

# **DUNBAR HIGH** SCHOOL MUNDO · WORLD LEGIO DE

An International Baccalaureate World Class S.T.E.M. School

### JONOW NO **CREATING AN EPICENTER OF EXCELLENCE**







The Premier S.T.E.M (Science Technology Engineering Math) International Baccalaureate School for the East and South Zone

Featuring Advanced Technology Certifications, and College Preparatory Biomedical and **Engineering Programs** 



We are a Microsoft Showcase School Microsof

REV 17-18



## International Baccalaureate Programs

### Diploma Programme

The International Baccalaureate Diploma Program is designed to meet the highest standard required of any high school student in the world. Successful completion of the Diploma Program earns the student a diploma recognized for university admission throughout the world and for course credit and academic placement in 1000 leading colleges and universities in the United States.

The IB Diploma program is a system of syllabi and examinations based on the idea that general education at the upper secondary level should encompass the development of all the main powers of the mind through which the student interprets, modifies, and enjoys his/her environment.

Embracing the last two years of secondary education, the curricula of the Diploma Program incorporates standards that assume a high level of achievement during the prior years. The subjects are outlined according to six areas:

- Language A (English)
- Language B (Foreign Language)
- Individuals and Societies (Social Studies)
- Experimental Sciences
- Mathematics
- Arts and Humanities

In addition to the above courses, the IB Diploma Candidate must also take a unique course called Theory of Knowledge, participate in an intensive community service project, and write an extended essay.

Theory of Knowledge (TOK) is an interdisciplinary requirement intended to stimulate critical reflection on knowledge and experience gained inside and outside of the classroom.

**Community Action & Service (CAS)** requires the student to demonstrate creativity, action and service in relationship to school and community.

**Extended Essay (EE)** is 4000 words on a subject of their choosing.



#### The International Baccalaureate Career-related

**Program** framework allows students to specialize in, and focus on a career-related pathway (STEM). The program's three-part framework comprises the study of at least two Diploma Program courses alongside career-related studies (STEM) and the distinctive IBCP core which is designed to create a bridge that connects each student's chosen Diploma Program courses and career-related studies (STEM).

For IBCP students, Diploma Program courses provide the theoretical underpinning and academic rigor of the program; career-related studies further support the program's academic strength and provide practical, real-world approaches to learning; and the IBCP core helps them to develop skills and competencies required for lifelong learning. The core includes a Professional and Personal Skills class, along with students developing a language portfolio, and a Reflective Project. Finally, students should complete a Service Learning piece that relates to the Reflective Project and their area of study

#### **Diploma Program courses**

IB World Schools select a number of IB Diploma Program courses as part of the IBCP framework. These courses can come from any of the subject groups in the IB Diploma Program and may be studied at standard or higher level. It is possible to **study from two to four Diploma Program courses** depending on the nature of the student's career-related studies and timetable. The Diploma Program courses chosen should be relevant to the student's career-related studies.

#### **Career-related studies (STEM)**

The career-related studies available at DHS are:

- PLTW: Biomedicine or Engineering
- Academy for Technology Excellence: Digital Design | TV Production | Game Simulations & Animation | Foundations of Web Design | Engineering by Design | Intro to Information Technology | Network Administrator

http://www.ibo.org

## **Advance Technology Certification Programs**

Over \$50,000 worth of Technical Training Leading to College & Career Readiness INTERNSHIPS AND WORLDWIDE RECOGNITION OPPORTUNITIES

### **Academy for Technology Excellence**



The Academy for Technology Excellence is dedicated to providing a rigorous and deliberate IT course track to drive competency for a **Network System Administrator** computer science career. This track is a complete immersion track of courses that allow students the potential to earn over 20 industry standard IT computer certifications, such as the Microsoft Office Specialist: Word, PowerPoint, Excel, Outlook, Access, Cisco Certified Network Associate and Entry Network Technician, CompTIA A+, Network+, Server+ and Security+, Aruba Networks, as well as the Microsoft Technology Associate: Server, Networking, Operating Systems, Security, Mobility and the Microsoft Certified Solution Associate: Server and Windows Operating System certifications. https://www.microsoft.com/en-us/education/imagine-academy

