Academic Plan - Associate of Applied Science Game Design and Development

# Catalog Year: 2020/2021

The Game Design and Development degree is a two-year Associate of Applied Science program that prepares students to work as a game developer or computer programmer.

There are three types of courses students will focus on in the degree: general computer science classes ensure every student has a solid programming background applicable to any development position, game development classes make certain students know how to apply their programming skill to create engaging games using an industry standard game engine, and art and multimedia courses provide the creative background necessary for students to effectively integrate with the diverse teams that work on modern games. Electives allow a student to customize their degree with additional classes in a chosen

# Total Credits:60

# A - General Education Courses

3 Credits, ART 121 - Drawing I, available fall spring summer

3 Credits, BUS 217 - Business Communication & Report Writing, available fall spring summer

3 Credits, COM 115 - Public Speaking\* OR COM 125 - Interpersonal Communication, available fall spring summer

3 Credits, ENG 121 - English Composition GT-CO1 OR ENG 131 - Technical Writing GT-CO1\*, available fall spring

summer

3-4 Credits, MAT 121 - College Algebra: GT-MA1 or Higher\*, available fall spring summer

# B - Major Courses

3 Credits, CIS 289 - Capstone, available spring

3 Credits, CSC 119 - Introduction to Programming, available fall spring summer

3 Credits, CSC 126 - Game Design and Development, available fall spring

3 Credits, CSC 200 - Game Programming I, available spring

3 Credits, CSC 227 - 3D Game Programming, available fall

3 Credits, CSC 246 - Mobile App Development, available fall

3 Credits, Major Elective (See Notes for specific requirements), available fall spring summer

3 Credits, Major Elective (See Notes for specific requirements), available fall spring summer

3 Credits, MGD 111 - Adobe Photoshop I, available fall spring summer

3 Credits, MGD 143 - Motion Graphic Design I, available fall spring

3 Credits, MGD 153 - 3D Animation I, available spring

3-4 Credits, Major Elective (See Notes for specific requirements), available fall spring summer

4 Credits, CSC 160 - Computer Science I\*, available fall spring

4 Credits, CSC 161 - Computer Science II, available fall

# Pre-Requisites, Co-Requisites, and Recommendations

CSC 160 - Computer Science I\*

Pre-Requisite: CSC 119 - Introduction to Programming: Java

CSC 161 - Computer Science II

Pre-Requisite: CSC 160 - Computer Science I: Java

CSC 200 - Game Programming I

Pre-Requisite: CSC 126 - Game Design and Development

CSC 227 - 3D Game Programming

Pre-Requisite: CSC 200 - Game Programming I

CSC 246 - Mobile App Development area of focus.

Pre-Requisite: CSC 161 - Computer Science II

ENG 121 - English Composition GT-CO1 OR ENG 131 - Technical Writing GT-CO1\*

Co-Requisite: CCR 094 - Studio 121

# Notes

Major Electives: Students must take 9-10 credit hours from the following: ART 221, ART 131, BUS 120, CIS 118, CIS 202, CSC 165, CSC 217, CSC 236, MAR 106, MAR 216, MAT 201 or higher, MGD 101, MGD 112, MGD 163, MGD 243, or any MGD or CSC course approved by department.

Course availability is subject to change.

Refer to 20/21 catalog for specific requirements and important information about this degree.

Recommended courses may be listed above for certain electives; consult with the Academic Advising Office (advising@arapahoe.edu or 303.797.5664) for additional elective recommendations.

\*This course requires college level readiness as measured by Accuplacer, ACT, or SAT scores; approved high school course work that is less than five years old; or successful completion of appropriate college-readiness course.

AAA 101 – College 101: Student Experience is required for all new college students seeking degrees or transfer.

In order to meet program requirements, students registered for ENG 121 or ENG 131 must also register for CCR 094

unless they can demonstrate otherwise meeting the CCR 094 standard through assessment testing, prior college

coursework, or recent High School coursework. See an Advisor for details.

# Graduation Requirements

To graduate, students must apply for graduation [here](http://www.arapahoe.edu/departments-and-programs/graduation) by the deadline and meet all degree requirements.

