S531 (33356) Information Structures for the Web
I400 (34811) Global Digital Services

Indiana University School of Informatics and Computing
Spring 2022

Credit Hours: 3
Instructors: William Helling (whelling@indiana.edu), Travis Faas (tfaas@iupui.edu)
Instruction mode: This course is offered online only

COURSE DESCRIPTION

Principles, methods, and techniques of basic to advanced markup and scripting to develop web pages and digital services. This course emphasizes work with HTML and CSS to develop valid, accessible, and usable information structures. Scripting (client-side and server-side) is not covered although is encouraged if students have advanced knowledge.

EXTENDED COURSE DESCRIPTION

This course will cover HTML5, CSS3, and responsive web design to meet the needs of any viewport. This course emphasizes the development of basic skills that will allow you to create webpages and to combine these pages into functional websites. After several weeks of working on your technical skills, you will be making valid, accessible, and usable websites that are viewable on all devices. This course requires that you develop a proficiency in both technical skills as well as conceptual skills. The future of information delivery is through a screen of some sort, whether it be a desktop monitor, a tablet, a smartphone, or any other device. You need to know how the users receive that information and what must be done to accommodate them. You may never enter a career where you actually create websites, but if you plan to be an information professional of any type you will certainly assist in developing, judging, acquiring, accepting, promoting, and rejecting information delivered by a web-enabled device of some sort. Learning and employing this technology will be situated in group work done collaboratively at a distance across time zones and cultures. Outcomes will include both technical skills along with the ability to establish shared goals with collaborators cross cultures and produce an artifact that addresses an information need that this distance collaboration team has identified.

Readings/Resources
There is no required textbook. Readings will be taken from:

- HTML Tutorial: [https://www.w3schools.com/html/default.asp](https://www.w3schools.com/html/default.asp)
- CSS Tutorial: [https://www.w3schools.com/css/](https://www.w3schools.com/css/)

Other readings/resources are indicated in the Modules.

## ASSESSMENTS

Each student should not only read the assigned material but also arrive at a competent understanding of it prior to assessment. These measures will be used to assess student-learning outcomes:

- **Discussions (for collaboration):** Several asynchronous discussion forums will span certain Modules to allow students to interact as a whole on common topics and eventually to interact in smaller groups on collaborative projects. Synchronous exchanges will be arranged via Zoom.
- **Assignments:** Assignments assess comprehension and skill acquisition. To complete the assignments, see the instructions on each Module’s page. You will be instructed on steps to complete a markup task that you will upload to a web server. The final assignment will be a cumulative and cooperative effort on a web site that you have been preparing during the semester.

## Teaching and Learning Methods

Active learning (AL), project-based learning (PBL), reading guides, and asynchronous use of Canvas.

## Grade Allocation

Discussions (x7) -- 40%
Markup assignments on HTML/CSS (x6) -- 45%
Final web site assignment (x1) -- 15%

## Assessment Rubric for Final Web Site

A rubric is provided here to assess the final web site, which constitute 20% of the students’ grade. Details on the criteria are provided in the course site. Complete details about the assessment for each assignment will also be provided in the course site.
### Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>3 points</th>
<th>2 points</th>
<th>0 points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Completeness</strong></td>
<td>Assignment contains all required markup components.</td>
<td>Assignment does not contain all required markup components.</td>
<td>Assignment contains incorrect or misapplied markup components.</td>
</tr>
<tr>
<td><strong>Validity: W3C standards</strong></td>
<td>There is no invalid HTML or CSS per W3C standards</td>
<td>There is invalid HTML or CSS but not affecting display.</td>
<td>Invalid HTML or CSS alters some display</td>
</tr>
<tr>
<td><strong>Accessibility: WCAG 2.0 principles: Perceivable, Operable, Understandable, Robust</strong></td>
<td>Assignment meets all four WCAG 2.0 principles</td>
<td>Assignment meets three of the four WCAG 2.0 principles</td>
<td>Assignment meets two or less of the WCAG 2.0 principles</td>
</tr>
<tr>
<td><strong>Usability: Nielsen's 10 Usability Heuristics for User Interface Design</strong></td>
<td>There are no apparent usability mistakes.</td>
<td>There are minor usability mistakes.</td>
<td>A usability mistake alters proper functioning of the site.</td>
</tr>
</tbody>
</table>

### S531 Learning Outcomes

#### Upon completion of this course, students will

<table>
<thead>
<tr>
<th>Upon completion of this course, students will</th>
<th>RBT</th>
<th>PGPL</th>
<th>FIL</th>
<th>PLG</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Produce standard HTML5 to create valid markup for a user interface</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>A1, A2</td>
</tr>
<tr>
<td>2. Design Cascading Style Sheets (CSS3) to give form and layout to a user interface</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>A3, A4</td>
</tr>
<tr>
<td>3. Implement responsive web design to satisfy all user devices</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>A5</td>
</tr>
<tr>
<td>4. Compose markup that meets standard web usability requirements</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>A6</td>
</tr>
<tr>
<td>5. Recognize and solve common issues in creating a digital service</td>
<td>5</td>
<td>3</td>
<td>1,3</td>
<td>3</td>
<td>D1, D2, D3, D4</td>
</tr>
<tr>
<td>6. Appraise international approaches to digital services</td>
<td>4</td>
<td>2</td>
<td>1,3</td>
<td>1</td>
<td>D5</td>
</tr>
<tr>
<td>7. Create a usable, navigable, and accessible website with valid markup</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>A7</td>
</tr>
<tr>
<td>8. Employ distance collaboration skills to produce a team-designed site</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>D6, D7</td>
</tr>
</tbody>
</table>

