

CERTIFICATE IN GAME ENGINEERING

In Workflow

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Approval Path

1. Thu, 19 Sep 2019 17:06:22 GMT
Ted Krovetz (tdk): Approved for CSC Committee Chair
2. Fri, 20 Sep 2019 23:25:40 GMT
Nikrouz Faroughi (faroughi): Approved for CSC Chair
3. Fri, 27 Sep 2019 16:42:12 GMT
Troy Topping (troy.topping): Approved for ECS College Committee Chair
4. Fri, 27 Sep 2019 19:19:04 GMT
Kevan Shafizadeh (kevan): Approved for ECS Dean

History

1. May 4, 2018 by clmig-jwehrheim

Date Submitted: Thu, 19 Sep 2019 16:56:38 GMT

Viewing: Certificate in Game Engineering

Last approved: Fri, 04 May 2018 12:58:48 GMT

Last edit: Fri, 11 Oct 2019 18:16:36 GMT

Changes proposed by: Haiquan Chen (219700833)

Academic Group: (College)

Engineering & Computer Science

Academic Organization: (Department)

Computer Science

Catalog Year Effective:

2020-2021 Catalog

Individual(s) primarily responsible for drafting the proposed degree major program:

Name (First Last)	Email	Phone 999-999-9999
Haiquan Chen	haiquan.chen@csus.edu	916-278-6087

Type of Program Proposal:

Certificate

Program Change Type:

Non-Substantive

Title of the Program:

Certificate in Game Engineering

Designation: (degree terminology)

Certificate - Undergraduate

Briefly describe the program proposal (new or change) and provide a justification:

CSC177 course title is updated to "Data Analytics and Mining" to be consistent with the recently submitted Form A for CSC177 course change.

Objectives of the degree program:

Master, integrate, and apply advanced knowledge and skills to solve complex computer science problems in the game engineering area.

University Learning Goals**Undergraduate Learning Goals:**

Competence in the disciplines
Intellectual and practical skills

Will this program be 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)?

No

Do these changes impact the Smart Planner roadmap?

No

Catalog Description:

Units required for Certificate: 12

Program Description

This certificate is intended to give students an opportunity to explore the science and engineering of computer games, and to prepare students for careers in those fields of computing which utilize or are heavily impacted by advances in computer gaming. These include such areas as video and strategy game development, 3-D graphics, modeling and animation and their support tools, intelligent decision making, specialized user interface hardware, machine learning, and working in interdisciplinary teams.

Academic Certificates

In addition to completing the requirements for the Bachelor of Sciences in Computer Science degree program, students enrolled in the major may also complete one of the (optional) 9-12 unit Academic Certificate programs. Each certificate includes 9 required units which can overlap with elective coursework taken to satisfy the major requirements, with some of the certificates requiring 3 additional units (1 additional course) beyond the degree requirements. Students interested in earning a certificate in addition to their degrees should meet with an academic advisor.

Requirements for Certificates

Certain combinations of courses gives students a deeper understanding of specialized areas in Computer Science. Completion of any of the following course lists entitles the student to receive a certificate indicating that they concentrated their elective study in the particular area. The Computer Science Department will try and offer on a regular basis all courses required for each certificate, but course cancellations and scheduling conflicts do sometimes occur causing students difficulty in completing their desired course study. In such situations, students may need to forgo completion of their certificate. Printed certificates must be requested directly from the Computer Science Department office after a student graduates.

As defined by policy <http://www.csus.edu/umannual/acadaff/fsm00010.htm>, a change in units constitutes a substantive change to the program. If your changes constitute a substantive change, please refer back to the "Program Change Type" field above to ensure that "Substantive" is selected.

Program Requirements: (If new courses are being created as part of a new program, it will be useful to propose courses first.)

Program Requirements

Code	Title	Units
CSC 155	Advanced Computer Graphics	3
CSC 165	Computer Game Architecture and Implementation	3
CSC 180	Intelligent Systems	3
Select one of the following:		3
CSC 126/ART 142	3D Computer Modeling	
CSC 127/ART 142	3D Computer Animation	
CSC/CPE 159	Operating System Pragmatics	
CSC 177	Data Analytics and Mining	

Total Units

12

Fiscal Impact to Change an Existing Program

Indicate programmatic or fiscal impact which this change will have on other academic units' programs, and describe the consultation that has occurred with affected units:

No impact on department/college in terms of fiscal resources.

Provide a fiscal analysis of the proposed changes:

No impact on department/college in terms of fiscal resources.

How will the above changes be accommodated within the department/College existing fiscal resources?

No impact on department/college in terms of fiscal resources.

Will the proposed changes require additional resources?

No

What additional space, equipment, operating expenses, library, computer, or media resources, clerical/technical support, or other resources will be needed?

No impact on department/college in terms of fiscal resources.

Estimate the cost and indicate how these resource needs will be accommodated:

No impact on department/college in terms of fiscal resources.

Key: 139