Course Change Request

Date Submitted: 02/06/18 1:53 pm

Viewing: CSCE 121: Introduction to Program Design and Concepts

Last approved: 01/31/18 3:27 am
Last edit: 02/07/18 10:33 am
Changes proposed by: smileingsheila

Catalog Pages referencing this course
- CSCE - Computer Sci & Engr (CSCE)
- Department of Computer Science & Engineering
- Department of Industrial and Systems Engineering
- Department of Mathematics
- ISEN - Indus & Systems Engr (ISEN)
- MATH - Mathematics (MATH)
- BS-MATH, Mathematics - BS

Faculty Senate Number

Contact(s)

<table>
<thead>
<tr>
<th>Name</th>
<th>E-mail</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheila Dotson</td>
<td><a href="mailto:dotson@tamu.edu">dotson@tamu.edu</a></td>
<td>979-845-6176</td>
</tr>
</tbody>
</table>

Rationale for Course

The proposed changes are to meet the demand/interest of students.

Course prefix       CSCE       Course number       121
Department            Computer Science & Engineering
College/School       College of Engineering
Academic Level       Undergraduate
Undergraduate course level justification (Select One)

Academic Level
(alternate)     Graduate
Effective term     2018-2019

Complete Course Title
Introduction to Program Design and Concepts
Abbreviated Course Title
INTRO PGM DESIGN CONCEPT

Catalog course description
Computation to enhance problem solving abilities; computational thinking; understanding how people communicate with computers, how computing affects society; design and implementation of algorithms; data types, program control, iteration, functions, classes, and exceptions; understanding abstraction, modularity, code reuse, debugging, maintenance, and other aspects of software development; development and execution of programs.

Prerequisites and Restrictions
- Programming course (high school or college).
Concurrent Enrollment    No

https://nextcatalog.tamu.edu/courseleaf/approve/
<table>
<thead>
<tr>
<th>Semester</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit</td>
<td>1102010006</td>
</tr>
<tr>
<td>Hour(s)</td>
<td>Letter Grade(G)</td>
</tr>
<tr>
<td>Repeatable for credit?</td>
<td>No</td>
</tr>
<tr>
<td>Three-peat?</td>
<td>No</td>
</tr>
<tr>
<td>Alternate Grade Modes</td>
<td>Satisfactory/Unsatisfactory</td>
</tr>
<tr>
<td>Method of instruction</td>
<td>Lecture and Laboratory</td>
</tr>
<tr>
<td>Will sections of this course be taught as non-traditional? (i.e., parts of term, distance education)</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Learning Outcomes

Meets traditional face-to-face learning outcomes.

Describe how learning outcomes are met or provide justification why they are not met.

Previously approved via memo (Spring 2018).

Meets traditional learning outcomes.

Hours

Meets traditional face-to-face hours.

Describe how hours are met or provide justification why they are not met.

Previously approved via memo (Spring 2018).

Meets traditional face-to-face hours.

Will this course be taught as a distance education course?

Yes

I verify that I have reviewed the FAQ for Export Control Basics for Distance Education.

Yes

Is 100% of this course going to be taught in Texas?

Yes

Will classroom space be needed for this course?

Yes

This will be a required course or an elective course for the following programs:

Required (select program)

Elective (select program)

Has/will this course be(e)n submitted for

No
core curriculum consideration?

Has/will this course be(en) submitted for Writing or Communication consideration?

Has/will this course be(en) submitted for ICD consideration?

Course Syllabus

Syllabus: Upload syllabus

Upload syllabus 121 Syllabus Combined.pdf

Letters of support or other documentation

No

Additional information Offering distance Summer 2018

Reviewer Comments

Sandra Williams (sandra-williams) (02/01/18 3:33 pm): Rollback: You need to attached syllabi to this request - a traditional and non-traditional (if applicable).

Sandra Williams (sandra-williams) (03/09/18 3:31 pm): UCC approved March 9 via e-vote.

Reported to state?