Analyzing; 5. Evaluating; 6. Creating

- **PGPL**: Principles of Graduate and Professional Learning: [https://graduate.iupui.edu/doc/faculty-staff/principles-grad-prof-learning.docx](https://graduate.iupui.edu/doc/faculty-staff/principles-grad-prof-learning.docx)
- **FIL**: Framework for Information Literacy: [https://www.ala.org/acrl/standards/ilframework](https://www.ala.org/acrl/standards/ilframework)
- **PLO**: MLIS Program Learning Outcomes: [https://soic.iupui.edu/lis/master-library-science/learning-outcomes/](https://soic.iupui.edu/lis/master-library-science/learning-outcomes/)

### I400 Learning Outcomes

<table>
<thead>
<tr>
<th>Course Learning Outcome</th>
<th>PLOs</th>
<th>RBT</th>
<th>Level</th>
<th>SWC</th>
<th>PLUS</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Produce standard HTML5 to create valid markup for a user interface</td>
<td>D1: Apply fundamental concepts of software architecture</td>
<td>3</td>
<td>I</td>
<td>5.1</td>
<td>P3.2. Innovator: Creates/designs</td>
<td>A1, A2</td>
</tr>
<tr>
<td>2. Design Cascading Style Sheets (CSS3) to give form and layout to a user interface</td>
<td>D1: Apply fundamental concepts of software architecture</td>
<td>3</td>
<td>I</td>
<td>5.1</td>
<td>P3.2. Innovator: Creates/designs</td>
<td>A3, A4</td>
</tr>
<tr>
<td>3. Implement responsive web design to satisfy all user devices</td>
<td>D2: Develop user requirements</td>
<td>3</td>
<td>I</td>
<td>5.1</td>
<td>P3.2. Innovator: Creates/designs</td>
<td>A5</td>
</tr>
<tr>
<td>4. Compose markup that meets standard web usability requirements</td>
<td>D2: Develop user requirements</td>
<td>6</td>
<td>I</td>
<td>5.1</td>
<td>P2.1 Problem Solver: Think critically</td>
<td>A6</td>
</tr>
<tr>
<td>5. Recognize and apply standard solutions in creating a digital service</td>
<td>A6: Evaluate and create interfaces by applying user experience design principles, methods, and theories</td>
<td>3</td>
<td>I</td>
<td>5.1</td>
<td>P2.2 Problem Solver: Collaborates</td>
<td>D1, D2, D3, D4</td>
</tr>
<tr>
<td>6. Appraise international approaches to digital services</td>
<td>F6: Work collaboratively as part of a team, including global teams</td>
<td>4</td>
<td>I</td>
<td>5.5</td>
<td>P2.1. Problem Solver: Analyzes, Synthesizes, and Evaluates</td>
<td>D5</td>
</tr>
<tr>
<td>7. Create a usable, navigable, and accessible website with valid markup</td>
<td>D6: Design web service consumers and producers in service-oriented architectures</td>
<td>6</td>
<td>I</td>
<td>5.6</td>
<td>P3.2. Innovator: Creates/designs</td>
<td>A7</td>
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<td>Level</td>
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<td>F6: Work collaboratively as part of a team, including global teams</td>
<td>3</td>
<td>I</td>
<td>5.1</td>
<td>P1.4. Communicator: Convey Ideas Effectively</td>
<td>D6, D7</td>
</tr>
</tbody>
</table>

- **Program-level Learning Outcomes (PLOs):** Please visit [Learning Outcomes for the B.S. in Informatics](https://soic.iupui.edu/undergraduate/degrees/informatics/learning-outcomes/) to view the complete list of the program-level learning outcomes for B.S. in Informatics.
- **Level of knowledge (Level):** I – Introduce; R – Reinforce; M – Master
- **SWC (Statewide Competencies)**

**COURSE OVERVIEW**

This course parallels Orientation to Digital Services (ODS: [https://opinto-opas.haaga-helia.fi/course_unit/DIG1TF001](https://opinto-opas.haaga-helia.fi/course_unit/DIG1TF001)) taught at Haaga-Helia University in Helsinki, Finland ([https://www.haaga-helia.fi/en](https://www.haaga-helia.fi/en)).

**Jan 10-16 -- Module 0: orientation**

*Discussion 0: Orientation*

**Jan 17-23 -- Module 1: IUPUI-Haaga-Helia introductions**

*Discussion 1: Introductions via Canvas*

Collaboration with individuals can begin as soon as course scheduling logistics can be arranged. Students start talking to one another to share their backgrounds and anticipations for the semester.

