The National High School Game Academy (NHSGA) explores the video game industry and the skills needed for a successful career. The program includes an exciting blend of hands-on exercises combined with traditional lecture and discussion. Students are encouraged to expand their own creative possibilities in a unique blend of left- and right-brain college-level work.

Inspired by the Carnegie Mellon graduate program, Entertainment Technology, the NHSGA is structured to give students a taste of the current state of video game development and provide guidance toward embarking on their own career in the video game industry.

Video games are now a major force in the world of popular entertainment. Video game sales, in the U.S., have outgrown the film industries annual box office sales. Plus, this industry is still growing with the emergence of casual gaming, online gaming and serious gaming, so companies are continually looking for passionate, creative and talented individuals.

While creating a real college-level environment, students are encouraged to explore their interests, expand their technical knowledge and develop their interpersonal skills. They will learn about job opportunities in the industry and what is needed to be competitive in this job market. There is a misconception that if one is good at playing video games, then they will be good at creating video games. Students in this program will discover just how much hard work and talent is needed to be successful.

Materials
Each student must bring a personal laptop computer to the program for game development coursework and homework. The minimum system requirements for the computer are listed on page 35. Students will be given a copy of all game development tools and software required for the Topics in Game Development class. Students will be assigned homework in the areas of programming, design and drawing. Past students have also demonstrated a strong desire to continue working on their team projects outside of class hours. A list of required and optional supplies is provided on page 34. The art materials may be purchased at numerous locations including the Carnegie Mellon Art Store. They will be needed regardless of a student’s academic focus within the program.

The Focus
Upon applying for the National High School Game Academy, students are asked to choose an Art Focus or a Programming Focus. Their preference will help the staff in balancing cross-disciplinary groups. While all students will take classes in all three areas of art, programming and game design, their focus will dictate the length of time they spend in each area. In the first week of class, each of these two focus areas will then be split into additional groups (beginner, intermediate and advanced) in order to aid us in providing a challenging level of study for all students. If students are beginners, unsure of which focus to take or are accomplished programmers already, then it is suggested that they choose the Art Focus so that they can explore a new area of study at the NHSGA.

Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tr>
<td>9:30 – noon</td>
<td>Topics in Game Development</td>
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<tr>
<td>1 – 5 p.m.</td>
<td>Game Design Studio</td>
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Attendance and Participation
Students are expected to fulfill all the requirements of the program in which they are enrolled, including, without limitation: attending and participating in all classes; completing all assigned coursework, homework, projects, exams and any other program requirements. Students who fail to attend class and/or to meet program requirements without explicit approval from their program directors may be asked to leave the program at any time. This will be considered an expulsion, not a withdrawal, and such students will not receive refunds. If students have a legitimate circumstance, illness or emergency that affects their ability to attend class or fulfill the requirements of the program, they must give notice to the academic program directors as soon as reasonably possible.

Course Description
Topics in Game Development
This lecture style course will introduce students to all aspects of video game development. Local video industry professionals will aid us in examining the entire product life-cycle and discover new ways that video game techniques are being used. An existing commercial game development toolset will be used to refine skills in the areas of storytelling, world creation and level design leading up to the development of an emotionally evocative game module. Through these projects, team building skills and communication skills will also be emphasized.

Game Design Studio
The afternoon Studio is a collection of skill-specific classes and workshops that will explore the three areas in which all students take part. Workshops on digital and traditional art, design and programming will be offered for all students. Students’ focus on Art or Programming will determine how much time they will spend studying in each area. A thorough understanding of game design and the development cycle requires a basic understanding of each of these three areas of study. Also, students who enter as programmers often discover that they enjoyed art even more and vice versa. The NHSGA is a great chance for students to explore where their skills lie and how they might fit into the industry.

Class Schedule
Monday through Friday
9:45 – noon – Topics in Game Development
1 – 5 p.m. – Game Design Studio
* Schedule subject to change
* Please note classes run until 5 p.m. on Friday, August 5, 2016.

Package Pick up for NHSGA only
Packages and mail may be picked up between 8 – 9 a.m. Monday through Friday at the Postal Services front counter located in the lower level of the Cohon University Center.

All students should come to the NHSGA with the following supplies:

Supply Kit
• Notebook 3-5 subject
• Small utility pencil bag – lots of small stuff here that could get lost
• Eraser – preferably vinyl
• Hand-held pencil sharpener
• Drawing pencil 2-10 pencils
• Drawing pad 9” x 12”, 100 sheets
• Headphones – bud or headset – simple and comfortable
• 3-Button mouse
• Mouse pad
• Optional: Small speakers
• Optional: Graphics tablet (eg Wacom)
• Optional: USB flash drive, 8-16 GB
Laptop System Requirements

Software

• Microsoft Word
  Other software will be provided upon arrival

Hardware

Minimum System Requirements:

Windows

• Intel® Pentium® 4 or AMD Athlon® 64 processor (2 GHz or faster)
• Microsoft® Windows® 7 with Service Pack 1, Windows 8 or Windows 8.1
• 4 GB of RAM minimum (8 GB recommended)
• 2.5 GB of available hard-disk space for software installation
• 1024 x 768 display (1280 x 800 recommended) with OpenGL® 2.0, 16-bit color and 512 MB of VRAM (1 GB recommended)
• Internet connection, wireless card recommended

Mac OS

• Multicore Intel processor with 64-bit support
• Mac OS X v10.7, v10.8 or v10.9
• 4 GB of RAM minimum (8 GB recommended)
• 3.2 GB of available hard-disk space for software installation
• 1024 x 768 display (1280 x 800 recommended) with OpenGL 2.0, 16-bit color and 512 MB of VRAM (1 GB recommended)

For more information and help connecting to the wireless network, see www.cmu.edu/computing/precollege/.