VIDEO GAME DESIGN (BS)

Program Overview
Bachelor of Science Degree

The bachelor's degree program in Video Game Design will prepare students for entry-level and intermediate level careers in game design, animation and visualization as well as for entry-level and intermediate level positions in a variety of digital media production environments. Building on the skills and knowledge acquired in the associate degree program, students will learn and refine advanced design and development skills utilized in the game industry. Students will be immersed in high-level programs, concepts and design challenges that will aid in their development of communications skills, refine their mastery of 2D and 3D animation concepts and introduce them to new technologies and trends in the industry. An important component of the curriculum is assembling a portfolio that will include game assets developed by students. Graduates from this program will be eligible for entry-level to intermediate level positions such as game designer, character artist, environmental artist, technical artist, level designer, and visual effects animator.

Curriculum

With the permission of the Department Chair and recommendations from two discipline faculty members, students may substitute VGD 422 Special Projects for another technical course.

Course	Title	Quarter Credit Hours
Term I		
GDS 111	HTML and JavaScript	4
VGD 114	Introduction to Game Development	3
VGD 115	Digital Graphics for Gaming	3
Choose one of the following (depending upon Math Placement):		4-5
MA 105	Basic College Math with Lab [1]	
MA 110	Introduction to College Math [1]	
Elective	100-200 Level Math/Science Core [1]	
	Quarter Credit Hours	**14-15**
Term II		
GDS 110	Introduction to Game Programming	4
VGD 126	2D Content Creation Tools for Games	4
VGD 129	Technical & Visual Communications for Game Designers	3
EN 100	Introduction to College Writing	4
	Quarter Credit Hours	**15**
Term III		
GDS 121	Intermediate Game Programming	4
GDS 137	Game Prototyping	4
VGD 133	3D Modeling I	4
Elective	100-200 Level Social Sciences Core	4
EN 200	Workplace Communications	4
	Quarter Credit Hours	**20**
Term IV		
VGD 242	3D Modeling II	4
VGD 244	Unity I	4
VGD 259	Storyboard and Design	3
MA 200	Applied Math for Business	4
AR 203	Introduction to Drawing	4
	Quarter Credit Hours	**19**
Term V		
VGD 251	Introduction to Level Design	3
VGD 256	Unity II	4
VGD 268	UI/UX Design Principles	3
Elective	100-200 Level Social Sciences Core	4
	Quarter Credit Hours	**14**
Term VI		
GDS 268	Game Studio	3
VGD 261	Game Testing	3
VGD 264	Introduction to Texture and Lighting	4
Elective	100-200 Level Humanities (or Arts/Foreign Language) Core	4
	Quarter Credit Hours	**14**
Term VII		
GDS 375	Simulation and Serious Games	3
VGD 371	Advanced 3D Modeling	4
VGD 373	Animation I	3
EN 322	Argumentative Research Writing (COM Core) [1]	4
	Quarter Credit Hours	**14**
Term VIII		
VGD 390	Advanced Animation I	4
VGD 392	3D Scripting & Advanced Rigging	4
VGD 404	Advanced Texturing	4
Elective	300-400 Level Math/Science Core [1]	4
	Quarter Credit Hours	**16**
Term IX		
GDS 370	Advanced Game Design	3
VGD 384	Game Engines	4
VGD 394	Game Analytics	3
MA 300	Statistics (MA/SCI Core) [1]	4
Elective	300-400 Level Humanities Core [1]	4
	Quarter Credit Hours	**18**
Term X		
VGD 380	3D Digital Sculpting	4
VGD 412	Game Industry Perspectives	3
EN 421	Technical Communications (COM Core) [1]	4
Choose one of the following:		4
VGD 417	Introduction to Virtual Reality Development	
GDS 422	Emerging Technologies in Game Development	
	Quarter Credit Hours	**15**
Term XI		
GDS 410	Introduction to Senior Project	5
Elective	300-400 Level Humanities, Social Sciences, or 200 Level Foreign Language Core [1]	4
Choose one of the following options:		6-7

Option 1		
VGD 408	Virtual Production/Motion Capture	
VGD 419	Design Studio I	
Option 2		
IT 415	Cooperative Learning I	
	Quarter Credit Hours	**15-16**
Term XII		
GDS 420	Senior Project	6
Elective	300-400 Level Social Sciences Core [1]	4
Choose one of the following:		4-7
VGD 429	Design Studio II	
IT 425	Cooperative Learning II	
	Quarter Credit Hours	**14-17**
	Total Quarter Credit Hours	**188-193**

[1] Liberal Arts Core.

Legend

C = Number of lecture hours per week

L = Number of laboratory hours per week

T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

All bachelor's degree students are required to take 28 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses.

Subject to change.