**Jan 24-30 -- Module 2: Creating and validating HTML markup**

*Assignment 1: Uploading and validating*

Background reading:

- HTML Editors: [https://www.w3schools.com/html/html_editors.asp](https://www.w3schools.com/html/html_editors.asp)
- HTML Basic: [https://www.w3schools.com/html/html_basic.asp](https://www.w3schools.com/html/html_basic.asp)
- HTML Attributes: [https://www.w3schools.com/html/html_attributes.asp](https://www.w3schools.com/html/html_attributes.asp)
- HTML Headings: [https://www.w3schools.com/html/html_headings.asp](https://www.w3schools.com/html/html_headings.asp)
- HTML Quotations: [https://www.w3schools.com/html/html_quotation_elements.asp](https://www.w3schools.com/html/html_quotation_elements.asp)
Validation exercises for HTML and Accessibility
- W3C Validation: https://validator.w3.org/
- Wave WebAim validation: https://wave.webaim.org/

Jan 31-Feb 6 -- Module 3: Creating structure and hierarchy
**Discussion 2: Valid and accessible markup**

Background reading:
- HTML Comments: https://www.w3schools.com/html/html_comments.asp
- HTML Links: https://www.w3schools.com/html/html_links.asp
- HTML Images: https://www.w3schools.com/html/html_images.asp
- HTML The Picture Element: https://www.w3schools.com/html/html_images_picture.asp
- HTML Tables: https://www.w3schools.com/html/html_tables.asp
- HTML Lists: https://www.w3schools.com/html/html_lists.asp
- HTML Unordered Lists: https://www.w3schools.com/html/html_lists_unordered.asp
- HTML Ordered Lists: https://www.w3schools.com/html/html_lists_ordered.asp
- HTML Other Lists: https://www.w3schools.com/html/html_lists_other.asp
- HTML Semantic Elements: https://www.w3schools.com/html/html5_semantic_elements.asp

Feb 7-13 -- Module 4: Styling HTML markup with CSS
**Assignment 2: Creating valid and accessible HTML/CSS**

Background reading:
- CSS Introduction: https://www.w3schools.com/css/css_intro.asp
- CSS Syntax: https://www.w3schools.com/css/css_syntax.asp
- CSS Selectors: https://www.w3schools.com/css/css_selectors.asp
- CSS How To: https://www.w3schools.com/css/css_howto.asp
- CSS Comments: https://www.w3schools.com/css/css_comments.asp
- CSS Colors: https://www.w3schools.com/css/css_colors.asp
- CSS RGB: https://www.w3schools.com/css/css_colors_rgb.asp
- CSS HEX: https://www.w3schools.com/css/css_colors_hex.asp
- CSS HSL: https://www.w3schools.com/css/css_colors_hsl.asp
- CSS Background Color: https://www.w3schools.com/css/css_background.asp
- CSS Background Image: https://www.w3schools.com/css/css_background_image.asp
- CSS Background Repeat: https://www.w3schools.com/css/css_background_repeat.asp
- CSS Background Attachment: https://www.w3schools.com/css/css_background_attachment.asp
- CSS Background Shorthand: https://www.w3schools.com/css/css_background_shorthand.asp

Feb 14-20 -- Module 5: Page layout options
**Discussion 3: CSS Box model, Responsive Web Design**

Background reading:
• CSS Borders: https://www.w3schools.com/css/css_border.asp
• CSS Border Width: https://www.w3schools.com/css/css_border_width.asp
• CSS Border Color: https://www.w3schools.com/css/css_border_color.asp
• CSS Border Sides: https://www.w3schools.com/css/css_border_sides.asp
• CSS Border Shorthand: https://www.w3schools.com/css/css_border_shorthand.asp
• CSS Rounded Borders: https://www.w3schools.com/css/css_border_rounded.asp
• CSS Margins: https://www.w3schools.com/css/css_margin.asp
• CSS Margin Collapse: https://www.w3schools.com/css/css_marginCollapse.asp
• CSS Padding: https://www.w3schools.com/css/css_padding.asp
• CSS Height/Width: https://www.w3schools.com/css/css_dimension.asp
• CSS Box Model: https://www.w3schools.com/css/css_boxmodel.asp

SUPPLEMENTARY
• CSS Outline: https://www.w3schools.com/css/css_outline.asp
• CSS Outline Width: https://www.w3schools.com/css/css_outline_width.asp
• CSS Outline Color: https://www.w3schools.com/css/css_outline_color.asp
• CSS Outline Shorthand: https://www.w3schools.com/css/css_outline_shorthand.asp
• CSS Outline Offset: https://www.w3schools.com/css/css_outline_offset.asp
• CSS Text Color: https://www.w3schools.com/css/css_text.asp
• CSS Text Alignment: https://www.w3schools.com/css/css_text_align.asp
• CSS Text Decoration: https://www.w3schools.com/css/css_text_decoration.asp
• CSS Text Transformation: https://www.w3schools.com/css/css_text_transformation.asp
• CSS Text Spacing: https://www.w3schools.com/css/css_text_spacing.asp
• CSS Text Shadow: https://www.w3schools.com/css/css_text_shadow.asp
• CSS Font Family: https://www.w3schools.com/css/css_font.asp
• CSS Font Web Safe: https://www.w3schools.com/css/css_font_websafe.asp
• CSS Font Fallbacks: https://www.w3schools.com/css/css_font_fallbacks.asp
• CSS Font Style: https://www.w3schools.com/css/css_font_style.asp
• CSS Font Size: https://www.w3schools.com/css/css_font_size.asp
• CSS Font Google: https://www.w3schools.com/css/css_font_google.asp
• CSS Font Pairings: https://www.w3schools.com/css/css_font_pairings.asp
• CSS Font Shorthand: https://www.w3schools.com/css/css_font_shorthand.asp
• CSS Icons: https://www.w3schools.com/css/css_icons.asp
• CSS Links: https://www.w3schools.com/css/css_link.asp
• CSS Lists: https://www.w3schools.com/css/css_list.asp
• CSS Table Borders: https://www.w3schools.com/css/css_table.asp
• CSS Table Size: https://www.w3schools.com/css/css_table_size.asp
• CSS Table Alignment: https://www.w3schools.com/css/css_table_align.asp
• CSS Table Style: https://www.w3schools.com/css/css_table_style.asp
• CSS Display: https://www.w3schools.com/css/css_display_visibility.asp
• CSS Max-width: https://www.w3schools.com/css/css_max-width.asp

