

# COMPUTER GRAPHICS MINOR

Any scientific problems are associated with some visualization aspects. Virtual reality (VR) integration allows scientists to explore visualization and simulation applications in an immersive virtual environment with enhanced engagement. With the knowledge of computer graphics and programming languages, game engines can be used as implementation platforms for VR-enhanced and non-VR scientific visualization, modeling, and simulation applications. The demand for scientific visualization, modeling, and simulation skills makes this minor a good choice in support of various majors.

**Grade Requirements:** As a computer science student, you are expected to maintain an overall university GPA  $\geq 2.3$ . Each computer science course must be completed with a minimum grade  $\geq C+$ .

## Required Courses

Programming		
CSCD 210	PROGRAMMING PRINCIPLES I	5
CSCD 211	PROGRAMMING PRINCIPLES II	5
CSCD 240	C AND UNIX PROGRAMMING	5
Data Structures and Algorithms		
CSCD 300	DATA STRUCTURES	5
Graphics		
CSCD 377	INTRODUCTORY COMPUTER GRAPHICS	4
CSCD 470	3D COMPUTER GRAPHICS PRINCIPLES	4
CSCD 477	VIRTUAL REALITY WITH COMPUTER GRAPHICS AND GAME ENGINES	4
<b>Total Credits</b>		<b>32</b>

## Students who earn a Computer Graphics minor at EWU should be able to:

- model and visualize any scientific problems or results using the knowledge of computer graphics and programming languages;
- develop VR applications that allow students to explore scientific visualization and simulation applications in an immersive virtual environment with enhanced engagement;
- use game engines as implementation platforms for scientific visualization, modeling, and simulation of VR-enhanced and non-VR applications.