2014 Worldwide Champion



Microsoft Imagine Academy

Microsoft CERTIFIED



## **Academy for Digital Excellence**

The Academy for Digital Excellence program offers **Web Design**, **Digital Design & TV Production** courses that engage students in the digital arts. Students will gain hands-on experiences that will lead to the 6 design industry standard IT certifications in Adobe Photoshop, Illustrator, InDesign, Dreamweaver, Flash, & Premiere Pro. Courses you can take include: Web Design, Digital Design, and TV Production. We have a state of the art TV production studio complete with sound booth, studio cameras, green screen, and production editing software – Adobe Premiere Pro and Adobe Sound Booth.

http://www.adobe.com/education/certification-programs.edu.html

Earn your Adobe Certified Associate credential.

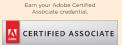
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## Academy for Game Design & Programming Excellence



The Academy for **Game Design** and **Programming** Excellence offers students the ability to understand the fundamental principles of game and simulation concepts in a project based course environment. Students will learn game and animation design principles, coding languages, and more. Our instructors are dedicated in using industry standard software and tools to gain students these amazing key skills. Students enrolled in the game design program will gain the skills necessary to receive Autodesk 3D Studio Max certification, as well as, Adobe Flash, Illustrator, and Photoshop credentials. Game Design and programming uses a variety of hardware and software tools in order for students to find a medium that best suits their need to create 2-D to 3-D games.

http://www.certiport.com







## **Engineering College Preparatory Program**



### Project Lead the Way (PLTW) IMAGINE IT, DESIGN IT, FUND IT, BUILD IT

The Engineering curriculum is designed to encourage students to pursue engineering and related disciplines in college. PLTW has relationships with more than 100 colleges and universities. Of these, 36 offer credit for completion of select PLTW courses.

#### Introduction to Engineering Design (IED)

Students dig deep into the engineering design process, applying math, science, and engineering standards to hands-on projects. They work both individually and in teams to design solutions to a variety of problems using 3-D modeling software, and use an engineering notebook to document their work. Students learn to use tools and equipment such as drills, saws, 3-D printers, and a CNC plasma cutter to design and develop their hands-on projects. Students are also given the opportunity to earn an industry certification in Autodesk<sup>®</sup> Inventor<sup>®</sup>.



#### **Principles of Engineering (POE)**

Through solving engaging and challenging problems, students explore a broad range of engineering topics including mechanisms, the strength of structures and materials, and automation. Students develop their skills in problem solving, research, and designing while learning strategies for collaboration, design process documentation, and presentation. During the final semester, students use VEX® components to design, build, and program a robot to compete against classmates in a grand challenge. The challenge requires use of all of the skills learned throughout the course. This highlights collaboration, 3-D modeling, designing, building, and programming.

#### Computer Integrated Manufacturing (CIM)

Manufactured items are part of everyday life, yet most students have not been introduced to the high-tech, innovative nature of modern manufacturing. This course illuminates the opportunities related to understanding manufacturing. At the same time, it teaches students about manufacturing processes, product design, robotics, and automation. Students use Autodesk® Inventor® and HSM Pro® to design desired manufactured parts. The machinery used to manufacture parts are a Haas TM1P CNC mill and a Haas TL1 lathe. Students can earn a virtual manufacturing badge recognized by the National Manufacturing Badge system.

#### **Engineering Design and Development (EDD)**

The knowledge and skills students acquire throughout PLTW Engineering come together in the Engineering Design and Development course. Students identify an issue, then research, design, and test a solution, ultimately presenting their solution to a panel of engineers. Students apply the professional skills they have developed to document a design process to industry standards, thus completing Engineering Design and Development ready to take on any post-secondary program or career. Past students' projects have included, a t-shirt that can charge small electronic devices, cooling systems for cars when the ignition and engine are not engaged, an electronic pain-relieving knee-sleeve, and a small-scale trash compactor.