Feb 21-27-- Haaga-Helia break week
Feb 28-Mar 6 -- Module 6: Topic Collaboration, Layout introduction

Assignment 3: Creating layout with CSS

Background reading:
- CSS Position: https://www.w3schools.com/css/css_positioning.asp
- CSS Overflow: https://www.w3schools.com/css/css_overflow.asp
- CSS Float: https://www.w3schools.com/css/css_float.asp
- CSS Float Clear: https://www.w3schools.com/css/css_float_clear.asp
- CSS Float Examples: https://www.w3schools.com/css/css_float_examples.asp
- CSS Inline-block: https://www.w3schools.com/css/css_inline-block.asp

SUPPLEMENTARY
- CSS Align: https://www.w3schools.com/css/css_align.asp
- CSS Combinators: https://www.w3schools.com/css/css_combinators.asp
- CSS Pseudo-class: https://www.w3schools.com/css/css_pseudo_classes.asp
- CSS Pseudo-element: https://www.w3schools.com/css/css_pseudo_elements.asp
- CSS Navbar: https://www.w3schools.com/css/css_navbar.asp
- CSS Vertical Navbar: https://www.w3schools.com/css/css_navbar_vertical.asp
- CSS Horizontal Navbar: https://www.w3schools.com/css/css_navbar_horizontal.asp
- CSS Dropdowns: https://www.w3schools.com/css/css_dropdowns.asp

Mar 7-13 – Module 7: Topic Collaboration, GRID layout

Discussion 4: Assigning roles for contributing to the group websites

Background reading:
- CSS Website Layout: https://www.w3schools.com/css/css_website_layout.asp
- CSS Units: https://www.w3schools.com/css/css_units.asp
- RWD Intro: https://www.w3schools.com/css/css_rwd_intro.asp
- RWD Viewport: https://www.w3schools.com/css/css_rwd_viewport.asp
- RWD Grid View: https://www.w3schools.com/css/css_rwd_grid.asp
- RWD Media Queries: https://www.w3schools.com/css/css_rwd_mediaqueries.asp
- RWD Images: https://www.w3schools.com/css/css_rwd_images.asp
- RWD Videos: https://www.w3schools.com/css/css_rwd_videos.asp
- RWD Frameworks: https://www.w3schools.com/css/css_rwd_frameworks.asp
- RWD Templates: https://www.w3schools.com/css/css_rwd_templates.asp
- Grid Intro: https://www.w3schools.com/css/css_grid.asp
- Grid Container: https://www.w3schools.com/css/css_grid_container.asp
- Grid Item: https://www.w3schools.com/css/css_grid_item.asp

Mar 14-20 -- IUPUI spring break week
Mar 21-27 -- Haaga-Helia break week

Mar 28-Apr 3 -- Module 8: Finalization of plans
Assignment 4: Group reports on member roles

Background reading: Recommended for those who will add audio, video, fonts to the website

- HTML Canvas: https://www.w3schools.com/html/html5_canvas.asp
- HTML SVG: https://www.w3schools.com/html/html5_svg.asp
- HTML Media: https://www.w3schools.com/html/html_media.asp
- HTML Video: https://www.w3schools.com/html/html5_video.asp
- HTML Audio: https://www.w3schools.com/html/html5_audio.asp
- HTML YouTube: https://www.w3schools.com/html/html_youtube.asp

Apr 4-10 -- Module 9: Website implementation
Discussion 5: Group members collaborate to begin website construction

Background reading:
- Usability: Jacob Nielsen's 10 Heuristics: https://www.nngroup.com/articles/ten-usability-heuristics/

Apr 11-17 -- Module 10: Website implementation
Assignment 5: Progress reports

Apr 18-24 -- Module 11: Website implementation
Discussion 6: Usability and user testing

