

The Photonics Academy

Wekiva High School
and

Valencia Community College

What Is The Photonics Academy?

- A dual enrollment program between Valencia Community College and Wekiva High School.
- Students will earn college credit toward an Associate of Science degree, while completing high school courses.
 - A student participating in the Photonics Academy Curriculum for all 4 years will earn 47 credit hours.

A student who is motivated enough to take summer courses or online courses can earn his/her entire AS degree by the time they graduate high school.

What's The Curriculum?

- The same curriculum VCC uses to train their Photonics graduates.
 - The same curriculum, books and labs will be utilized.
 - Even more importantly, a VCC teacher will be teaching the courses at WHS!

Career Cluster: Science, Technology, Engineering & Mathematics

High School CTE Program: Dual Enrollment Laser and Photonics Academy Model

Career Cluster Pathway: Engineering & Technology (SCPA)

Educational Agency: Wekiva High School



16 CORE CURRICULUM CREDITS

ADDITIONAL ELECTIVE CREDITS

ENGLISH
4 credits

MATH
4 credits

SCIENCE
3 credits,
2 with lab

SOCIAL STUDIES
3 credits

OTHER REQUIRED COURSES

FINE OR PRACTICAL ARTS (1 cr)

PHYSICAL EDUCATION (1 cr)

CAREER AND TECHNICAL EDUCATION COURSES

Major Area of Interest:
(Electronics Engineering Technology)
- Technical Certificate: 24 college credits
- A.S Degree: 53 college credits

ADDITIONAL COURSES FOR A.S DEGREE

Technical Electives: 6 college credits
General education: 15 college credits

Career Cluster of interest identified by students enrolled in mandatory middle school career education course that includes interest assessment through CHOICES and ePersonal Education Planner through FACTS.org.

HIGH SCHOOL							FALL		SPRING		SUMMER
							1 st 9 wks	2 nd 9 wks	1 st 9 wks	2 nd 9 wks	
	9	English I	Algebra I	Physical Science	Global Studies or World Geography	Physical Education	EET1214 C (2cr)	MTB1329 C (3cr)	EET1036C (6cr)		
10	English II	Geometry	Biology	World History	Fine or Practical Arts Elective	CET2112 C (3cr)	EST1210 (3cr)	CET2113 C (3cr)	EST2220 C (3cr)	General Education (6cr)	
11	English III	Algebra II	Chemistry	American History	Foreign Language	EST2221 C (3cr)	EET1141 C (3cr)	EST2230 (3cr)	EET2325 C (3cr)	General Education (9cr) CET2486C (3cr) CET2178C (3cr)	
12	English IV	Calculus or Trig	Physics	American Government /Economics	Foreign Language	EET2365 C (3cr)	CET2123 C (3cr)	Degree Elective (3cr)	Degree Elective (3cr)		

Dual enrollment courses may be used to satisfy high school graduation or Bright Futures Gold Seal Vocational Scholars course requirements - see the Articulation Coordinating Committee's Dual Enrollment Equivalency List and the Bright Futures Comprehensive Course Table.

Note: Courses in bold are required for Laser Photonics Technical Certificate program

All VCC courses above are required for A. S. degree in Electronics Engineering Technology .

POSTSECONDARY	Secondary career and technical education programs may lead to industry recognized certificates, occupational opportunities or postsecondary education options. Based on the Career Cluster of interest and identified career and technical education program, the following postsecondary options are available.									
	TECHNICAL CENTER PROGRAM(S)				VALENCIA COMMUNITY COLLEGE PROGRAM(S)				UNIVERSITY PROGRAM(S)	

CAREER	SAMPLE CAREER SPECIALTIES									

CREDIT	ARTICULATION AND CTE DUAL ENROLLMENT OPPORTUNITIES									

Possible Industry Certifications (Students):

High School:		
Postsecondary:		

What does the Photonics Academy need?

- We need money to help cover the cost of the instructor and to purchase the laboratory equipment required for the program.
 - The estimated equipment cost to initiate the program is \$300K.
 - The cost for a full-time instructor for 1 year is \$35K

Equipment Cost Per Course

Lab	Cost Per Course For 9 Stations							Total	
Electronics	15 Stations							\$ 78,066	\$ 78,066
Photo	\$ 2,244							\$ 2,244	\$ 2,244
	\$ 18,638							\$ 18,638	\$ 18,638
Fiber	\$ 40,588							\$ 40,588	\$ 40,588
	\$ 6,939							\$ 6,939	\$ 6,939
E-O	\$ 27,320							\$ 27,320	\$ 27,320
	\$ 1,423							\$ 1,423	\$ 1,423
Laser	\$ 26,764							\$ 26,764	\$ 26,764
								\$ -	\$ -
Base	\$ 41,342							\$ 41,342	\$ 41,342
	\$ 24,285							\$ 24,285	\$ 24,285
Optical Tables w/Legs	\$ 25,961							\$ 25,961	\$ 25,961
Total	\$ 20,882	\$ 47,527	\$ 28,743	\$ 26,764	\$ 65,627	\$ 25,961	\$ 78,066	\$ 293,570	

Equipment Cost Minus Donations

Lab	Cost Per Course For 9 Stations							Total	
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	\$ 18,638							\$ 18,638	\$ 18,638
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Equipment Donations		
NG		\$ 30,000
VCC		\$ 78,066
Sub Total		\$ 185,504

Monetary Donations For Equipment		
OCPS		\$ 100,000
WCF		\$ 1,000
.decimal		\$ 1,000
Still Needed for Equipment		\$ 83,504

Equipment And Instructor Cost

Unfunded Equipment Cost	\$ 83,504
Instructor Cost (Full Time - One Year)	\$ 35,000
NG Contribution for Instructor	(\$20,000)
Total Needed	\$ 118,504

Why should I participate?

- Local Photonics training programs cannot keep pace with the demand for technicians in Florida.
- Photonics firms are forced to hire less-than-qualified technicians and train them.
- They also recruit from out-of-state and pay relocation costs.
- WHS expects 50 to 75 students to participate in the Photonics Academy.

Even if only half of them complete the course of study, it will provide Central Florida photonics firms with 25 to 35 local candidates per year.

Are there any plans for the future?

- Yes! Workforce Central Florida has funded a displaced worker program to train qualified but displaced Central Floridians in Photonics Technology.
 - Wekiva High School has offered the Photonics Academy lab for this program.
 - This will put 20 new photonics technicians into the market in June 2010.
- OCPS would like to make the Photonics Academy a magnet program, once it is well established.
 - This would draw students from all over Orange County.

How can I help?

- Please make a monetary donation to the Valencia Foundation.
 - This is an organization that can administer the funds as needed by the Photonics Academy.
 - The Valencia Foundation also gets matching funds from the state to help increase the value of your generous donation.

Are there other ways I can help?

- Yes, some other forms of support:
 - Donation of equipment as designated on the VCC equipment list
 - Offer summer internships for students who will be entering their Senior year.
 - Donation of your time to help set up and maintain the classroom
 - Donation of your time to assist the teacher
 - Guest lecturer
 - Lab assistant
 - Guide the students in lab work
 - Assist the students with extracurricular activities such as science fairs

Are there other ways I can help?

- Yes, some other forms of support:
 - Offer plant tours of your facilities
 - Assist recruiting of student to the program
 - Serve on the advisory board
 - Assist with fundraising efforts

Summary

- The Photonics Academy will be good for the local industry and the economy
 - Money is the biggest issue
 - Please help make the program a success
 - Time is also critical
 - School starts August 24th