No

Key: 3409
Course title and number: CSCE 121: Introduction to Program Design & Concepts
Term: Fall 2018
Meeting times and location: MWF 8:00am-8:50 ZACH 350

Course Description and Prerequisites
Computation to enhance problem solving abilities; computational thinking; understanding how people communicate with computers, how computing affects society; design and implementation of algorithms; data types, program control, iteration, functions, classes, and exceptions; understanding abstraction, modularity, code reuse, debugging, maintenance, and other aspects of software development; development and execution of programs.

Prerequisite: Programming course (high school or college).

Learning Outcomes or Course Objectives
1. Understand computer program structure, design and development.
2. Use primitive data types and control structures in computer programs.
3. Understand and apply vectors, strings, and structs.
4. Declare and use functions in computer programs.
5. Understand object-oriented programming concepts: objects, classes, inheritance, polymorphism, and encapsulation.
6. Design and create simple graphic user interfaces.
7. Understand and apply file I/O in computer programs.
8. Understand and use basic algorithms for searching, sorting, lists, trees and maps.
9. Navigate and make use of class libraries.
10. Write simple computer programs in a high-level programming language, C++.
11. Complete a team design project using knowledge and principles from the course.

Instructor Information
Name: Dr. J. Michael Moore
Telephone number: 979-845-5475
Email address: jmichael@cse.tamu.edu
Office hours: M 3:00pm-4:00pm, TR 11:00am-12:00pm
Office location: HRBB 325

Textbook and/or Resource Material
There are significant changes from the first edition, so the current edition is recommended.
Errata: http://stroustrup.com/Programming/PPP2errata.html

zyBooks Link: http://learn.zybooks.com
Class zyBooks Code: TAMUCSCE121MooreSpring2018

This is an online textbook. You will required to have access to your own copy linked to this class with the code above. Otherwise you will not receive credit for completion of activities that count toward your grade. zBooks will give you a refund if you drop the class within a week after Q-drops. So purchase ASAP.
It is recommended to have a computer that you can bring to class. It should be capable of running an IDE such as Visual Studio Community or xCode. Bring Your Own Device (BYOD) is an initiative in the college of engineering: https://engineering.tamu.edu/easa/areas/academics/byod

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This course uses Blackboard Learn (i.e. eCampus). To know more about its accessibility standards please to their website. http://www.blackboard.com/Platforms/Learn/Resources/Accessibility.aspx. If you find that course content or software are not accessible, please contact your course instructor or disability services as appropriate.

**ECAMPUS:** https://ecampus.tamu.edu/
Provides content sequencing and links to materials, assignments, and resources. The recommended browsers for eCampus access are Mozilla Firefox or Google Chrome (Internet Explorer is not recommended). For additional information on support browsers for eCampus, please visit [http://tx.ag/eCampusBrowserSupport](http://tx.ag/eCampusBrowserSupport).

**PIAZZA:** https://piazza.com/tamu/spring2018/csce436/home
All questions will be fielded through Piazza. Email should only be used in rare instances. The primary benefit is that for many questions everyone can see the answer and other students can answer as well. We will endorse good student responses. You can also post private messages that can only be seen by instructors or an individual instructor. This allows any instructor or TA to answer which generally leads to quicker response times. Sign Up: https://piazza.com/tamu/spring2018/csce121

**VOCAREUM:** https://www.vocareum.com/
Online code submission system. Vocareum supports autograding. We will create accounts for you, and you will receive email instructions from Vocareum on connecting.

**GRADESCOPE:** [http://gradescope.com/](http://gradescope.com/)
Used to turn in some assignments. This system provides a better grading system for instructors and TAs than what is available in eCampus. We will create accounts for you, and you will receive email instructions from Gradescope on connecting.

**GOOGLE DRIVE:** http://google.tamu.edu (optional)
Used to save course data so if your computer crashes, you still have code you created.

**CLOUD 9:** https://c9.io/
Used for collaborative labwork. We will create accounts for you, and you will receive email from cloud 9.

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Netiquette
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Grading Policies
Please review Texas A&M student rule 7: http://student-rules.tamu.edu/rule07
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Exam Make Up
Missed exams will only be rescheduled for university excused absences. Note that if advanced notice is not feasible, you have 2 business days to provide notification. See student rules. A zero will be assigned for exams due to an unexcused absence. Documentation must be submitted prior to making up a missed exam. Job interviews do not constitute an excused absence unless explicitly approved by Dr. Moore.