Apr 25-May 1 -- Module 12: Website implementation
Assignment 6: Progress reports

May 2-6 -- Module 13: Final Project delivery
Discussion 7 and Assignment 7 (final website): Website will be complete and critiqued by group members and instructors
<table>
<thead>
<tr>
<th>Dates</th>
<th>Modules</th>
<th>S531/I400 Assignments</th>
<th>S604/S400 Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 10-16</td>
<td>Module 0: orientation</td>
<td>Discussion 0: Orientation</td>
<td></td>
</tr>
<tr>
<td>Jan 17-23</td>
<td>Module 1: IUPUI-Haaga-Helia introductions</td>
<td>Discussion 1: Introductions via Canvas</td>
<td>Discussion/report 1</td>
</tr>
<tr>
<td>Jan 24-30</td>
<td>Module 2: Creating and validating HTML markup</td>
<td>Assignment 1: Uploading and validating</td>
<td></td>
</tr>
<tr>
<td>Jan 31-Feb 6</td>
<td>Module 3: Creating structure and hierarchy</td>
<td>Discussion 2: Valid and accessible markup</td>
<td>Discussion/report 2</td>
</tr>
<tr>
<td>Feb 7-13</td>
<td>Module 4: Styling HTML markup with CSS</td>
<td>Assignment 2: Creating valid and accessible HTML/CSS</td>
<td></td>
</tr>
<tr>
<td>Feb 14-20</td>
<td>Module 5: Page layout options</td>
<td>Discussion 3: CSS Box model, Responsive Web Design</td>
<td>Discussion/report 3</td>
</tr>
<tr>
<td>Feb 21-27</td>
<td>Haaga-Helia break week</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mar 7-13</td>
<td>Module 7: Topic Collaboration, GRID layout</td>
<td>Discussion 4: Assigning roles for contributing to the group websites</td>
<td>Discussion/report 4</td>
</tr>
<tr>
<td>Mar 14-20</td>
<td>IUPUI spring break week</td>
<td></td>
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<td></td>
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<tr>
<td>Mar 28-Apr 3</td>
<td>Module 8: Finalization of plans</td>
<td>Assignment 4: Group reports on member roles</td>
<td></td>
</tr>
<tr>
<td>Apr 4-10</td>
<td>Module 9: Website implementation</td>
<td>Discussion 5: Group members collaborate to begin website construction</td>
<td>Discussion/report 5</td>
</tr>
<tr>
<td>Apr 11-17</td>
<td>Module 10: Website implementation</td>
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<td>Discussion 6: Usability and user testing</td>
<td>Discussion/report 6</td>
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<td>May 2-6</td>
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<td>Discussion/report 7</td>
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</tbody>
</table>
### Graduate Grading Scale: S531

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>100 % to 96.0%</td>
</tr>
<tr>
<td>A-</td>
<td>95.9 % to 90.0%</td>
</tr>
<tr>
<td>B+</td>
<td>89.9 % to 87.0%</td>
</tr>
<tr>
<td>B</td>
<td>86.9 % to 84.0%</td>
</tr>
<tr>
<td>B-</td>
<td>83.9 % to 80.0%</td>
</tr>
<tr>
<td>C+ through C</td>
<td>79.9 % to 70.0%</td>
</tr>
<tr>
<td>D through F</td>
<td>69.9 % &gt;</td>
</tr>
</tbody>
</table>

Note that to satisfy a core requirement, grade must be B- or above. For electives, grade must be C or above (and overall GPA 3.0 or above).

### Undergraduate Grading Scale: I400

<table>
<thead>
<tr>
<th>Grade</th>
<th>Minimum %</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>97.0</td>
<td>Professional level work, showing highest level of achievement</td>
</tr>
<tr>
<td>A</td>
<td>93.0</td>
<td>Extraordinarily high achievement, quality of work; shows command of the subject matter</td>
</tr>
<tr>
<td>A-</td>
<td>90.0</td>
<td>Excellent and thorough knowledge of the subject matter</td>
</tr>
<tr>
<td>B+</td>
<td>87.0</td>
<td>Above average understanding of material and quality of work</td>
</tr>
<tr>
<td>B</td>
<td>83.0</td>
<td>Mastery and fulfillment of all course requirements; good,</td>
</tr>
<tr>
<td>Grade</td>
<td>Minimum %</td>
<td>Description</td>
</tr>
<tr>
<td>-------</td>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td>B-</td>
<td>80.0</td>
<td>Satisfactory quality of work</td>
</tr>
<tr>
<td>C+</td>
<td>77.0</td>
<td>Modestly acceptable performance and quality of work</td>
</tr>
<tr>
<td>C</td>
<td>73.0</td>
<td>Minimally acceptable performance and quality of work</td>
</tr>
<tr>
<td>C-</td>
<td>70.0</td>
<td>Unacceptable work (Core course must be repeated for credit)</td>
</tr>
<tr>
<td>D+</td>
<td>67.0</td>
<td>Unacceptable work (Course must be repeated for credit)</td>
</tr>
<tr>
<td>D</td>
<td>63.0</td>
<td>Unacceptable work</td>
</tr>
<tr>
<td>D-</td>
<td>60.0</td>
<td>Unacceptable work</td>
</tr>
<tr>
<td>F</td>
<td>0.0</td>
<td>Unacceptable work</td>
</tr>
</tbody>
</table>

No credits toward major, minor, or certificate requirements are granted for a grade below C. No credits toward general education or elective requirements are granted for a grade below C–.

