



Innovation and Collaboration at Nevada Virtual Academy

How Nevada Virtual Academy Is Preparing Students for Career
and College Readiness and Introducing Educational Opportunities

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Nevada Virtual Academy

Nevada Virtual Academy (NVVA), founded in 2007, is an online public school in the national network of programs managed by K12 Inc. Recently, NVVA has embarked on new initiatives to introduce educational innovations to students and focus on post-secondary preparedness.

These initiatives include:

- New learning pathways
- Focus on career and college readiness
- Science, Technology, Engineering, and Mathematics (STEM) education

In this report, we focus on the new programs NVVA is designing to provide students more individualized learning opportunities and prepare them for college and career readiness. We also emphasize how NVVA is collaborating with University of Nevada, Las Vegas to increase focus on STEM programs and post-secondary opportunities.

Getting Started at NVVA

Learning Pathways

NVVA currently serves students across the state in kindergarten through grade 12. Families who enroll in NVVA’s program for the 2015–2016 school year will have a personalized experience offered through innovative learning pathways. These pathways are designed to meet each learner’s individual needs and enhance his or her capabilities.

For students in grades K–8, pathway options include: Independent Study, Virtual Pathway, and Blended Pathway.

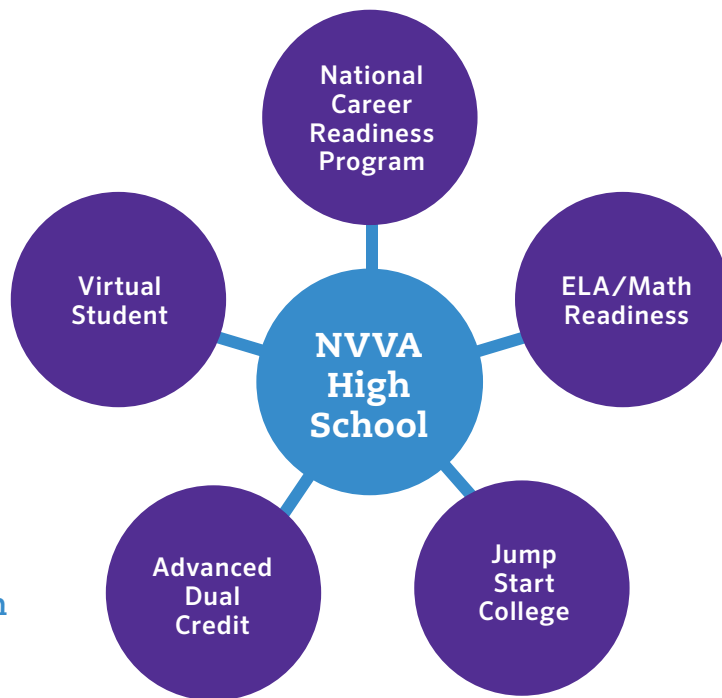
In partnership with students and parents, NVVA educators determine which pathway best serves each individual student learner. Students who work well without constant guidance find Independent Study a good educational fit, while students new to virtual learning, or those that do best with frequent teacher guidance and hands-on activities, proceed on the Blended Learning Pathway.

Overview: NVVA K–8 Learning Pathways

INDEPENDENT STUDY PATHWAY	VIRTUAL LEARNING PATHWAY	BLENDED LEARNING PATHWAY
<ul style="list-style-type: none">- Independent learners- Allows students to advance through curricula at fast pace- Teachers work with students on setting and maintaining a curricular sequence	<ul style="list-style-type: none">- Structured approach for distance education- Students assigned class periods with mandatory classes and assignments- Students benefit from frequent live [OR synchronous] instruction and teacher interactions	<ul style="list-style-type: none">- New program for students seeking course participation online and on campus- Combines Virtual Learning Pathway with face-to-face experience; requires on-campus participation- Frequent live and face-to-face instruction and hands-on activities

NVVA offers high school students five academic pathways to college and career readiness:

- Virtual Student
- Advanced Dual Credit
- Jump Start College
- ELA/Math Readiness
- National Career Readiness Program



VIRTUAL STUDENT

This pathway is for students who demonstrate the ability to thrive in a completely virtual setting and work at their own pace with teacher guidance and progress monitoring.

ADVANCED DUAL CREDIT

NVVA reported that more than 40 high school learners enrolled in dual-credit courses for the 2013–2014 school year with a 90.47% retention rate. University-bound students enrolled at NVVA can enroll as non-degree students at University of Nevada, Las Vegas or University of Nevada, Reno. Students may take up to 24 credits that will transfer to a degree program of their choice.

JUMP START COLLEGE

This pathway is a collaboration with Western Nevada College to provide transferable college courses to high school students. Each semester course at Western Nevada College counts as a full year’s credit toward a high school diploma. College courses will be taught by a Western Nevada College professor and facilitated by NVVA teachers, in person, four days a week.

ELA/MATH READINESS

This pathway is an opportunity for students who need extra reinforcement of mathematics and English skills to receive additional face-to-face instruction. Students who would likely have to take a remedial math or English course upon entering college will instead have the opportunity to receive this instruction in high school.