#### **Engineering Extracurriculars**

FIRST Robotics combines the excitement of sport with the rigors of science and technology. We call FIRST Robotics Competition the ultimate sport for the mind. High-school student participants call it "the hardest fun you'll ever have." Strict rules, limited resources, and an intense six-week time limit challenge teams of students to raise funds, design a team "brand," hone teamwork skills, and build and program an industrial-size robots to play a difficult field game against likeminded competitors. It is as close to real-world engineering as a student can get. Volunteer professionals mentor and lend their time and talents to guide each team. Each season ends with an exciting FIRST Championship.





https://www.pltw.org/our-programs/engineering

## **Biomedical College Preparatory Program**



### Project Lead the Way (PLTW) FOCUSED ON RESEARCH & PROBLEM SOLVING

The rigorous and relevant four-course PLTW Biomedical Science sequence allows students to investigate the roles of biomedical professionals as they study the concepts of human medicine, physiology, genetics, microbiology, and public health. Students engage in activities such as investigating the death of a fictional person to learn content in the context of real-world cases. They examine the structures and interactions of human body systems and explore the prevention, diagnosis, and treatment of disease, all while working collaboratively to understand and design solutions to the most pressing health challenges of today and the future.

### The foundation courses are:

#### **Principles of Biomedical Science**

In the introductory course of the PLTW Biomedical Science program, students explore concepts of biology and medicine to determine factors that led to the death of a fictional person. While investigating the case, students examine autopsy reports, investigate medical history, and explore medical treatments that might have prolonged the person's life. The activities and projects introduce students to human physiology, basic biology, medicine, and research processes while allowing them to design their own experiments to solve problems.



**CSI** Investigations

#### **Human Body Systems**

Students examine the interactions of human body systems as they explore identity, power, movement, protection, and homeostasis. Exploring science in action, students build organs and tissues on MANIKEN® skeletal models; use data acquisition software to monitor body functions, such as muscle movement, reflex and voluntary action, and respiration; and take on the roles of biomedical professionals to solve real-world medical cases.



#### **Medical Interventions**

Students follow the life of a fictitious family as they investigate how to prevent, diagnose, and treat disease. Students explore how to detect and fight infection; screen and evaluate the code in human DNA; evaluate cancer treatment options; and prevail when the organs of the body begin to fail. Through cases, students learn about a range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics.

Knowledge in biomedical sciences paves the way for a wide range of careers. A small sample of recent graduates who completed at least one PLTW Biomedical Science<sup>™</sup> course reveals the array of opportunities: some students pursued post-secondary studies in microbiology, pharmacy, chemistry,

nursing, nutrition and dietetics, or neurobiology; others enrolled in medical or dental school; and others began careers in forensic science or started research projects focused on immunology and cancer.

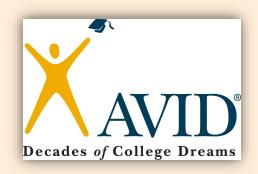


http://www.pltw.org/our-programs/biomedical-science

## **AVID** (Advancement Via Individual Determination)

### WHERE DREAMS BECOME A REALITY!

AVID (Advancement Via Individual Determination) has been on the campus of Dunbar High School since 2008. It is an academic, regularly scheduled elective class taken during the school day, with 16 sections offered from the 9th – 12th grade level. Seven teachers instruct AVID utilizing the block schedule. AVID is based on the WICOR method which uses writing as a tool of learning, collaborative grouping, organization, and inquiry as methods. The main components of the program are: academic instruction, tutorial support, motivational, organizational and leadership activities. The mission of AVID is to ensure that ALL students, especially those students who are in the middle and those who represent the traditional underrepresented groups: HTTP://WWW.AVID.ORG



- Will succeed in rigorous curriculum
- Will complete a rigorous college preparatory path
- Will enter mainstream activities and volunteer opportunities in and out of school
- Will increase their opportunity of enrollment in four-year colleges

Alabama A & M

• Will become educated and responsible participants and leaders in a democratic society









Amherst Barnard Berkeley Bethune Cookman Bucknell Colby Colgate Columbia Cornell Duke Emory Florida A & M Florida Atlantic University Florida International Florida Polytechnic Florida Southern Florida Southwestern State Full Sail Grinnell Harvey Mudd Hodges University Johns Hopkins Johnson & Wales Keiser University Lamar Macalester Massachusetts Institute of Technology Middlebury Naval Academy Nova Southeastern University Olin Purdue Rasmussen College Swarthmore Stetson

Stony Brook Texas A & M University of California at Berkley University of Central Florida University of Chicago University of Cincinnati University of Florida University of Miami University of South Florida Washington University Wellesley West Point Wesleyan Awarded Millions in Scholarships Yearly **Edison Presidential Bright Futures** Central District Cloud Peak Edna Swan **Destination Graduation** Alabama A & M Tuition Take Stock