**Recommended Resources**

Student should already have mastered basic technology skills. For students lacking entry skills, existing online resources can be valuable. IUPUI provides access to excellent online tutorials. The following resources are recommended for course assignments, exercises, and projects:

- For self-instructional modules focusing on a wide range of basic technology skills, go to [UITS IT Training](iu.edu/explore-topics/show-all/index.html)
- For additional software training materials, go to [UITS IT Training: Skillsoft](iu.edu/skillsoft/)

You have three sources for software: IUware, IUanyWare, Office 365

- **IUware** ([iuware.iu.edu/](iuware.iu.edu/)) allows students, faculty, and staff to download software at no charge. See [What is IUware?](kb.iu.edu/d/agze)
- **IUanyWare** ([uits.iu.edu/iuanyware](uits.iu.edu/iuanyware)) uses a web browser or mobile app to run certain IU-licensed software applications without your needing to install them on your device. See [What is IUanyWare](kb.iu.edu/d/bbbr). Note: You will be asked to download and install Citrix Receiver the first time you use the full service.
- **Office 365** ([uits.iu.edu/office365](uits.iu.edu/office365)) is a subscription-based service free to all IU currently enrolled students that provides multiple options for accessing the newest versions of Microsoft Office. See [About Microsoft Office 365 at IU](kb.iu.edu/d/bexq)

For more details, see [How to get university-licensed software at IU?](kb.iu.edu/d/aclo)
**Text Editor**
Text editors are types of applications focused on helping you write clear markup and programming code. There are a variety of free text editors available for both Mac and Windows computers

- Brackets (Mac/Windows)
- Atom (Mac/Windows)
- Notepad++ (Windows)

Use what you prefer, but you must have at least one text editor installed. The textbook uses Brackets.

You will choose the tool you want to use to create web pages, but here is some advice: If you have never made web pages before and are hesitant to learn new software at the same time you are also taking this class, avoid Dreamweaver and Visual Studio. If you already bring in some skills at webpage markup and wish to take advantage of the features that Dreamweaver and Visual Studio enjoy, this may be a good opportunity for you to acquire skills in one of these programs because you will use them in the future if you continue in this field. However, this is not a Dreamweaver/Visual Studio course, and lessons are not provided using these editors.

**Browser**
You are already using some browser, of course, but you will need to see if it is the most recent version. If it is not, update it.

- For PC users, you need to have the most recent version of Edge and the most recent version of either Firefox or Chrome.
- For Mac users, you need to have the most recent version of Safari and the most recent version of either Firefox or Chrome.

**SFTP client**
An SFTP client allows you to post your files to a web server. Several free SFTP clients are available:

- **WinSCP** (winscp.net/) -- PC
- **Filezilla** (filezilla-project.org) -- PC and Mac
- **CyberDuck** (cyberduck.io/sftp/) -- PC and Mac

**VPN client: Pulse Secure**
IUPUI students who want to connect to their webserver accounts from outside the IU network will require VPN. For information on IU’s VPN service, including how to install and configure a VPN client for your computer or device, see About the IU VPN (https://kb.iu.edu/d/ajrq). IU’s VPN also requires Two-Step Login (Duo): for more information on Two-Step Login, see About Two-Step Login (Duo) at IU (https://kb.iu.edu/d/beum). If you have questions about using
a VPN or Two-Step Login, please contact your local Support Center. For information on how to contact your local Support Center, please see Contact your campus IT Support Center (https://kb.iu.edu/d/abxl). An informational notice at Status IU (https://status.iu.edu) is also posted with up-to-date information on connection issues.

Access to a web server
IUPUI students will use in-info-web4.informatics.iupui.edu accounts furnished by SoIC IT. You will receive account information when class begins.

EXPECTATIONS, GUIDELINES, AND POLICIES

Attendance

The course will be taught entirely online including web-based readings and resources, threaded discussions, plus online presentations and activities.

This course assumes that students can work independently. There are no required face-to-face meetings. There are no required synchronous online meetings. However, students are encouraged to e-mail or arrange an online chat with the instructor at any time.

A basic requirement of this course is that you will participate in all class activities and conscientiously complete all required course assignments. Students are expected to complete the assignments, quizzes, and projects on time, which is your attendance.

Incompletes

Incompletes are not automatically granted. You may arrange a grade of “I” or incomplete for a course with an instructor for special circumstances. Students need to have completed the majority of course work (75%+) at an acceptable level of achievement. You and the instructor must agree upon the terms for completing the course. Students who have multiple incompletes (2 or more) will be blocked from registering for additional LIS courses until there is only one (or zero) outstanding incomplete, or the student presents the department chair with a plan of action for completing all incompletes in a timely way.

Deadlines for the work for an incomplete to be finished are at the instructor’s discretion. The deadline can be no longer than 1 year from the end of the semester, but can be earlier if the instructor specifies that. Left unchanged, an Incomplete automatically becomes an F after one year. See: Student Central: Incompletes (studentcentral.iupui.edu/grades-progress/incompletes.html)

Deliverables
You are responsible for completing each deliverable (e.g., Module) by its deadline and submitting it by the specified method. Deadlines and submission instructions are outlined in the syllabus or in supplementary documents accessible through Canvas. In fairness to the instructor and students who completed their work on time, a grade on a deliverable shall be reduced 10%, if it is submitted late and a further 10% for each 24-hour period it is submitted after the deadline.

Your Questions, Concerns, and Comments

Please do not hesitate to contact the instructor directly via Canvas mail with any questions. If needed, the instructor will also use Canvas Announcements to notify the entire group (e.g., syllabus change, instructor availability, etc.).

If you have problems accessing Canvas, please contact the University Information Technology Services (UITS) Support Center at 317-274-HELP. All course Announcements will be found in Canvas along with the course schedule, assignments, and other course documents.

