

TECHNICAL EDUCATION

TODAY

Secondary Schools Edition



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Early Engineering A Great *IDEA*

Innovation, Design, Engineering, and Arts

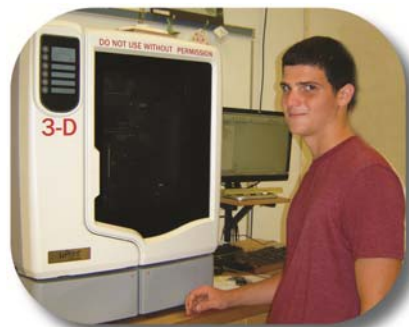


A solid educational foundation begins with teachers who go the extra mile and work together to provide students with tailored instruction, hands-on projects, and real world experience. Students enrolled in one Florida high school are gaining exactly that, through the school's IDEA Center. The IDEA Center includes the study of Science, Technology, Engineering, and Math (STEM) as it relates to Innovation, Design, Engineering, and Arts (IDEA). Programs of study include construction technology which involves design, engineering, and architecture; TV production; and visual and graphic arts. IDEA Center students reap the benefits of dedicated teachers in a close-knit environment as they get ready for postsecondary education and higher paying, high-tech careers.

"The IDEA Center provides students with a small learning community environment where art, creativity, and technology are

integrated," said IDEA Center coordinator and drafting teacher Joe Orr. "Teachers meet monthly to collaborate on curriculum and enhance core academics with career exploration and preparedness. Another benefit of the small learning community is common planning time. This allows IDEA Center teachers to integrate courses and share related knowledge and experience. Another advantage is that IDEA Center classes are all located in the same building, allowing impromptu meetings and further collaboration. All in all, our students benefit by experiencing a more well-rounded education."

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Student Christopher Callahan enjoys working with the 3-D printer in his Drafting III class.

Wanted: Skills

The following is excerpted from a study that confirms that our workforce needs skills—*now*. Funding for Career and Technical Education (CTE) has never been more critical. The report is entitled: *Help Wanted: Projections of Jobs and Education Requirements Through 2018* by Anthony P. Carnevale, Nicole Smith, and Jeff Strohl of the Georgetown University Center on Education and the Workforce.

"...The emphasis of the recovery will be largely on skilled jobs. Many people who lost jobs that required only a high school education or less will find that their relatively low-skill jobs will not come back at all, lost to automation or overseas competitors. Scores of these job seekers will be left behind because the jobs that survived the recession and the jobs created in the recovery will require postsecondary education or training.

The economy that emerges from the recession will be different than the economy that preceded it. This recession, like the previous two, has intensified the underlying engine of economic change that has been evident at least since the 1980–81 recession. The industrial economy of the 20th century has slowly transformed itself into a new services economy that demands more education and different skills of its workers."

Florida's minimum wage: \$7.25
Florida's average wage for an experienced **Radiologic Technician: \$27.92**

A Great IDEA (continued)

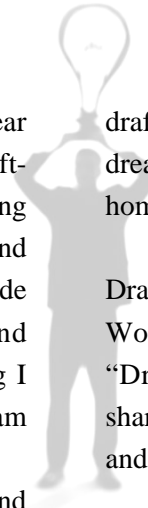
Dalton Hicks has just completed his freshman year and Drafting I class. “The best part of my day was Drafting class with Mr. Orr. I’m already signed up for Drafting II,” Dalton stated. “I like applying what I’ve learned and seeing what I’ve built,” he continued. “My plans include going to Embry-Riddle Aeronautical University and becoming an aerospace engineer. Drafting is something I need for my future and I will be able to build on what I am learning.”

Gisela Sarai Mijares is entering her senior year and has already completed Drafting I, II, and III. Gisela’s interests lean towards architecture. “I like the universal language of drafting,” she said. “It’s organized and detail oriented. I like being out in the field and seeing how

drafting relates to making a house feel like a home. My dream job would be creating homes that ‘touch’ people; homes that someone would feel a strong connection to.”

