BYU Computer Science
Animation and Games Emphasis

Fall 2024 Requirements

77 – 81.5 credits

Grades below C- are not allowed in major courses

Core Course Requirements (78.5-79.5 Hours)

1. Complete the following prerequisite courses: CS 111, CS 191, CS 235, CS 291, CSANM 150, DESAN 101 (Apply to the program)

2. Complete the following: CS 224, 236, 240, 312, 324, 355,455, CSANM 250

3. Complete the following supporting courses: WRTG 316 , Math 112, 213, 215, Phscs 121

4. Complete one of the following: STATS 121 or 201

5. Complete one of the following: Math 113, Math 290, or STAT 220

6. Complete either CSANM 354 or CSANM 342

7. Complete either DESAN 460 or CS 404

8. Complete 6 credits from the following: CSANM 352, 450, 452, 459 or 460

Elective Course Requirements

9. Complete 2 from the following: CS 252, 256, 260, 270, 329, 330, 340, 345, 356, 393, 401R, 412, 428, 431, 450, 452, 453, 456, 460, 462, 465, 466, 470, 471, 473, 474, 479, 486, 556, 574, or 575

10. Complete 2 from the following: Any 400 course listed under 9, CS 501R, 513, 556, 574, 575, 580, CSANM 210, 252, 258, 340, 342, 351R, 353, 354, 355, 452, 454, 458R, DESAN 364R, or ECEN 425.

11 . Complete 1 course from the following: ARTHC 111, ARTHC 202 or TMA 294

*CS 401R, 498R & 501R must be taken for 3 credits

CORE

Freshman

Semester 1: Math 112 Calculus 1; CS 191** Exploring CS (.5); CS 111** Intro Programming; DESAN 101** Intro to Drawing

Semester 2: Math 113, Math 290, or STAT 220; Stat 121 or 201 Statistics; CS 235** Data Structures Req. 111 or 142; CSAnm 150** 3D Graphics

Sophomore

Semester 3: CSANM 250 Interm 3D Computer Graphics; CS 291 Careers in CS (.5) Req: 111, 191; CS 224 Intro to Comp Sys Req. CS 235; CS 236 Discrete Structures CS 235; Apply to the Program

Semester 4: Math 213 Elem Linear Alg Req. Math 112; Math 215 Comp Linear Alg Req. Math 112; Phscs 121 Physics; CS 240 Adv Software Construction Req. CS 235; Elective I (Choose below)

Junior

Semester 5: CS 355 Interactive Graphics Req: CS 240 and Math 313 or Math 213 & 215; WRTG 316 Technical Writing; CS 312 Algorithm Analysis; CSAnm 354 or CSANM 342

Semester 6: CS 455 Comp Graphics Req. 240 & 355; Elective G Or CSANM 352 (Choose below); CS 324 Sys Programming

Senior

Semester 7: DESAN 460 Or CS 404 Ethics; CSAnm 450 Or 459 Sen. Film or Game; Elective G (Choose below); Elective G or H (Choose below)

Semester 8: CSANM 452 Or CSANM 460; Elective H (Choose 2 courses); Elective H (Choose below)

Guide only – Consult MyMap for your specific requirements

Elective G (Choose 2 courses)

Key

- Elective classes
- Core classes
- Prerequisite
- May be taken concurrently
- ** Must be completed before applying to program

CS 252 Computational Theory	CS 340 Software design CS 260 and 240	CS 428 Software Engineer Req: 340	CS 460 Networks Req: 324 or 360	CS 473 Avd. Machine Learning 312,Math 213, Stat 121	Any 400 level course listed, under elective G	CSANM 210 Visual Narrative	CSANM 354 Materials &Surfacing May only use once	Elective I (Choose 1 course)	
CS 256 Intro to HCI	CS 345 Operating Sys Dsgn Req: 224 & 240	CS 431 Languages & Compilers	CS 462 Distributed Systems Req: 324, 340	CS 474 Deep Learning 312, Math 213, Stat 121	CS 498R Undergraduate Special Projects	CSANM 252 Intro to 3-dimensional Graphics	CSANM 355 Photo for Anim	ARTHC 111 Art History	
CS 260 Web Programming Req: 142 or 111	CS 356 Adv. Tech in HCI Req: 256 & 260	CS 450 Computer Vision	CS 465 Security Req: 324 or 360	CS 479 Machine Translation	CS 501R Advanced Topics In CS	CSANM 258 Scripting for Animation	CSANM 452 Sen. Film 3 May only take once	ARTHC 202 World Civ 1500+ (Also can fulfill ARTS and CIV 2	
CS 270 Intro to Machine Learning	CS 393 Algorithms & Problem Solving	CS 452 Database Modeling Req: 240	CS 466 Blockchain Tech Req: CS 312	CS 486 Verification & Valid Req: 312	CS 513 Robust Control	CSANM 340 Intro to Game Design	CSANM 454 Advanced Shading	TMA 294 History of Animation	
CS 329 Test, Analysis, Verify Reg 240	CS 401R** Topics in CS	CS 453 Info Retrieval Req: 240	CS 470 Artificial Intelligence 312,Math 313,Stat 121	CS 556 Research Methods in HCI	CS 574 Transformers for NLP	CSANM 342 Real-time techniques May only use once	CSANM 458R 3D Effects		
CS 330 Prog Languages Req: 240	CS 412 Programming & Convex Optimization	CS 456 UI Software Req: 240, 256	CS 471 Voice User Interfaces	CS 574 Transformers for NLP	CS 575 Intro to Network Science	CSANM 351R Lighting for 3D Graphics	DESAN 364R Digital Sculpting		
				CS 575 Intro to Network Science	CS 580 Predictive Modeling	CSANM 353 Previsualization	EC EN 425 Real Time Op Sys		