CODE OF CONDUCT

All students should aspire to the highest standards of academic integrity. Using another student’s work on an assignment, cheating on a test, not quoting or citing references correctly, or any other form of dishonesty or plagiarism shall result in a grade of zero on the item and possibly an F in the course. Incidences of academic misconduct shall be referred to the Department Chair and repeated violations shall result in dismissal from the program.

All students are responsible for reading, understanding, and applying the Code of Student Rights, Responsibilities and Conduct and in particular the section on academic misconduct. Refer to The Code of Student Rights (studentcode.iu.edu/)

All students must also successfully complete How to Recognize Plagiarism: Tutorials and Tests (plagiarism.iu.edu).

You must document the difference between your writing and that of others. Use quotation marks in addition to a citation, page number, and reference whenever writing someone else’s words (e.g., following the Publication Manual of the American Psychological Association). To detect plagiarism instructors apply a range of methods.

Academic Misconduct

1. **Cheating:** Cheating is considered to be an attempt to use or provide unauthorized assistance, materials, information, or study aids in any form and in any academic exercise or environment.
a. A student must not use external assistance on any “in-class” or “take-home” examination, unless the instructor specifically has authorized external assistance. This prohibition includes, but is not limited to, the use of tutors, books, notes, calculators, computers, and wireless communication devices.

b. A student must not use another person as a substitute in the taking of an examination or quiz, nor allow other persons to conduct research or to prepare work, without advanced authorization from the instructor to whom the work is being submitted.

c. A student must not use materials from a commercial term paper company, files of papers prepared by other persons, or submit documents found on the Internet.

d. A student must not collaborate with other persons on a particular project and submit a copy of a written report that is represented explicitly or implicitly as the student’s individual work.

e. A student must not use any unauthorized assistance in a laboratory, at a computer terminal, or on fieldwork.

f. A student must not steal examinations or other course materials, including but not limited to, physical copies and photographic or electronic images.

g. A student must not submit substantial portions of the same academic work for credit or honors more than once without permission of the instructor or program to whom the work is being submitted.

h. A student must not, without authorization, alter a grade or score in any way, nor alter answers on a returned exam or assignment for credit.

2. **Fabrication**: A student must not falsify or invent any information or data in an academic exercise including, but not limited to, records or reports, laboratory results, and citation to the sources of information.

3. **Plagiarism**: Plagiarism is defined as presenting someone else’s work, including the work of other students, as one’s own. Any ideas or materials taken from another source for either written or oral use must be fully acknowledged, unless the information is common knowledge. What is considered “common knowledge” may differ from course to course.

   a. A student must not adopt or reproduce ideas, opinions, theories, formulas, graphics, or pictures of another person without acknowledgment.

   b. A student must give credit to the originality of others and acknowledge indebtedness whenever:

      - directly quoting another person’s actual words, whether oral or written;
      - using another person’s ideas, opinions, or theories;
      - paraphrasing the words, ideas, opinions, or theories of others, whether oral or written;
      - borrowing facts, statistics, or illustrative material; or
      - offering materials assembled or collected by others in the form of projects or collections without acknowledgment
c. **Interference:** A student must not steal, change, destroy, or impede another student’s work, nor should the student unjustly attempt, through a bribe, a promise of favors or threats, to affect any student’s grade or the evaluation of academic performance. Impeding another student’s work includes, but is not limited to, the theft, defacement, or mutilation of resources so as to deprive others of the information they contain.

d. **Violation of Course Rules:** A student must not violate course rules established by a department, the course syllabus, verbal or written instructions, or the course materials that are rationally related to the content of the course or to the enhancement of the learning process in the course.

e. **Facilitating Academic Dishonesty:** A student must not intentionally or knowingly help or attempt to help another student to commit an act of academic misconduct, nor allow another student to use his or her work or resources to commit an act of misconduct.

**OTHER POLICIES**

1. **Administrative withdrawal:** A basic requirement of this course is that students complete all required course activities. If a student is unable to attend, participate in, or complete an assignment on time, it is the student’s responsibility to inform the instructor. If a student misses more than half of the required activities within the first 25% of the course without contacting the instructor, the student may be administratively withdrawn from this course. Administrative withdrawal may have academic, financial, and financial aid implications. Administrative withdrawal will take place after the full refund period, and a student who has been administratively withdrawn from a course is ineligible for a tuition refund. Contact the instructor with questions concerning administrative withdrawal. Learn more at [IUPUI Administrative Withdrawal Policy](studentcentral.iupui.edu/register/administrative-withdrawal.html)

2. **Civility:** To maintain an effective and inclusive learning environment, it is important to be an attentive and respectful participant in all course exercises. IUPUI nurtures and promotes “a campus climate that seeks, values, and cultivates diversity in all of its forms and that provides conditions necessary for all campus community members to feel welcomed, supported, included, and valued” (IUPUI Strategic Initiative 9). IUPUI prohibits “discrimination against anyone for reasons of race, color, religion, national origin, sex, sexual orientation, marital status, age, disability, or veteran status” (Office of Equal Opportunity). Profanity or derogatory comments about the instructor, fellow students, invited speakers, or any members of the campus community shall not be tolerated. A violation of this rule shall result in a warning and, if the offense continues, possible disciplinary action.