# RECOMMENDED COURSE SEQUENCE FULL-TIME TRACK

## Year 1: Fall

3 Credits, ART 121 - Drawing I

3 Credits, CSC 119 - Introduction to Programming

3 Credits, CSC 126 - Game Design and Development

3 Credits, ENG 121 - English Composition GT-CO1 OR ENG 131 - Technical Writing GT-CO1

3-4 Credits, MAT 121 - College Algebra: GT-MA1 or Higher

## Year 1: Spring

3 Credits, COM 115 - Public Speaking OR COM 125 - Interpersonal Communication

4 Credits, CSC 160 - Computer Science I

3 Credits, CSC 200 - Game Programming I

3 Credits, MGD 111 - Adobe Photoshop I

3 Credits, MGD 143 - Motion Graphic Design I

## Year 2: Fall

3 Credits, BUS 217 - Business Communication & Report Writing

4 Credits, CSC 161 - Computer Science II

3 Credits, CSC 227 - 3D Game Programming

3 Credits, Major Elective

* ~Recommended Restricted Elective(s)~
  + ART 131 - Visual Concepts 2-D Design
  + BUS 120 - Introduction to E-Commerce
  + CIS 118 - Intro to PC Applications
  + CIS 202 - Automated Project Management: MS Project
  + CSC 129 - Introduction to Security Coding
  + CSC 165 - Discrete Structures
  + CSC 217 - Advanced Python Programming
  + MAT 122 - College Trigonometry: GT-MA1

3 Credits, MGD 153 - 3D Animation I

## Year 2: Spring

3 Credits, CIS 289 - Capstone

3 Credits, CSC 246 - Mobile App Development

3-4 Credits, Major Elective

* ~Recommended Restricted Elective(s)~
  + CSC 129 - Introduction to Security Coding
  + CSC 160 - Computer Science I\*
  + CSC 165 - Discrete Structures
  + CSC 233 - Object-Oriented Prog.: (Java)
  + CSC 245 - Secure Software Development
  + CSC 246 - Mobile App Development
  + MAR 216 - Principles of Marketing
  + MGD 112 - Adobe Illustrator I

3 Credits, Major Elective

* ~Recommended Restricted Elective(s)~
  + CSC 129 - Introduction to Security Coding
  + CSC 161 - Computer Science II
  + CSC 165 - Discrete Structures
  + CSC 233 - Object-Oriented Prog.: (Java)
  + CSC 245 - Secure Software Development
  + CSC 246 - Mobile App Development
  + MGD 112 - Adobe Illustrator I
  + MGD 243 - Web Motion Graphic Design II

# RECOMMENDED COURSE SEQUENCE PART-TIME TRACK

## Year 1: Fall

3 Credits, CSC 119 - Introduction to Programming

3 Credits, CSC 126 - Game Design and Development

3-4 Credits, MAT 121 - College Algebra: GT-MA1 or Higher

## Year 1: Spring

4 Credits, CSC 160 - Computer Science I

3 Credits, CSC 200 - Game Programming I

3 Credits, MGD 143 - Motion Graphic Design I

## Year 1: Summer

3 Credits, ART 121 - Drawing I

3 Credits, ENG 121 - English Composition GT-CO1 OR ENG 131 - Technical Writing GT-CO1

## Year 2: Fall

4 Credits, CSC 161 - Computer Science II

3 Credits, MGD 153 - 3D Animation I

## Year 2: Spring

3 Credits, CSC 246 - Mobile App Development

3 Credits, Major Elective

* ~Recommended Restricted Elective(s)~
  + ART 131 - Visual Concepts 2-D Design
  + BUS 120 - Introduction to E-Commerce
  + CIS 118 - Intro to PC Applications
  + CIS 202 - Automated Project Management: MS Project
  + CSC 129 - Introduction to Security Coding
  + CSC 165 - Discrete Structures
  + CSC 217 - Advanced Python Programming
  + MAT 122 - College Trigonometry: GT-MA1

3 Credits, MGD 111 - Adobe Photoshop I

## Year 2: Summer

3 Credits, BUS 217 - Business Communication & Report Writing

3 Credits, COM 115 - Public Speaking OR COM 125 - Interpersonal Communication

## Year 3: Fall

3 Credits, CSC 227 - 3D Game Programming

3 Credits, Major Elective

* ~Recommended Restricted Elective(s)~
  + CSC 129 - Introduction to Security Coding
  + CSC 161 - Computer Science II
  + CSC 165 - Discrete Structures
  + CSC 233 - Object-Oriented Prog.: (Java)
  + CSC 245 - Secure Software Development
  + CSC 246 - Mobile App Development
  + MGD 112 - Adobe Illustrator I
  + MGD 243 - Web Motion Graphic Design II

## Year 3: Spring

3 Credits, CIS 289 - Capstone

3-4 Credits, Major Elective

* ~Recommended Restricted Elective(s)~
  + CSC 129 - Introduction to Security Coding
  + CSC 160 - Computer Science I\*
  + CSC 165 - Discrete Structures
  + CSC 233 - Object-Oriented Prog.: (Java)
  + CSC 245 - Secure Software Development
  + CSC 246 - Mobile App Development
  + MAR 216 - Principles of Marketing
  + MGD 112 - Adobe Illustrator I