



CIS Standards

(Updated November 2016)

Web Design and Development for all Programs of Study

Please select the Web Design and Development standards that match the program of study to make sure you have the correct standard reference number.

Page 2 - Web Design Program of Study

Page 3 – Web Development Program of Study

Web Design and Development

Course Description

Students will demonstrate advanced knowledge of web design and languages, including HyperText Markup Language(HTML) and Cascading Style Sheets (CSS) to create a content rich and visually pleasing website that captures and keeps visitors' interests. Focus will be given to effective page layout, image creation and manipulation, interactivity, content creation, and project management. This course may be available for articulated or dual credit at a postsecondary institution.

Course Code: 270706

Endorsements to teach:

IT

Programs of Study to which this Course applies:

Web Design, Web Development

CIS. HS. 3. 20

Read and write code that is clear, well-formatted, and appropriately documented.

- CIS. HS. 3. 20. *a* Identify alternatives and discuss advantages and disadvantages that led to their decision.
- CIS. HS. 3. 20. *b* Review code to identify and fix errors.
- CIS. HS. 3. 20. *c* Determine if existing code opens a website up to vulnerabilities.

CIS. HS. 3. 21

Assess content for accessibility issues and discuss the issue and possible solutions.

- CIS. HS. 3. 21. *a* Analyze content flow and present alternative content with screen readers and other adaptive technologies.
- CIS. HS. 3. 21. *b* Consider mobile application functionality when network access is not available (local data, graceful failure.)

CIS. HS. 3. 22

Showcase a variety of projects and make connections between the different types of software used and different web coding languages.

- CIS. HS. 3. 22. *a* Create a portfolio of finished summative projects to showcase student learning.
- CIS. HS. 3. 22. *b* Identify client and target audience needs.
- CIS. HS. 3. 22. *c* Discuss needs of clients based on current trends.
- CIS. HS. 3. 22. *d* Demonstrate use of collaborative development tools.
- CIS. HS. 3. 22. *e* Guide an interview with the goal of identifying the problem and solution.

CIS. HS. 3. 23

Create a web program that will utilize multiple languages and servers.

- CIS. HS. 3. 23. *a* Create a functional website with both front-end and back-end file management.
- CIS. HS. 3. 23. *b* Employ a variety of web technologies to produce a final product that meets industry web development standards.

CIS. HS. 3. 24

Recognize common tools used for workflows associated with content generation.

- CIS. HS. 3. 24. *a* Identify one or more tools (proprietary, open source or otherwise) that are capable of creating the required content (image, video, text.)
- CIS. HS. 3. 24. *b* Discuss the advantages and disadvantages of various tools designed for the same workflow. (Lite vs. full, commercial vs. open source.)

CIS. HS. 3. 25

Demonstrate the ability to create webpages without the aide of a prefabricated template.

- CIS. HS. 3. 25. *a* Illustrate industry standard development practices by developing webpages from scratch.

CIS. HS. 3. 26

Identify information that may be private or subject to ethical consideration.

- CIS. HS. 3. 26. *a* Identify issues with collected information such as usernames, passwords, location data, preferences, and discuss the possible ramifications of misuse.
- CIS. HS. 3. 26. *b* Discuss the benefits of a minimal set of permissions when authoring a mobile app and possible consequences of over-requesting permissions.

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Standards and Indicators

CIS. HS. 6. 16

Read and write code that is clear, well-formatted, and appropriately documented.

- CIS. HS. 6. 16. a Identify alternatives and discuss advantages and disadvantages that led to their decision.
- CIS. HS. 6. 16. b Review code to identify and fix errors.
- CIS. HS. 6. 16. c Determine if existing code opens a website up to vulnerabilities.

CIS. HS. 6. 17

Assess content for accessibility issues and discuss the issue and possible solutions.

- CIS. HS. 6. 17. a Analyze content flow and present alternative content with screen readers and other adaptive technologies.
- CIS. HS. 6. 17. b Consider mobile application functionality when network access is not available (local data, graceful failure.)

CIS. HS. 6. 18

Showcase a variety of projects and make connections between the different types of software used and different web coding languages.

- CIS. HS. 6. 18. a Create a portfolio of finished summative projects to showcase student learning.
- CIS. HS. 6. 18. b Identify client and target audience needs.
- CIS. HS. 6. 18. c Discuss needs of clients based on current trends.
- CIS. HS. 6. 18. d Demonstrate use of collaborative development tools.
- CIS. HS. 6. 18. e Guide an interview with the goal of identifying the problem and solution.

CIS. HS. 6. 19

Create a web program that will utilize multiple languages and servers.

- CIS. HS. 6. 19. a Create a functional website with both front-end and back-end file management.
- CIS. HS. 6. 19. b Employ a variety of web technologies to produce a final product that meets industry web development standards.

CIS. HS. 6. 20

Recognize common tools used for workflows associated with content generation.

- CIS. HS. 6. 20. a Identify one or more tools (proprietary, open source, or otherwise) that are capable of creating the required content (image, video, text.)
- CIS. HS. 6. 20. b Discuss the advantages and disadvantages of various tools designed for the same workflow. (Lite vs. full, commercial vs. open source.)

CIS. HS. 6. 21

Demonstrate the ability to create webpages without the aide of a prefabricated template.

- CIS. HS. 6. 21. a Illustrate industry standard development practices by developing webpages from scratch.

CIS. HS. 6. 22

Identify information that may be private or subject to ethical consideration.

- CIS. HS. 6. 22. a Identify issues with collected information such as usernames, passwords, location data, preferences, and discuss the possible ramifications of misuse.
- CIS. HS. 6. 22. b Discuss the benefits of a minimal set of permissions when authoring a mobile app and possible consequences of over-requesting permissions.