

FACTE 2012

Florida Department of Education
Information Technology
Engineering & Technology Education
Program Update

IT Education Program Changes

- Curriculum Landscape Evolving
- Greater emphasis on core
- Options and Modularity
 - Extends program life
 - Student path flexibility
 - Responsiveness to Industry
- Out-of-date Programs Daggared
 - Student scholarship preserved
 - Expect teacher learning curve
 - District technology adjustments

IT Education Program Changes

- Applied Cybersecurity (2011)
 - 600-Hour Cyber Core (OCP A)
 - Five Advanced Electives
 - All Courses Level 3 (except IIT/IT Fund)
 - New Cyber Tech District Certification
 - Aligned with Security+ and ISC² Certifications
- Applied Information Technology
 - 450-Hour IT Core (OCP A&B)
 - Six Advanced Electives
 - All Courses Level 3 (except IIT/Computer Fund)
 - New Info Tech District Certification
 - Multiple Industry Certifications Applicable

IT Education Program Changes

- Computer Systems & Information Technology (CSIT)
 - 300-Hour IT Core
 - Two 300-Hour Elective Paths (Network and/or Security)
 - All Courses Level 3
 - Industry Certifications: CompTIA A+, Network+, and Security+
- Four New Computer Programming Programs
 - Java, Database, .NET, and Web Application Development
 - 600-Hour Common Programming Core
 - All Courses Level 3 (except IIT)
 - New Comp Prog District Certification
 - Aligned with IEEE SWEBOK
 - Industry Certification: Oracle Java, MCTS .NET, IEEE CSDP

IT Education Program Changes

- **New IT Secondary Courses**
 - Information Technology Directed Study
 - Information Technology Cooperative Education – OJT
- **New Middle School Program**
 - Information & Communications Technology (ICT) Essentials
 - Grades 6 – 8
 - Aligned with NAEP and CIW IBA Certification
- **New Middle School Courses**
 - Exploring Information Technology Careers
 - Fundamentals of Networking and Information Support
 - Fundamentals of Web and Software Development

IT Education Program Changes

■ Dagged IT Secondary/PSAV Programs

- Information Technology
- Computer Systems Technology
- Computer Systems Technology 1
- Computer Systems Technology 2
- Business Computer Programming
- Web Programming Services

■ Next IT Programs in the Hopper

- PC Support (Evolving to Technology Support Services)
- Network Support and Network Admin Programs
- New Media Technology & Multimedia Design Technology
- Digital Media Technology

IT Program Academic Alignment

Applied Cybersecurity Program Aligned

Course	Math			Science								
	ALG1	ALG2	GEO	APH	ASGH	BIO1	CHM1	ESS	GEN	MS1H	PS	PHY1
Introduction to IT	6/36 17%	2/41 5%	1/45 2%	2/53 4%	2/52 4%	2/56 4%	2/55 4%	2/58 3%	2/35 6%	2/42 5%	2/56 4%	2/53 4%
IT Fundamentals	5/36 14%	#	1/45 2%	2/53 4%	16/52 31%	7/56 13%	8/55 15%	16/58 28%	3/35 9%	14/42 33%	21/56 38%	21/53 40%
Computer & Network Security Fundamentals	3/36 8%	#	3/45 7%	2/53 4%	17/52 33%	6/56 11%	14/55 25%	18/58 31%	3/35 9%	14/42 33%	22/56 39%	22/53 42%
Cybersecurity Essentials	7/36 19%	1/41 2%	3/45 7%	2/53 4%	17/52 33%	7/56 13%	19/55 35%	16/58 28%	3/35 9%	14/42 33%	22/56 39%	22/53 42%
Operational Cybersecurity	4/36 11%	#	3/45 7%	2/53 4%	14/52 27%	7/56 13%	15/55 27%	14/58 24%	3/35 9%	13/42 31%	15/56 27%	15/53 28%
Cybersecurity Planning & Analysis	5/36 14%	#	3/45 7%	2/53 4%	14/52 27%	7/56 13%	15/55 27%	14/58 24%	3/35 9%	14/42 33%	15/56 27%	15/53 28%
Database Security	6/36 17%	#	3/45 7%	2/53 4%	14/52 27%	5/56 9%	15/55 27%	14/58 24%	3/35 9%	13/42 31%	15/56 27%	15/53 28%
Software & Application Security	5/36 14%	#	3/45 7%	#	#	#	#	#	#	#	#	#
Web Security	#	#	#	#	#	#	#	#	#	#	#	#
Applied Cybersecurity Applications	#	#	#	#	#	#	#	#	#	#	#	#

** Alignment pending

Alignment attempted, but no correlation to academic course.