Program Mission, Goals, and Outcomes

Program Mission

The mission of the Video Game Design bachelor's degree (VGD/BS) program is to prepare students for a variety of careers in interactive media design and digital asset creation through the development of video games. This curriculum will provide opportunities for students to learn about design, digital assets and the creative process, as well as interdisciplinary collaboration and pipeline workflows. The program emphasizes the application of skills and knowledge to the design and development of games and simulations through a combination of theory, practical laboratory exercises, collaborative experiences, and a capstone project. Technical courses are taught utilizing small class sizes led by experienced instructors in state-of-the-art facilities. All course outcomes are designed to prepare students for further education beyond the undergraduate level.

Program Goals

1. Provide appropriate learning opportunities to acquire game development knowledge from design to production, including management and industry standard documentation.
2. Provide opportunities to acquire knowledge of advanced design principles, user interface, asset creation, and user experience.
3. Provide opportunities to acquire rich knowledge of visualization and animation techniques.
4. Provide learning opportunities to acquire rich knowledge of various game engines and asset creation tools.
5. Provide opportunities to prepare for entry into a career in interactive media design and digital arts through understanding of the creative process and pipeline workflow, as well as the development of a digital portfolio.
6. Provide opportunities for the student to prepare for a range of corporate to contract-based employment opportunities and to develop a commitment to the values and ethics of a career-oriented creative professional.

Program Outcomes

Students will:

1. Execute advanced user-centric, iterative, agile, design and development through industry standard methods and tools.
2. Demonstrate advanced design principles through effective visual communication projects.
3. Demonstrate advanced visualization and animation techniques using 2D and 3D tools.
4. Demonstrate advanced use of industry standard game engines and asset creation tools.
5. Create and execute professional-quality media.
6. Demonstrate the ability to act ethically and professional, with respect for all people and cultures, as an individual or as part of a team, through skillful visual, written, and oral communications.

Q&A and Technical Standards

Questions & Answers

1. When do my classes meet?

Day Classes: Technical classes normally meet for at least three hours a day for up to five days a week. Classes normally begin in the early morning (7:45 a.m.), late morning (usually 11:25 a.m.), or mid-afternoon. The time slot for your program may vary from term to term.

Evening Classes: Technical classes meet on the average of three nights a week, although there may be times when they will meet four nights a week. Classes normally begin at 5:45 p.m.

In addition, to achieve your bachelor's degree, you will take a total of approximately seven liberal arts courses, which will be scheduled around your program schedule over the course of your entire program. Each liberal arts course meets approximately four hours per week. Liberal arts courses are offered days, evenings, and Saturdays.

At the beginning of each term you will receive a detailed schedule giving the exact time and location of all your classes. The College requires that all students be prepared to take classes and receive services at any of NEIT's locations where the appropriate classes and services are offered.

When a regularly scheduled class falls on a day which is an NEIT observed holiday (Columbus Day, Veterans Day, Martin Luther King, Jr. Day, and Memorial Day), an alternate class will be scheduled as a make up for that class. The make up class may fall on a Friday. It is the student's responsibility to take note of when and where classes are offered.

2. How large will my classes be?

The average size for a class is about 20 to 25 students; however, larger and smaller classes occur from time to time.

3. How much time will I spend in lab?

Almost half of your technical courses consist of laboratory work. In order for you to get the most out of your laboratory experiences, you will first receive a thorough explanation of the theory behind your lab work.

4. Where do my classes meet?
Students should be prepared to attend classes at any of NEIT's classroom facilities: either at the Post Road, Access Road, or the East Greenwich campus.

5. How long should it take me to complete my program?
To complete your degree requirements in the shortest possible time, you should take the courses outlined in the prescribed curriculum. For a typical six-term curriculum, a student may complete the requirements in as little as 18 months.

To complete all your degree requirements in the shortest time, you should take at least one liberal arts course each term.

Students may also elect to complete some of their liberal arts requirements during Intersession (except for EN courses), a five-week term scheduled between Spring and Summer Terms. Students will not be assessed any additional tuition for liberal arts courses taken during the Intersession but may be assessed applicable fees.

Students wishing to extend the number of terms needed to complete the required technical courses in their curriculum will be assessed additional tuition and fees.

6. Is NEIT accredited?
NEIT is accredited by the New England Commission of Higher Education. Accreditation by NECHE is recognized by the federal government and entitles NEIT to participate in federal financial aid programs. Some academic departments have specialized professional accreditations in addition to accreditation by NECHE. For more information on accreditation, see NEIT's catalog.

7. Can I transfer the credits that I earn at NEIT to another college?
The transferability of a course is always up to the institution to which the student is transferring. Students interested in the transferability of their credits should contact the Office of Teaching and Learning for further information.

8. Can I transfer credits earned at another college to NEIT?
Transfer credit for appropriate courses taken at an accredited institution will be considered upon receipt of an official transcript for any program, biology, science, and mathematics courses in which the student has earned a "C" or above within the past three years and for English or humanities courses in which the student has earned a "C" or above within the last ten years. An official transcript from the other institution must be received before the end of the first week of the term for transfer credit to be granted for courses to be taken during that term. Students will receive a tuition reduction for the approved technical courses based on the program rate and will be applied against the final technical term of the curriculum's tuition amount. No tuition credit is provided for courses which are not a part of the technical curriculum.

