NWCCD Summer 2019 COSC-1010 tailored for teacher professional development

Save the date! NWCCD is currently planning a Summer 2019 section of COSC-1010, Introduction to Computer Science I (4 credits). Note that this COSC-1010 is the same course, directly transferable, offered at the University of Wyoming and several Wyoming Community Colleges during the traditional school year.

Our COSC-1010 is normally an online-only class. This hybrid section is tailored for teacher professional development and certification requirements.

● We start with an initial in-person intensive week, Monday to Friday, on our Sheridan Campus. This allows all participants to get up to speed with our "low friction, high results" online toolset and complete the first several course assignments. It also sets the stage for online collaboration within the cohort for the rest of the summer.

● The remainder of the course will be conducted online (see over).

● The core content of the course will be the same as regular sections. However:

○ There will be more flexibility with due dates to allow for assignments to be completed around family vacations or other commitments.

○ During our in-person week, we will explore some of the related online-learning curricula available for your classroom, including at least code.org and codehs.com.

○ At least one course assignment will allow you to create a lesson, using our professional-grade, "greenfield" coding tools, to directly build upon work your students would do in one of the heavily-scaffolded learning environments such as code.org or codehs.com.

Out of town participants will have the option of staying on campus in our residence halls or making their own living arrangements. Lunch will be provided each day.

Our proposed timeline for the course is currently:

● Week of June 17-21: On-campus intensive

● June 24 to Aug 8 (7 weeks): Online coursework.

We can accommodate only 20 students for the in-person week. If we are oversubscribed, we may consider starting a second cohort the week of June 24th. If you are interested but can't make the week of June 17th, please let us know so we can notify you if we launch a second cohort.

This class is not yet in our online course catalog. If you have questions or would like to be notified when it is time to sign up, please contact the instructor directly:

E. Anne Gunn, egunn@sheridan.edu, 307 675 0790

Course format and technology requirements

All course modules are available online. All assignments are completed online. The instructor may create short (5 to 20 minutes) explanatory videos on specific subjects and make them available via YouTube but there are no pre-recorded or live video lectures.

Each student must have access to a laptop or desktop computer with a modern browser and at least a moderate-speed internet connection. Work can probably be completed using a netbook or Chromebook but the small screen-size would make an external monitor highly desirable. The learning management system (Canvas) and course assignments may be accessed via a phone or tablet but the coding assignments cannot be completed on a mobile device.

Students should bring their own laptops to the in-person week if they have them. However, since all coding is done online in a browser-based environment, no software need be installed. If your home computer is a desktop, we will have a laptop you can borrow for the on-campus week. All you will need to take with you when you go home is your browser bookmarks.

Texts/reading

Required: Head First JavaScript Programming, 2014, by Freeman & Robson Optional: A Smarter Way to Learn JavaScript, 2015, by Myers As assigned: supplementary online resources

Formal Course Description

This course Introduces the fundamental concepts of programming from an object-oriented perspective. Topics include simple data types, control structures, array and string data structures, algorithm development, and debugging techniques. This course emphasizes computational thinking, fundamental programming skills, and good software development principles in the context of a language that supports the object oriented paradigm.

Prerequisites

MATH 0930 Intermediate Algebra with "C" or better, or Math Placement Level IV

Expenses

We're still developing the precise budget for this special course. Standard tuition rates (approx. $550 for in-state students and $1300 for out-of-state) will apply and there will be a modest additional fee to cover on-campus food and activities. Textbooks may be purchased at our bookstore or online. All of our online learning environments and tools are free and browser-based.