Southwest Florida Community Scholarship Keiser University Achievement Award Carrol University Tuition Alabama State Tuition GI Bill Hillmeyer Tremont Florida Polytechnic Tuition Daughters of the American Revolution Dunbar Heritage Peachey's Rotary South

Rotary East Delta Sigma Bruce L. Schiener Florida Memorial Alumni Association Suncoast Federal Credit Union

#### DUNBAR STUDENTS ARE UNIVERSITY AND COLLEGE BOUND

## **Academic Clubs and Sports**

### **Clubs and Activities**

#### A-Team

Art Club AVID Chorus College Reach Out Program (CROP) Cheerleading **Destination Graduation** Drama Club **Dungeons & Dragons** Engineering Team (Tiger Engineering) Fellowship of Christian Athletes (FCA) The Film Club Future Educators of America Girls Opting for information Technology (GO4IT) Junior Reserve Officer Training Corp (JROTC) Health Occupation Students of America (HOSA) IT Internships Kappa League

LAN Party Literacy Club Math Team Marching Band Mu Alpha Theta National Honor Society National Technology Honor Society Rho Kappa Honor Society **Robotics Team (First Robotics)** Scholars Club Student Government Step Team Society for Hispanic Professional Engineers (SHPE Jr.) **Tiger Tech** World Language Fair Yearbook Young Life Young Publishers Club







### Sports Programs Fall Sports

Bowling Cross Country Football Golf Swimming Volleyball

### Winter Sports

Basketball Girls Weightlifting Soccer Wrestling Spring Sports Baseball Boys Weightlifting Softball Tennis Track

## **Awards and Accomplishments**

- A Microsoft Showcase School, A Microsoft Innovation School and the 1st Microsoft Certified High School in the World; A Microsoft Global Forum participant in Barcelona, Spain
- An Adobe featured school for IT certification and A "Model School for Tech Success" by CompTIA Education Foundation
- A Magnet School of Excellence and Distinction and a 4 time Merit Award winner
- 1<sup>st</sup> Place, 3<sup>rd</sup> Place, & 4<sup>th</sup> Place Worldwide Champions Microsoft Office
- Three 1<sup>st</sup> Place, Two 2<sup>nd</sup> Place and One 3<sup>rd</sup> Place National Champions for Microsoft Office
- Numerous award-winning teachers and coaches Teachers of the Year, Coaches of the Year, Golden Apple winners and finalist, Teachers of Distinction, plus, Microsoft Innovative Expert Educators
- Students in the STEM programs perform higher than the District and State on standardized tests
- Thousands of IT professional computer certification credentials earned by students & faculty
- STEM students excel in the Florida, National, and International Science and Inventors Fair
- State Finalist for Energy Whiz competition for the State of Florida
- Math Team top performers for Lee County and the State of Florida
- Engineering students placed in the Top 3 in the Florida Astronaut Challenge NASA Kennedy Space Center; Placed 1<sup>st</sup> and 3<sup>rd</sup> in Engineering Olympics; Seaman's We Can Change the World Competition – Best in Florida and Top 16 Nationally; National AXO Engineering winner, Rookie Inspiration Award – First Robotics Competition
- Biomedical students took 2nd Place for the National Pharmacy is Right for Me Innovation Challenge and HOSA team took some 1<sup>st</sup> Place through 3<sup>rd</sup> Place awards at HOSA Regional meets
- Received 3 award recognitions for effective business partnerships with Adobe and Microsoft at the STEM Florida Conference
- Showcased as "The Standard" for Information Technology education in the N.C.T.E.F. Guide developed with Microsoft Learning Foundation
- Awarded the "Transformation Award" by Southwest FL Regional Technology Partnership
- IT Florida Finalist in the Excellence in IT Leadership | Finalist for Excellence in Bridging the Digital Divide
- Principal, Carl Burnside was selected as the Principal of the Year Finalist for the State of Florida and as 1 of 4
  Finalists for the Florida Council of Instructional Technology Leaders (FCITL)



## **DUNBAR HIGH SCHOOL**

"Achievement is the Expectation"