IT Education Practical Arts

- Applied Information Technology Courses
 - Computer Fundamentals (9003410)
 - Web Technologies (9003420)
 - Web Development Technologies (9003460)
 - Multimedia Technologies (9003470)
- <http://www.fldoe.org/articulation/CCD/files/PACourses1213.pdf>

New IT Industry Certifications

■ Microsoft Technology Associate (MTA)

- MTA: Windows Development (MICRO071)
- MTA: Web Development (MICRO072)
- MTA: .NET (MICRO073)
- MTA: Software Development (MICRO074)
- MTA: Windows Server Admin (MICRO075)
- MTA: Windows OS (MICRO076)
- MTA: Security (MICRO077)
- MTA: Networking (MICRO078)

New IT Industry Certifications

- HP Accredited Technology Associate (ATA)
 - HP ATA: Connected Devices (HPCPY001)
 - HP ATA: Cloud (HPCPY002)
 - HP ATA: Networks (HPCPY003)
 - HP ATA: Servers & Storage (HPCPY004)
- Replacement Certifications
 - Apple Certified Pro (ACP) Final Cut Pro X (APPLE016)
 - Oracle Certified Associate (OCA): Java Programmer (ORACL004) – Replacing Sun Micro certification
 - Oracle Certified Professional (OCP): Java Programmer (ORACL005) – Replacing Sun Micro certification

E&T Education Program Changes

- Three Programs Under Review
 - Engineering Technology
 - Drafting/Illustrative Design Technology (Technical Design)
 - Communications Technology
- Two Programs Being Daggared
 - Construction Technology (Redundant with Building Trades & Design Technology)
 - Engineering By Design (Low Enrollment)
- One New E&T Program for 2012-13
 - Applied Robotics
 - Comprehensive 4-year Program
 - All Courses Level 3

E&T Program Academic Alignment

- Four Programs Aligned With Math/Science
 - Aerospace Technologies
 - Materials & Processes Technology
 - Production Technology
 - Applied Robotics
- Results Integrated Into 2013-2014 Frameworks

E&T Industry Certifications

■ New Certifications

- Mastercam Associate Certification – Mill Design

■ Replacement Certifications

- Certified Apprentice Drafter – Architectural
- Certified Drafter – Architectural
- Certified Drafter – Mechanical
- Certified Apprentice Drafter – Mechanical

■ Heads Up!

- Last Year for Autodesk Certified User (CAD or Inventor)
- Shift to Autodesk Certified Associate

E&T Education Horizon Check

- Modeling & Simulation
- New Program Structure Under Consideration
 - Expanded, Modular Programs
 - Some New...Some Old
- Middle School Program (E&T Essentials)
 - NAEP-Based
 - Grades 6 – 8