9. What is the "Feinstein Enriching America" Program?
New England Institute of Technology is the proud recipient of a grant from the Feinstein Foundation. To satisfy the terms of the grant, the College has developed a one-credit community enrichment course which includes hands-on community enrichment projects. The course can be taken for a few hours per term, spread over several terms. Students who are already engaged in community enrichment on their own may be able to count that service towards course credit.

10. How many credits do I need to acquire my Financial Aid?
In order to be eligible for the maximum financial aid award, you need to maintain at least 12 credits per academic term.

11. What does my program cost?
The cost of your program will be as outlined in your enrollment agreement, along with your cost for books and other course materials. Students who decide to take more terms than the enrollment agreement describes to complete the technical courses in their curriculum will be subject to additional fees and possible additional tuition costs. Students who elect to take the technical portion of the degree requirements at a rate faster than the rate prescribed in the curriculum and the enrollment agreement will be assessed additional tuition.

Students who require prerequisite courses will incur additional tuition and fees above those outlined in their enrollment agreement.

If a student elects to take a course(s) outside of the prescribed curriculum, additional tuition and fees will be assessed.

Remember, students who withdraw and re-enter, one time only, pay the tuition rate that was in effect for them at the time of their last day of attendance for up to one year from their last day of attendance. Second re-entrees and beyond pay the tuition rate in effect at the time they re-enter. The most economical way for you to complete your college degree is to begin your program now and continue your studies straight through for the six terms necessary to complete your degree requirements.

12. What kind of employment assistance does NEIT offer?
The Career Services Office assists NEIT students and graduates in all aspects of the job search, including resume writing, interviewing skills, and developing a job search strategy. Upon completion of their program, graduates may submit a resume to the Career Services Office to be circulated to employers for employment opportunities in their fields. Employers regularly contact us about our graduates. In addition, our Career Services Office contacts employers to develop job leads. A strong relationship with employers exists as a result of our training students to meet the needs of industry for over fifty years. No school can, and NEIT does not, guarantee to its graduates employment or a specific starting salary.

13. Where will job opportunities exist?
Graduates have obtained employment in the local area. However, one of the most exciting aspects of this program is the ability to look nationally for employment opportunities.

14. What kind of jobs will I be qualified to look for?
Generally jobs will exist in the entry-level positions in the computer industry. Upon completion of a bachelor's degree at NEIT, positions on the management level become attainable.

Technical Standards
These technical standards set forth by the IT department establish the essential qualifications considered necessary for students admitted to the program. The successful student must possess the following skills and abilities or be able to demonstrate they can complete the requirements of the program with or without reasonable accommodation, using some other combination of skills and abilities.

Cognitive Ability

- Good reasoning and critical thinking skills.
- Ability to learn, remember and recall detailed information and to use it for problem solving.
- Ability to deal with materials and problems such as organizing or reorganizing information.
- Ability to use abstractions in specific concrete situations.
- Ability to separate complex information into its component parts.
- Ability to perform tasks by observing demonstrations.
- Ability to perform tasks by following written instructions.
- Ability to perform tasks following verbal instructions.
- Possession of basic keyboarding skills and knowledge of computer programs.

Communications Skills

- Ability to speak in understandable English in a classroom situation on a one-on-one basis as well as before a group.
- Ability to communicate effectively with faculty and other students.
- Ability to demonstrate and use the knowledge acquired during the classroom training process.
- Ability to verbally express technical concepts clearly and distinctly.
- Ability to express thoughts clearly.

Adaptive Ability

- Ability to remain calm in the face of computer lab equipment and/or software failure.
- Ability to maintain emotional stability and the maturity necessary to interact with members of the faculty and students in a responsible manner.
- Ability to tolerate the differences in all students, faculty, and administration.
- Ability to follow instructions and complete tasks under stressful and demanding conditions.
- Ability to adapt in a positive manner to new and changing situations with an open mind and flexibility.
- Ability to think clearly and act quickly and appropriately in stressful situations.

Physical Ability

- Ability to sit continuously at a personal computer for long periods of time in order to learn and become proficient in computer programming and networking.
- Ability to perform learned skills independently, with accuracy and completeness within reasonable time frames in accordance with classroom and business procedures.

Manual Ability

- Sufficient motor function and sensory abilities to participate effectively in the classroom laboratory.
- Sufficient manual dexterity and motor coordination to coordinate hands, eyes and fingers in the operation of computers and business equipment.

Sensory Ability

Visual

- Acute enough to see clearly and interpret the contents on the computer screen

Degree Progress Checklist
Video Game Design - BS

Degree Progress Checklists

- For students entering Sequence A October 2024 or later
- For students entering Sequence B October 2024 or later
- For students entering Sequence A April 2021 to September 2024
- For students entering Sequence B April 2021 to September 2024
- For students entering Sequence A October 2019 to March 2021
- For students entering Sequence B October 2019 to March 2021