

# GAME DESIGN AND DEVELOPMENT, AN OPTION TO THE ASSOCIATE IN SCIENCE IN COMPUTER SCIENCE

## Program Description

This program will prepare students for transfer to a four-year college to obtain a Bachelor of Science degree in computer game design. The curriculum follows the model provided by the Association of Computing Machinery and the Institute of Electrical and Electronics Engineers Computer Society to assure maximum transferability. Upon graduation, students can expect to transfer to a four-year college with junior status. Effective problem solving is central to good game design and development. The software development process (composing and coordinating components of a program) requires that students construct algorithms for problem solving with appropriate documentation. This curriculum has been designed to prepare the student to work as a team and solve complex computer programming problems. The department recommends the following minimal criteria for prospective students in the Computer Game Development and Design option:

1. High school diploma or equivalent
2. Cumulative high school grade point average of C or above
3. Ranked in top half of high school graduating class
4. No developmental studies requirement

## Transfer Information

Students pursuing the Computer Science – Game Development and Design degree can transfer into majors such as Computer Science or Information Technology with a concentration/ specialization in Game Development and Design. Many colleges offer opportunities for transfer both in and out of state. Admission is competitive and may require specific coursework to be completed as well as a portfolio of artwork. Students are encouraged to work closely with OCC faculty and Advising Transfer Services. Students planning to transfer to a four-year institution in NJ can explore the “Transfer Programs” feature on NJ Transfer [www.njtransfer.org](http://www.njtransfer.org) (<http://www.njtransfer.org>).

## Career Information

The Associate of Arts and the Associate of Science Degrees are designed to provide students with the coursework needed to transfer to a four-year institution and pursue a bachelor's degree. The curriculum provides students the knowledge and skills needed to pursue various career pathways, while providing a credential beyond the high school degree. Students are strongly encouraged to consult with OCC faculty and Career Services as they begin to explore career options. Students can also utilize Career Coach, a resource provided by OCC, to explore degree programs and corresponding careers <https://ocean.emsicc.com/>

*Students are encouraged to keep track of degree requirements by using the “My Progress” screen on Student Planning. Student Planning can be accessed via logging into Ocean Connect.*

## Program Requirements

First Semester		Credit Hours
ENGL 151	English I	3
CSIT 115	Introduction to Computer Game Development	3
CSIT 165	Programming I	4
Social Science Gen. Ed. Requirement ( <a href="https://catalog.ocean.edu/graduation-requirements-degree/approved-general-education-courses/#social">https://catalog.ocean.edu/graduation-requirements-degree/approved-general-education-courses/#social</a> )		3
STSC 150	Student Success Seminar	2
<b>Credit Hours</b>		<b>15</b>
Second Semester		
ENGL 152	English II	3
MATH 265	Calculus I	4
CSIT 166	Programming II	4
CSIT 176	Computer Organization & Architecture	3
Humanities or Social Science Gen. Ed. Requirement ( <a href="https://catalog.ocean.edu/graduation-requirements-degree/approved-general-education-courses/#humanities">https://catalog.ocean.edu/graduation-requirements-degree/approved-general-education-courses/#humanities</a> )		3
<b>Credit Hours</b>		<b>17</b>
Third Semester		
MATH 266	Calculus II	4
CSIT 265	Data Structures and Analysis	4
Select one of the following to fulfill the Lab Science Gen. Ed. Requirement:		4
BIOL 161	General Biology I	
CHEM 181	General Chemistry I	
PHYS 281	General Physics I	
Humanities Gen. Ed. Requirement ( <a href="https://catalog.ocean.edu/graduation-requirements-degree/approved-general-education-courses/#humanities">https://catalog.ocean.edu/graduation-requirements-degree/approved-general-education-courses/#humanities</a> )		3
<b>Credit Hours</b>		<b>15</b>
Fourth Semester		
BUSN 134 or BUSN 271	Principles of Marketing or Principles of Management	3
CSIT 173	Game Programming With Open GL	3
CSIT 213	Database Management	3
Select one of the following to fulfill the Lab Science Gen. Ed. Requirement:		4
BIOL 162	General Biology II	
CHEM 182	General Chemistry II	
PHYS 282	General Physics II	
<b>Credit Hours</b>		<b>13</b>
<b>Total Credit Hours</b>		<b>60</b>