Audio Description (Prerecorded) (Level AA)	Web: Supports	Web: The product does not contain any prerecorded synchronized media (video with audio) that requires audio descriptions.
1.3.4 Orientation (Level AA 2.1 only)	Web: Supports	Web: The product does not restrict its view and operation to a single display orientation, such as portrait or landscape unless a specific orientation is essential.
1.3.5 Identify Input Purpose (Level AA 2.1 only)	Web: Supports	Web: The product ensures that the purpose of input fields that request information about the user, such as name or email, can be programmatically determined.
1.4.3 Contrast (Minimum) (Level AA)	Web: Partially Supports	Web: In most instances, the visual presentation of text and images of text in the product provides a contrast ratio of at least 4.5:1 against adjacent colors. Exceptions include: • Element text "2", "3", "4" on the "Practice Tests" page. • Element text such as "3.1 Acceleration" on the "Practice Tests" page. • Text like "Correct", "Read0, Note" on the pages "Practice Tests" and "Highlights Modal".

Criteria	Conformance Level	Remarks and Explanations
1.4.4 Resize text (Level AA)	Web: Partially Supports	Web: In most instances, the product allows text to be resized without assistive technology up to 200 percent without loss of content or functionality. Exception includes: • There is content that disappears, overlaps, or is cut off on the pages "Text size resizer", "Error Messages" & "Highlights Modal".
1.4.5 Images of Text (Level AA)	Web: Partially Supports	Web: In most instances, the product uses text instead of images of text, or the images of text can be visually customized to user viewing requirements. Exception includes: • There is text created with images of text rather than actual text elements styled with CSS on the page "Study Guides".
1.4.10 Reflow (Level AA 2.1 only)	Web: Partially Supports	Web: In most instances, pages of the product allow for resizing to a minimum width of 320 CSS pixels or vertical height of 256 CSS pixels without loss of content or functionality, and without requiring scrolling in two dimensions except where scrolling is required for content usage such as tables or diagrams. Exception includes: • There is content that disappears, overlaps, is cut off, or requires horizontal scrolling to view on the pages "Error Messages", "Citation, Footer" & "Highlights Modal".

Criteria	Conformance Level	Remarks and Explanations
1.4.11 Non-text Contrast (Level AA 2.1 only)	Web: Partially Supports	Web: In most instances, the visual presentation of non-text content in the product has a contrast ratio of at least 3:1 against adjacent color(s). Exceptions include: • Control indicated by icon on hover state such as "Close" on the page "Error Messages". • Switch control on unselected on the page "Citation, Footer". • Active focus outline of the elements on the pages "My Highlights (MH) modal" and "Highlights Modal" • Non-text element like "Edit this highlight" on the page "Highlights Modal".
1.4.12 Text Spacing (Level AA 2.1 only)	Web: Supports	Web: The product supports user changes in text style properties, such as line height or text spacing, without loss of content or functionality.
1.4.13 Content on Hover or Focus (Level AA 2.1 only)	Web: Partially Supports	Web: In most instances, content triggered by hover or focus remains visible while triggered, remains visible while moving the pointer over it, and can be dismissed without moving the pointer or changing focus if it obscures other content. Exception includes: • There is content that appears on hover and focus, obscures other content, and cannot be dismissed without moving focus or the cursor on the page "Highlight a paragraph in a rex page" & "Accessibility related hidden links".
2.4.5 Multiple Ways (Level AA)	Web: Supports	Web: The product provides multiple ways to navigate through pages in the product except where pages are sequential steps in a process.

Criteria	Conformance Level	Remarks and Explanations
2.4.6 Headings and Labels (Level AA)	Web: Supports	Web: Headings and labels provided in the product adequately describe the topic or purpose of the content with which they are associated.
2.4.7 Focus Visible (Level AA)	Web: Supports	Web: The product provides a visible indication of keyboard focus for elements on each page.
2.4.11 Focus Not Obscured (Minimum) (Level AA 2.2 only)	Web: Supports	Web: When user interface components receive keyboard focus, they are, at minimum, partially visible.
2.5.7 Dragging Movements (Level AA 2.2 only)	Web: Supports	Web: The product does not use dragging movements for interactive functionality.
2.5.8 Target Size (Minimum) (Level AA 2.2 only)	Web: Supports	Web: The size of targets in the product meets the requirements of this criterion.
3.1.2 Language of Parts (Level AA)	Web: Supports	Web: Pages of the product present content in a single language.
3.2.3 Consistent Navigation (Level AA)	Web: Supports	Web: The product ensures that navigational mechanisms repeated across the product are presented consistently and in the same relative order.
3.2.4 Consistent Identification (Level AA)	Web: Supports	Web: The product ensures that components with the same functionality are identified consistently across pages of the product.
3.3.3 Error Suggestion (Level AA)	Web: Supports	Web: Where the product automatically detects input errors and provides error messages, the product also provides suggestions for correcting each error.
3.3.4 Error Prevention (Legal, Financial, Data) (Level AA)	Web: Supports	Web: The product does not cause legal commitments, process financial transactions, or modify or delete user-controllable data.

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Criteria	Conformance Level	Remarks and Explanations
3.3.8 Accessible Authentication (Minimum) (Level AA 2.2 only)	Web: Supports	Web: The product provides assistance by allowing users to paste data and by properly applying autocomplete attributes on appropriate input fields to identify the input purpose.
4.1.3 Status Messages (Level AA 2.1 only)	Web: Partially Supports	Web: In most instances, the product provides status messages that can be presented to assistive technologies without receiving focus. Exceptions include: • There are dynamically changing content areas that do not indicate live regions on the pages "My Highlights (MH) modal", "Study Guides" and "Highlights Modal" • There are search results that appear but are not announced to screen reader users on the page "Search". • Error message "We're unable to load Study Guides on this page. Please check your connection and try again" is not communicated by the screen reader on the page "Error Messages".

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