3800 East Edison Avenue

Fort Myers, Florida 33916

Phone (239) 461-5322

Fax (239) 461-5110

Web: http://dhs.leeschools.net











## **DUNBAR HIGH SCHOOL** A World Class IB STEM School

Fort Myers, Florida – Lee County



Our Career Academy programs offer students the ability to earn over 33 IT Credentials in career areas like: Network Administration, PC Support Technician, Game Design & Programming, Engineering & TV Production

### ABOUT DUNBAR

TITLE I Approx. 90% Free and Reduced Lunch

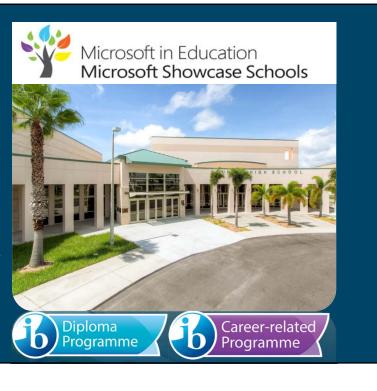
#### **Our Mission**

Dunbar High School will develop inquiring, knowledgeable, and caring young people who help to create a better and more peaceful world through intercultural understanding and respect, compassionate leadership, and lifelong learning

#### An International Baccalaureate Microsoft Showcase STEM School

We offer not only the standard IB Diploma program (IBDP), but we also offer the opportunity to take IB courses alongside our STEM courses in our IB Career Related Program (IBCP).

We offer over 33 IT credentials in variety of career related programs.



			Microsoft Showcase School / Microsoft Innovation School
	2018	•	Microsoft U.S. Partners in Learning Global Education Forum in Barcelona, Spain
5	2017		1st, 3rd, & 4th Place Winners for the Microsoft Office Worldw
	2016		Championship and 1st Place and 2nd Place National Champion and 1st, 2nd, & 3rd Place State Champions
	2015	•	2 Rising Stars from the News-Press People of the Year Awards
ן ר	2014	•	SW Florida Regional Technology Partnership Women in Technology Award
Ś	2013	•	National Center for Women in Technology Aspirations in Computing Awards
5	2012	•	Digital Lee, Lee Character Counts and Lee County Film Festival Winners
	2011	•	Hertz Hack-A-Thon Winners and SWFRTP Hack-A-Thon Winne
	2010	•	Magnet School of Excellence and 5-Time Merit Award Winner
Ş	2009	•	Network for Teaching Entrepreneurship – Make Your Job Challenge Winners
	2008	•	Adobe Education Leaders, Microsoft Innovative Experts, CTE Teachers of the Year, Golden Apple Teachers of Distinction,
	2007		Microsoft Innovative Educators
٢	2006	•	Science Fair and Inventors Fair, and Math Team Winners
	2006	•	Finalist Microsoft U.S. Partners in Learning Innovative Educati Forum
	2005		Finalists - Florida Adobe Certified Associate Championship
	2004	•	Round 1 Finalists - Microsoft Imagine Cup - IT Challenge
			1 of 5 Finalists for the Women in Business Apex Award

"OVER A DECADE OF EXCELLENCE"

- Nominated for the Greater Chamber of Commerce Chrysalis Award for Education
- The City of Ft. Myers proclaimed Jan. 18, 2011 as Dunbar High School Day
- Certiport 's Global Summit's Teacher of the Year
- **3 STEM Florida Effective Business Partnerships Awards**
- Adobe Featured School

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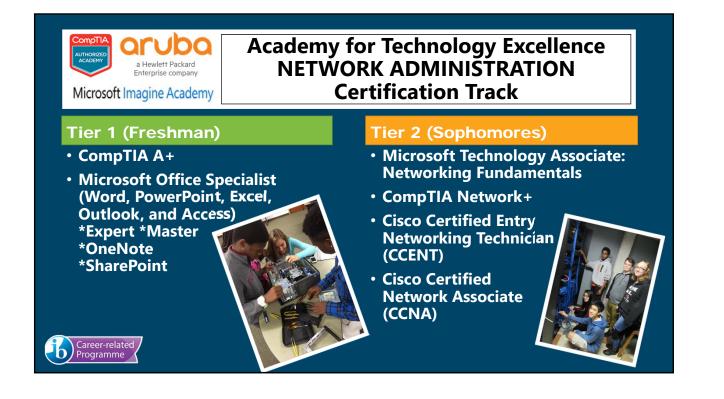
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/inners