Fellow senior Christopher Callahan completed Drafting I, II, and III and earned his certification in SolidWorks, an industry leading 3-D CAD design software. “Drafting is really fun and I’m a hands-on guy,” he shared. “I learned how to run the mini-lathe, lasers, saws, and the 3-D printer.”

Each of these students has explored different job options through career and technical education classes at the IDEA Center. Whether these students launch a career close to home or around the world, the IDEA Center is preparing them for a successful future.



Left: Jacob Jordan practices CPR on ‘Resusci Junior,’ a manikin used for realistic child CPR education. Right: Barbara Lane teaches anatomy.

High School Health Care Foundation for a Future

Academy of Medical Arts and Sciences introduces health care careers

Students interested in helping others and making a difference by working in a hospital, an outpatient clinic setting, a veterinarian’s office, or a pharmacy will find themselves in good company in one Florida high school’s Academy of Medical Arts and Sciences. This small learning community provides students with strong academics supported by a diverse curriculum of healthcare courses. First step in the academy curriculum? Barbara Lane’s classroom.

Barbara teaches a broad introduction to healthcare in courses such as Medical Skills and Services and Health Science I. She also serves as Health Occupation Students of America (HOSA) advisor. “My classes get students

interested and excited about entering into a medical career,” Barbara said. Students enrolled in the Academy continue exploring medical career pathways through electives taught by Academy lead teacher Laura Sollenberger.

“We love our careers and try to pass that enthusiasm and dedication on to our students,” Barbara said. “Our students are taught cultural diversity. Ethics and integrity are stressed and teamwork is encouraged. We introduce our students to a profession.”

“This year we instituted cooperative test taking with our ninth graders,” Barbara continued. “This learning strategy involved pairing students for testing based on their strengths and weaknesses. This approach introduced teamwork, fostered growth and development of mentoring and leadership skills, enhanced study techniques, and

(Continued from page 2)

promoted relationship building. It was a real win/win.”

Jacob Jordan, a member of the Class of 2012 and well on his way to a career in the medical field, rattles off the body’s systems and functions as easily as the ABC’s. “Health Science I is the best part of my day,” Jacob said. “My parents have always been supportive of academics and pursuing a career in the health field,” Jacob continued. He has a personal interest in healthcare as well. “I used to play football and wrestle but I sustained an injury and can no longer do that.”

Jacob’s long-term goals include attending medical school and becoming an anesthesiologist. He is intrigued with the idea of combining his passion for travelling, teaching, and medicine by pursuing a career as a member of a medical flight team. For now he is content with starting his junior year and making a difference as president of the student council.

Exploring healthcare career pathways in the medical profession provides high school students with a solid foundation of knowledge that they will use for a lifetime, regardless of their chosen career.

“You cannot help but learn more as you take the world into your hands. Take it up reverently, for it is an old piece of clay, with millions of thumbprints on it.”

