Video Game Programming

Learn how to apply programming techniques to video games. Gain exposure to concepts related to video games including gameplay, graphics, artificial intelligence (AI), in-game physics, and more. You'll write and debug code and program many different types of 2D and 3D video games. Electives explore concepts such as programming mobile games and writing your own game engine.

units required for minor:	units required for specialization:	minor code:	department:
18	**14**	**VGM**	**ITP**

Skills

» 3D graphics
» Game algorithms
» Artificial intelligence
» Game engine programming

Careers

» Game Programmer
» Technical Designer
» Game Director

Policies

» All minors at USC need **16 units** that only meet minor requirements and do not meet any other major, minor, or GE requirement.

» All courses completed for your minor or specialization must be completed for a **letter grade**.

» You must earn a **2.0 minimum** cumulative GPA in the courses completed for your minor or specialization.

Minor requirements

Core requirements (14 units):

ITP-165 "Introduction to C++ Programming" (2 units)

ITP-265 "Object-Oriented Programming" (4 units)
[prerequisite: ITP-115 or ITP-165]

ITP-365 "Managing Data in C++" (4 units)
[prerequisite: ITP-265]

ITP-380 "Video Game Programming" (4 units)
[prerequisite: ITP-365 or CSCI-104]

Elective (4 units):

ITP-382 "Mobile Game Development" (4 units)
[prerequisite: ITP-265 or CSCI-103]

ITP-435 "Professional C++" (4 units)
[prerequisite: ITP-365 or CSCI-104]

ITP-439 "Compiler Development" (4 units)
[prerequisite: ITP-365 or CSCI-104]

ITP-485 "Programming Game Engines" (4 units)
[prerequisite: ITP-380]

CSCI-491a "Final Game Project" (4 units)

CSCI-491b "Final Game Project" (2 units)

Specialization requirements

Core requirements (14 units):

ITP-165 "Introduction to C++ Programming" (2 units)

ITP-265 "Object-Oriented Programming" (4 units)
[prerequisite: ITP-115 or ITP-165]

ITP-365 "Managing Data in C++" (4 units)
[prerequisite: ITP-265]

ITP-380 "Video Game Programming" (4 units)
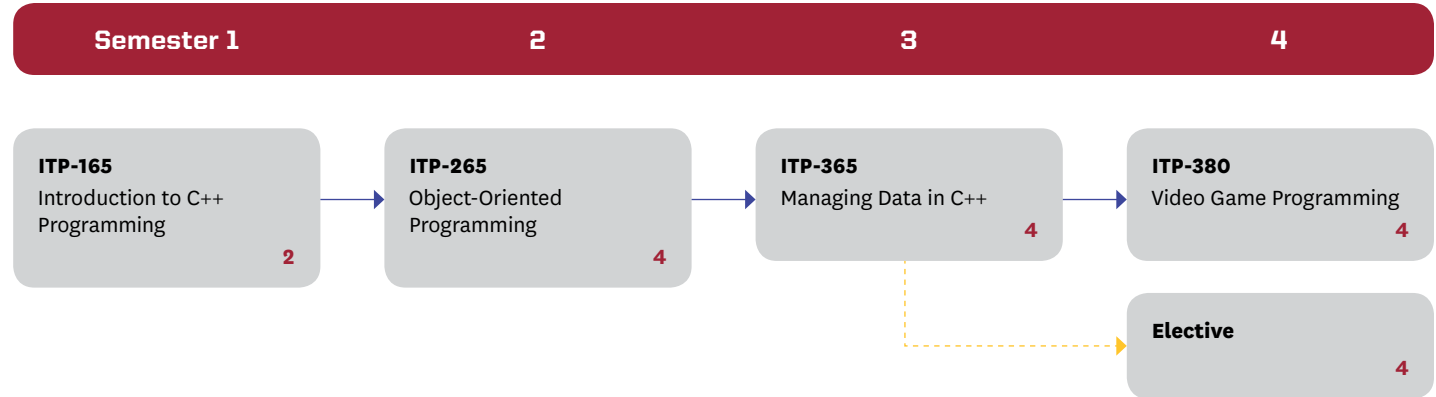*[prerequisite: ITP-365 or CSCI-104]*

Updated: 02/28/19

VIDEO GAME PROGRAMMING
SEQUENCING & COURSE PLAN

LEGEND

→ Prerequisite

⇢ Prerequisite depends on course selection

1-4 Units or special notes

Semester 1	2	3	4

ITP-165
Introduction to C++ Programming
2

→

ITP-265
Object-Oriented Programming
4

→

ITP-365
Managing Data in C++
4

→

ITP-380
Video Game Programming
4

⇢ **Elective**
4

📋 **Make sure you consult with your major advisor about how best to incorporate the requirements for your minor with your major and general education requirements. You must complete a pre-advisement course plan before scheduling an appointment with a minor advisor.**

PRE-ADVISEMENT COURSE PLAN

SEMESTER	YEAR
COURSE	**UNITS**

SEMESTER	YEAR
COURSE	**UNITS**

SEMESTER	YEAR
COURSE	**UNITS**

SEMESTER	YEAR
COURSE	**UNITS**