CSC 111: PROGRAMMING CONCEPTS AND METHODOLOGY FOR TEACHERS

In Workflow

1. CSC Committee Chair (shaverdian@csus.edu;%20jouyang@csus.edu)
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Approval Path

1. Thu, 12 Nov 2020 18:13:05 GMT
   Anna Baynes (shaverdian): Approved for CSC Committee Chair
2. Wed, 18 Nov 2020 17:28:11 GMT
   Nikrouz Faroughi (faroughi): Approved for CSC Chair
3. Fri, 20 Nov 2020 17:48:43 GMT
   Gareth Figgess (figgess): Rollback to CSC Committee Chair for ECS College Committee Chair
4. Fri, 20 Nov 2020 18:08:35 GMT
   Anna Baynes (shaverdian): Approved for CSC Committee Chair
5. Fri, 20 Nov 2020 18:28:43 GMT
   Nikrouz Faroughi (faroughi): Approved for CSC Chair
6. Fri, 20 Nov 2020 18:36:34 GMT
   Gareth Figgess (figgess): Approved for ECS College Committee Chair
7. Tue, 01 Dec 2020 21:32:57 GMT
   Kevan Shafizadeh (kevan): Approved for ECS Dean

New Course Proposal

Date Submitted: Thu, 12 Nov 2020 18:12:38 GMT

Viewing: CSC 111 : Programming Concepts and Methodology for Teachers

Last edit: Fri, 20 Nov 2020 18:08:15 GMT

Changes proposed by: Anna Baynes (219700742)

Contact(s):

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Catalog Title:

Programming Concepts and Methodology for Teachers

Class Schedule Title:

Prog Concpt for Teachers

Academic Group: (College)

ECS - Engineering & Computer Science

Academic Organization: (Department)

Computer Science

Will this course be offered through the College of Continuing Education (CCE)?

Yes

Please specify:
CCE Only

Catalog Year Effective:
Spring 2021 (2021/2022 Catalog)

Subject Area: (prefix)
CSC - Computer Science

Catalog Number: (course number)
111

Course ID: (For administrative use only.)
TBD

Units:
4

In what term(s) will this course typically be offered?
Fall, Spring, Summer

Does this course require a room for its final exam?
No, final exam does not require a room

Does this course replace an existing experimental course?
No

This course complies with the credit hour policy:
Yes

Justification for course proposal:
This course will be part of a proposed CCE-only program for current k-12 teachers to receive a specific or introductory authorization to teach computer science in k-12. The Commission on Teacher Credentialing has defined the subject matter necessary to earn this authorization. This is one of a set of courses being proposed for this program.

Course Description: (Not to exceed 80 words and language should conform to catalog copy.)
Computer science teacher professional development based on equity, curriculum development, and computer science. Programming languages including blocky-style, web, and an object-oriented programming language. Introduction to computer science methodologies for program design, development, testing, and documentation. Computer science content includes program design, algorithm design, number systems, classes and objects, methods, control structures, arrays, and simple interactive input/output. Pedagogical content includes strategies for teaching and retaining students by developing engaging learning experiences and designing student assessment in computer science.

Are one or more field trips required with this course?
No

Fee Course?
No

Is this course designated as Service Learning?
No

Does this course require safety training?
No

Does this course require personal protective equipment (PPE)?
No

Does this course have prerequisites?
Yes

Prerequisite:
CSC 110

Prerequisites Enforced at Registration?
Yes

Does this course have corequisites?
No

Graded:
Letter

Approval required for enrollment?
No Approval Required

Course Component(s) and Classification(s):
Discussion

Discussion Classification
CS#02 - Lecture/Discussion (K-factor=1WTU per unit)
Discussion Units
4

Is this a paired course?
No

Is this course crosslisted?
No

Can this course be repeated for credit?
No

Can the course be taken for credit more than once during the same term?
No

Description of the Expected Learning Outcomes: Describe outcomes using the following format: 'Students will be able to: 1), 2), etc.'
1)develop simple web pages using HTML and CSS;
2)explain several differences between programming languages and decide which language is more appropriate for a given task;
3)describe well-structured computer programs in Java to solve small problems using procedural decomposition and abstraction, methods, parameters, events, mathematical expressions, functions, if statements, boolean expressions, selection, iteration, built-in libraries, one-dimensional and multi-dimensional arrays;
4)develop good programming habits including design with pseudocode, use of a symbolic debugger, iterative enhancement, test-driven design, simple documentation, and conventional programming style;
5)develop effective instruction, lesson plans, activities and student assessment for a computer science curriculum including solving small problems, documenting the programming and debugging process;
6)design lesson plans to engage diverse learners through culturally responsive pedagogy and
7)analyze potential learning difficulties and adjust teaching for students with different needs; and,
8)identify the major core concepts and practices for frameworks and standards in Computer Science in California

Assessment Strategies: A description of the assessment strategies (e.g., portfolios, examinations, performances, pre-and post-tests, conferences with students, student papers) which will be used by the instructor to determine the extent to which students have achieved the learning outcomes noted above.
LO 1-8) will be assessed with assignments and examinations

For whom is this course being developed?
Other

Is this course required in a degree program (major, minor, graduate degree, certificate?)
No

Does the proposed change or addition cause a significant increase in the use of College or University resources (lab room, computer)?
No

Will there be any departments affected by this proposed course?
No

I/we as the author(s) of this course proposal agree to provide a new or updated accessibility checklist to the Dean's office prior to the semester when this course is taught utilizing the changes proposed here.

I/we agree

University Learning Goals

Undergraduate Learning Goals:

Competence in the disciplines
Integrative learning
Intellectual and practical skills

Is this course required as part of a teaching credential program, a single subject, or multiple subject waiver program (e.g., Liberal Studies, Biology) or other school personnel preparation program (e.g., School of Nursing)?

Yes

For the Council for the Preparation of School Personnel (to be filled out with assistance of your department chair):

Does this course change impact your department's currently written Program Standards Document?

No

Common Standards: In what way does this course or program change impact the currently written Common Standards document? Please include any suggested language changes:

N/A

Is this change in response to program or unit assessment activities?

No

Will this course introduce any new or changes to program assessments?

No

GE Course and GE Goal(s)

Is this a General Education (GE) course or is it being considered for GE?

No

Please attach any additional files not requested above:

CSC 111 (1).docx

Reviewer Comments:

Gareth Figgess (figgess) (Fri, 20 Nov 2020 17:48:43 GMT): Rollback: Update contact hours

Anna Baynes (shaverdian) (Fri, 20 Nov 2020 18:08:15 GMT): In the doc, I made it clear that it is 4 credits, which means 4 weekly credit hours.

Key: 14363