John Updike



Occupational Outlook: Radiologic Technicians

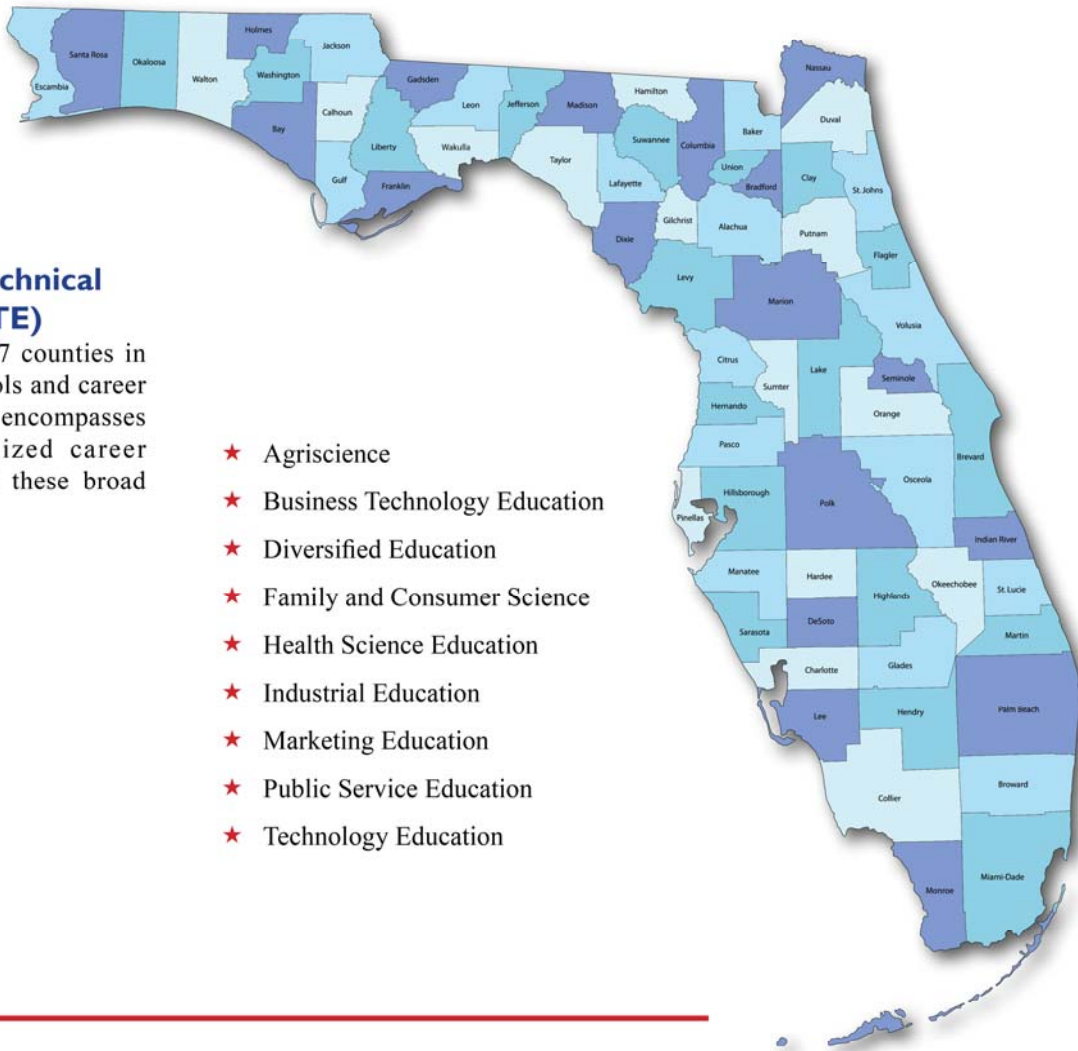
Employment of radiologic technologists is expected to increase by about 17 percent from 2008 to 2018, faster than the average for all occupations. As the population grows and ages, there will be an increasing demand for diagnostic imaging. With age comes increased incidence of illness and injury, which often requires diagnostic imaging for diagnosis. In addition to diagnosis, diagnostic imaging is used to monitor the progress of disease treatment. With the increasing success of medical technologies in treating disease, diagnostic imaging will increasingly be needed to monitor progress of treatment.

Source: www.BLS.gov

OCCUPATION	WAGES
Minimum Wage	\$ 7.25
Civil Engineers	\$45.82
Architectural Drafters	\$25.46
Environmental Engineers	\$38.96
Environmental Engineering Technicians	\$21.66
Cardiovascular Technologists	\$23.74
Dental Hygienists	\$32.45
Pharmacy Technicians	\$15.11
Salaries based on experienced workers	



Secondary Career & Technical Education



Career and Technical Education (CTE)

is offered in all 67 counties in Florida high schools and career academies. CTE encompasses scores of specialized career instruction within these broad categories:

- ★ Agriscience
- ★ Business Technology Education
- ★ Diversified Education
- ★ Family and Consumer Science
- ★ Health Science Education
- ★ Industrial Education
- ★ Marketing Education
- ★ Public Service Education
- ★ Technology Education



**Florida
Department
of Education**

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