3. **Communication:** For online courses, the instructor or teaching assistant should respond to emails within two Indiana University working days, which excludes weekends and holidays. The instructor should accept appointments for face-to-face, telephone, or teleconferenced meetings, and announce periods of extended absence in advance.
4. **Conferences**: To present research at an academic conference as speaker is commendable and aligns with the educational and research mission of the school and university. However, instructors can only provide accommodations for absences if a student is presenting work, such as a paper or poster, or is supported by a school or campus-level scholarship. The student should request from the instructor accommodation for an absence as soon as possible upon paper, poster, or scholarship acceptance. In the request for accommodation for absence, the student should provide supporting documentation of acceptance as well as confirmation from their mentor or campus sponsor that the presentation is to meet a research, educational, or diversity objective. Permission is granted at the discretion of the instructor. Students should not expect an exception for nonacademic conferences or conferences at which the student is not presenting as speaker. Travel arrangements should not be made until the student has received permission from the instructor.

5. **Counseling and Psychological Services (CAPS)**: Students seeking counseling or other psychological services should contact the CAPS office at 274-2548 or capsindy@iupui.edu. For more information visit the CAPS website (iupui.edu/health-wellness/counseling-psychology/)

6. **Course evaluations**: Course evaluations provide vital information for improving the quality of courses and programs. Students are not required to complete a course or instructor evaluation for any section in which they are enrolled at the School of Informatics and Computing. Course evaluations are completed in Canvas (Course Questionnaire). Course evaluations are open from the eleventh week. Course evaluations are anonymous, which means that no one can view the name of the student completing the evaluation. In addition, no one can view the evaluation itself until after the instructor has submitted the final grades for the course. In small sections, demographic information should be left blank, if it could be used to identify the student.

7. **Disabilities policy**: In compliance with the Americans with Disabilities Act (ADA), all qualified students enrolled in this course are entitled to reasonable accommodations. Please notify the instructor during the first week of class of accommodations needed for the course. Students requiring accommodations because of a disability must register with Adaptive Educational Services (AES) and complete the appropriate AES-issued before receiving accommodations. Students with learning disabilities for which accommodations are desired should contact the Adaptive Educational Services office on campus, and inform the instructor as soon as possible: Adaptive Educational Services (AES) (diversity.iupui.edu/offices/aes/index.html), or 317-274-3241.

8. **Email**: Indiana University uses your IU email account as an official means of communication, and students should check it daily. Although you may have your IU email forwarded to an outside email account, please email faculty and staff from your IU email account.

9. **Emergency preparedness**: Know what to do in an emergency so that you can protect yourself and others. For more information, visit the emergency management website at Protect IU (protect.iu.edu/emergency-planning/emergency-contact/iupui.html).

10. **University policies**: Numerous policies governing IU faculty and students may be found at University Policies (policies.iu.edu/categories/academic-faculty-students.html).
11. **No class attendance without enrollment.** Only those who are officially enrolled in this course may attend class unless enrolled as an auditor or making up an Incomplete by prior arrangement with the instructor. This policy does not apply to those assisting a student with a documented disability, serving in an instructional role, or administrative personnel. See [Register: Get ready to take classes](studentcentral.iupui.edu/register/index.html).

12. **Religious holidays:** Students seeking accommodation for religious observances must submit a request form to the course instructor by the end of the second week of the semester. For information visit [You have the right to observe religious holidays](studentcentral.iupui.edu/calendars/holidays/index.html).

13. **Right to revise:** The instructor reserves the right to make changes to this syllabus as necessary and, in such an event, will notify students of the changes immediately.

14. **Sexual misconduct:** IU does not tolerate sexual harassment or violence. For more information and resources, visit [Stop Sexual Violence](stopsexualviolence.iu.edu/)

15. **Student advocate:** The Office of Student Advocacy and Support assists students with personal, financial, and academic issues. The Student Advocate is in the Campus Center, Suite 350, and may also be contacted at 317 274-4431 or studvoc@iupui.edu. For more information visit [Office of Student Advocacy and Support](studentaffairs.iupui.edu/advocacy-resources/index.html).

**MISSION STATEMENT**

The Mission of IUPUI is to provide for its constituents excellence in

- Teaching and Learning;
- Research, Scholarship, and Creative Activity; and
- Civic Engagement.

With each of these core activities characterized by

- Collaboration within and across disciplines and with the community;
- A commitment to ensuring diversity; and
- Pursuit of best practices.

IUPUI’s mission is derived from and aligned with the principal components—Communities of Learning, Responsibilities of Excellence, Accountability and Best Practices—of Indiana University’s Strategic Directions Charter.

**STATEMENT OF VALUES**

IUPUI values the commitment of students to learning; of faculty to the highest standards of teaching, scholarship, and service; and of staff to the highest standards of service. IUPUI recognizes students as partners in learning. IUPUI values the opportunities afforded by its
location in Indiana's capital city and is committed to serving the needs of its community. Thus, IUPUI students, faculty, and staff are involved in the community, both to provide educational programs and patient care and to apply learning to community needs through service. As a leader in fostering collaborative relationships, IUPUI values collegiality, cooperation, creativity, innovation, and entrepreneurship as well as honesty, integrity, and support for open inquiry and dissemination of findings. IUPUI is committed to the personal and professional development of its students, faculty, and staff and to continuous improvement of its programs and services.