NATIONAL CAREER READINESS PROGRAM

Students enrolled in this pathway have the opportunity to participate in the nationally recognized ACT Word Readiness System, a series of courses that helps students gain knowledge and skills important for on-the-job success. The program is offered face-to-face, one day a week. Upon completion of the coursework and ACT Work Keys assessments, students will have the opportunity to earn the ACT National Career Readiness Certificate.

The NVVA pathways demonstrate an increased effort to guide each student to the particular program best suited to meet his or her individual learning needs. The focus at the high school level centers on close attention to post-secondary planning and readiness.



Collaborating with University of Nevada, Las Vegas

Since 2012, NVVA has maintained strong ties to University of Nevada, Las Vegas (UNLV) through a dual-credit program, affording students opportunities to obtain college level credits while in high school. Recently, the NVVA board of directors and board president Don Curry saw an opportunity for increased collaboration between the virtual school and UNLV. Curry, with strong ties to UNLV and a background in Biology and School Administration, introduced an innovative relationship between the university and NVVA with a focus on STEM learning.

Last year, NVVA surveyed families to gauge student interest in new programs in Science, Technology, Engineering, and Mathematics (STEM) education. The feedback strongly supported implementing new opportunities.

Curry and NVVA worked with UNLV on ways both institutions could collaborate on providing unique opportunities for students to be exposed to post-secondary pathways. At UNLV, Dr. Peg Rees, Vice Provost Division of Education Outreach, Dr. Mark Fink, Associate Vice Provost for Online Education, and Dr. Joanna Jezierska, Director of Multicultural Program for Engineering and Sciences were instrumental in folding NVVA into collaborating with the university on STEM initiatives and student outreach. In 2014, NVVA was awarded the Community Partner Award from the UNLV Academic Success Center.

The relationship allows NVVA to use UNLV facilities for summer STEM camps, and for UNLV STEM students to assist in NVVA camps.

Meeting the Need for STEM

STEM has received increased attention in the past few years as data from the U.S. Bureau of Labor reports that STEM employment is projected to grow to more than 9 million between 2012 to 2022—an increase of 1 million jobs over 2012 employment levels.¹

Sensitive to the need for STEM education, NVVA established a unique STEM program in the virtual setting, combining the K¹² online curricula and blended learning approaches. Offered to students in grades K-12, NVVA introduced a number of clubs supplementing online coursework with face-to-face meetings and activities. The most highly attended NVVA club is Robotics in which students work together to create robots of various complexities in order to complete assigned tasks.

Through its collaborative relationship with UNLV, NVVA also has the opportunity to host STEM summer camps. Camps include: LEGO Robotics, Vehicle Design, and Roller Coaster Physics. Camps are separated by grades with teachers and UNLV STEM faculty volunteers.

In 2014, nearly 60 individuals attended NVVA's STEM summer camps, with many parents expressing personal interests in continuing their education and going back to school.

STEM Education Across K¹²

“STEM education is an intentional, meta-disciplinary approach to teaching and learning, in which students uncover and acquire a cohesive set of concepts, competencies, and dispositions of science, technology, engineering, and mathematics that they transfer and apply in both academic and real-world context. . . .”

Rider Bertrand, 2007, <http://stemedfoundation.org/>

At K12 Inc., STEM clubs offers learning opportunities to every student enrolled in a public school program. Through K¹²-sponsored STEM clubs, thousands of students in grades K through 12 have the opportunity to investigate, observe, and analyze everything from dinosaurs to astronomy to robotics. They are also introduced to occupations in many fields of science and technology. And, because our free STEM clubs are fully virtual, all a student needs is to be enrolled in one of our public school programs. Each club meets 15 times between September and May with live online sessions.

Many managed schools programs, including Nevada Virtual Academy, expand upon these K¹² sponsored STEM clubs to bring experiences to their students. Arizona Virtual Academy, for example, has partnered with the Arizona Diamondbacks to sponsor “Science of Baseball” programs at the school’s blended learning centers for students in grades 3 through 8. These are available both virtually and face to face. The curriculum was built by the Diamondbacks organization and provided at no cost to interested students. This partnership gives students ready access to many interesting learning experiences in science, technology, engineering, and technology.

¹STEM 101: Intro to tomorrow's jobs: <http://www.stemedcoalition.org/wp-content/uploads/2010/05/BLS-STEM-Jobs-report-spring-2014.pdf>



In Closing

In the 2014–2015 school year, more than 100 students graduated from Nevada Virtual Academy. Many graduates plan to attend colleges and universities such as:

- University of Nevada, Las Vegas
- University of Nevada, Reno
- Brigham Young University
- Cornell University
- University of California, Los Angeles
- University of California, Berkeley

Nevada Virtual Academy continues to look for innovative opportunities to meet students' needs with individualized learning pathways and a focus on college and career preparedness. Through the focus on STEM education, NVVA supplements its virtual school program with exciting opportunities for hands-on learning and problem-solving activities that target critical educational and occupational needs.