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Late Homework
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How turning in late work can affect your grade:

<table>
<thead>
<tr>
<th>Minutes Late turning in late work can affect your grade:</th>
<th>Max Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>99.95%</td>
</tr>
<tr>
<td>30 (1/2 hour)</td>
<td>99.70%</td>
</tr>
<tr>
<td>60 (1 hour)</td>
<td>99.40%</td>
</tr>
<tr>
<td>120 (2 hours)</td>
<td>98.81%</td>
</tr>
<tr>
<td>360 (6 hours)</td>
<td>96.46%</td>
</tr>
<tr>
<td>720 (1/2 day)</td>
<td>93.05%</td>
</tr>
<tr>
<td>1440 (1 day)</td>
<td>86.59%</td>
</tr>
<tr>
<td>2880 (2 days)</td>
<td>74.98%</td>
</tr>
<tr>
<td>4320 (3 days)</td>
<td>64.92%</td>
</tr>
</tbody>
</table>

Grading Scale
A = ≤ 90-100
B = ≤ 80-89
C = ≤ 70-79
D = ≤ 60-69
F = <60
## Course Topics, Calendar of Activities, Major Assignment Dates

### Tentative Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Computer Organization, First Program, Software Development Process, Flowcharts &amp; Pseudo code</td>
</tr>
<tr>
<td>2</td>
<td>Data Representation, Assignment &amp; Variables, Control Structures (Sequence, Selection, Iteration)</td>
</tr>
<tr>
<td>3</td>
<td>Exceptions, Compound Data, Debugging / Testing</td>
</tr>
<tr>
<td>4</td>
<td>Algorithms, Software Development, Streams, Input Validation</td>
</tr>
<tr>
<td>5</td>
<td>File IO, Functions and Parameters</td>
</tr>
<tr>
<td>6</td>
<td>Functions, Function Design, Command Line Parameters, Exam</td>
</tr>
<tr>
<td>7</td>
<td>Code Organization, Throwing Exceptions, Debugging Functions</td>
</tr>
<tr>
<td>8</td>
<td>Function Overloading, Recursion</td>
</tr>
</tbody>
</table>
Americans with Disabilities Act (ADA)

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, currently located in the Disability Services building at the Student Services at White Creek complex on west campus or call 979-845-1637. For additional information, visit http://disability.tamu.edu.

Academic Integrity

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Acknowledgement

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Course title and number CSCE 121: Introduction to Program Design & Concepts
Term (e.g., Fall 200X) Summer 2018
Meeting times and location WEB

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Telephone number 979-845-5475
Email address jmichael@cse.tamu.edu
Office hours M 3:00pm-4:00pm, TR 11:00am-12:00pm
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Errata: http://stroustrup.com/Programming/PPP2errata.html

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Class zyBooks Code: TAMUCSCE121MooreSpring2018

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</tr>
<tr>
<td>60</td>
<td>99.8%</td>
</tr>
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<td>1440 (1 day)</td>
<td>75%</td>
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<td>Computer Organization, Data Representation, Assignment &amp; Variables, First Program</td>
</tr>
<tr>
<td>6/5</td>
<td>Software Development Process, Design, Control Structures (Sequence, Selection, Iteration), Exceptions, Compound Data</td>
</tr>
<tr>
<td>6/12</td>
<td>Using Compound Data, Streams / Files, Input Validation</td>
</tr>
</tbody>
</table>
6/19 Function basics, Command Line Parameters, Exceptions with Functions
6/26 More with Functions, Recursion, Objects & Classes with UML
7/3 Defining Objects & Classes
7/10 Dynamic Memory (including pointers)
7/17 Dynamic Memory with Classes, Inheritance
7/24 Inheritance / Polymorphism, Graphics, Graphical User Interfaces with Event Driven Programming
7/31 Generic Programming (Templates, STL)
8/7 Wrap Up (one day only)
*tentative means it can change…

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