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- Featured as the IT Career Cluster Guide Model by The National Career and Technical Education Foundation (NCTEF) & Microsoft Learning
- SW Florida Regional Technology Partners Transformation Award
- CompTIA "Model School for Tech Success" and CompTIA Merit Award Winners
- Voted as the ABC-7 "Cool School" of SWFL for Fall
- Finalist for IT Leadership-Southwest Division Awards by IT Florida
- Program featured in Florida Trend Magazine's 50th Anniversary Edition insert, Gulfshore Business, Parent & Child Magazine, Certification Magazine, and others
- Principal was Finalist for FL Council of Instructional Technology Leaders
- Innovative Technology Educational Program Award FLSBA
- Declared 1st Microsoft Certified High School in the "WORLD"
- Showcased at the FL Dept. of Ed.K-12 Conference and Innovation Fair
- 1 of 15 Innovative Technology Programs in the Nation by T.H.E. Journal









## WEB DESIGN, DIGITAL DESIGN, & TV PRODUCTION

#### **WEB DESIGN**

#### **DIGITAL DESIGN**

#### **TV PRODUCTION**

- Adobe Photoshop Adobe Photoshop

Adobe Premiere Pro











ROJECT LEAD THE WAY

Principles of Biomedical Science Human Body Systems Medical Interventions





## **STUDENT SUCCESS PROFILES SAMPLES**

### **TYLER MILLIS – 2016 Dunbar Graduate**



#### **Background:**

Single Parent Free & Reduced lunch Low Socioeconomic

#### Accomplishments

~48 IT Certifications Microsoft 1<sup>ST</sup> Place World Champion Valedictorian Multiple Hackathons winner Technology Internships Full Scholarship to MIT

## **STUDENT SUCCESS PROFILES SAMPLES**

### JULIANA TOYLOY-STANTON – 2014 Dunbar Graduate



#### **Background:**

Free & Reduce lunch Low Socioeconomic Accomplishments



~8 IT Certifications Microsoft 3<sup>rd</sup> Place World Champion Valedictorian Full Scholarship to University of Florida Degree: Telecommunications Media & Society and Theatre Performance (minor) Founder of GO4IT – Girls Opting for Information Technology

## STUDENT SUCCESS PROFILES SAMPLES JUAN CARLOS QUIJADA – 2009 Dunbar Graduate



#### **Background:**

Free & Reduce lunch Low Socioeconomic ESOL

### Accomplishments

~23 IT Certifications Science Olympiad Medalist Valedictorian IT Employment: approx. \$65,000/year Associate Analyst Chico's FAS CallMiner: Customer Engagement & Speech Analytics Software

### STUDENT SUCCESS PROFILES SAMPLES CHRISTIAN MCMILLION – 2014 Dunbar Graduate



#### **Background:**

Single parent Free & Reduce lunch Low Socioeconomic

#### Accomplishments

~18 IT Certifications IT Internship Chico's FAS IT Employment: approx. \$100,000/year IT Project Manager Fort Carson Military Base Service Desk Specialist Providence Health & Services Graduate Western Governors University

"Being involved in the ATE program has made me have a totally different set of plans for my future. I know that I can earn a decent job and go to college. My computing and certification classes have helped me figure out what to do in life and changed my entire life for the better." Andre Brunel, Alta Resources Alorica



"Getting certified is the greatest feeling because you have accomplished something that you have been working on for a few months, and walking in there and passing a real life professional certification makes you want to press on and learn more." Evan Richardson, Software Engineer at WaveStrike " I am happy to know that my work in high school will actually have a use in my future, but currently this class is my single most driving point to come to school in the morning. I am currently employed because of the certifications I have..." Jacob Osterhout, DataLink Software

"I've gotten a job as a junior network administrator at 1st Community Bank and I would never have even thought of working there during high school without this program and definitely not without my certifications." Danny Bell, Marketing & Technology Specialist Boy Scouts of America

"Today I am very thankful for having this great opportunity to become Microsoft certified. As of now, my idea of school changed tremendously because now I look forward towards learning new material every day." Juan Quijada, CallMiner