2010-11 Most Active Certifications

Certification Title	Takers	% Pass	Grades				
			8	9	10	11	12
Adobe Certified Associate (Photoshop)	13,008	70%		10%	17%	20%	24%
Microsoft Office Specialist (MOS) Bundle Certification (3 of 5)	6,996	55%	0%	23%	12%	11%	9%
Adobe Certified Associate (Dreamweaver)	5,641	84%		8%	19%	26%	31%
National Professional Certification in Customer Service	2,903	85%		1%	4%	20%	60%
Certified Professional Food Manager (ServSafe®)	2,354	64%		2%	10%	19%	33%
Certified Medical Administrative Assistant (CMAA)	2,163	89%		0%	2%	27%	59%
Certified Nursing Assistant (CNA)	1,916	75%			0%	13%	62%
Adobe Certified Associate (Flash)	1,807	73%		2%	17%	25%	29%
Autodesk Certified Associate - AutoCAD	1,321	37%		3%	5%	16%	13%
National ProStart Certificate of Achievement	1,181	55%		5%	6%	12%	33%
Certified EKG Technician (CET)	1,002	72%			5%	28%	39%
NCCER Carpentry Fundamentals - Level 1	775	66%		3%	18%	17%	27%
Microsoft Office Master	511	88%		49%	16%	15%	9%
CompTIA A+	379	45%		2%	11%	12%	20%
Certified Solidworks Associate (CSWA)	343	29%		3%	4%	9%	14%
First Responder	313	18%				3%	15%
Certified Horticulture Professional	282	33%		0%	3%	12%	18%
Autodesk Certified Associate - Inventor	278	58%		2%	14%	26%	15%
Child Development Associate	224	56%		0%		2%	54%
Apple Certified Pro (ACP) - Final Cut Pro	208	47%		5%	5%	15%	21%
Mastercam Certified Programmer Mill Level I	202	14%		0%	1%	5%	7%
NOCTI Health Assisting	201	86%			48%	21%	17%
ADDA Drafter Certification	184	54%		1%	14%	21%	18%
Adobe Certified Expert (Photoshop)	179	69%		17%	16%	22%	13%
Certified Veterinary Assistant (CVA)	163	84%				17%	67%

2010-11 Most Active Programs

Program Title	Total	Pass Rate	Grades				
			8	9	10	11	12
Web Design	7,560	81%	0%	7%	18%	26%	31%
Digital Design	6,684	73%		10%	19%	21%	23%
Culinary Arts	3,581	62%		3%	9%	16%	33%
Information Technology	3,230	70%		32%	14%	12%	12%
Communications Technology	2,102	70%		13%	12%	18%	27%
Nursing Assistant (Acute and Long-Term Care)	1,795	78%			0%	11%	66%
Allied Health Assisting	1,582	78%			1%	24%	53%
Business Supervision and Management	1,565	39%		19%	5%	6%	9%
New Media Technology	1,445	73%		11%	20%	20%	21%
Administrative Assistant	1,115	63%		7%	17%	20%	19%
Drafting/Illustrative Design Technology	1,104	32%		4%	5%	13%	10%
Finance	939	82%		15%	3%	18%	47%
Engineering Technology - Secondary	783	43%		5%	9%	17%	11%
First Responder	687	57%			1%	17%	38%
Automotive Service Technology	629	33%			1%	14%	18%
Early Childhood Education	564	57%		1%	6%	9%	41%
Television Production	558	51%		4%	8%	17%	22%
Electrocardiograph Aide	527	77%			7%	33%	38%
Marketing	525	94%		7%	13%	25%	50%
Network Support Services	515	72%		28%	20%	12%	11%
Accounting Operations	514	44%		4%	10%	17%	13%
Construction Technology	503	42%		2%	18%	11%	12%
Diversified Career Technology	478	70%			0%	8%	62%
Pathways to Engineering	426	40%		2%	9%	18%	11%
Multimedia Design Technology	396	83%		29%	11%	17%	26%

Program Versus Certification

Program Title	Takers	Pass Rate	Grades			
			9	10	11	12
3-D Animation Technology	68	56%	1%	16%	22%	16%
Adobe Certified Associate (Flash)	9	44%			44%	
Adobe Certified Associate (Photoshop)	31	77%	3%	26%	23%	26%
Autodesk Certified Associate- 3dsMax Design	25	28%		12%	16%	
Microsoft Office Specialist (MOS) Bundle Certification (3 of 5)	3	100%				100%
Accounting Operations	514	44%	4%	10%	17%	13%
Adobe Certified Associate (Dreamweaver)	38	66%	5%	11%	13%	37%
Adobe Certified Associate (Flash)	11	55%	18%	9%		27%
Adobe Certified Associate (Photoshop)	61	33%	2%	11%	8%	11%
Microsoft Office Master	5	100%		60%	40%	
Microsoft Office Specialist (MOS) Bundle Certification (3 of 5)	292	36%	4%	11%	14%	8%
National Professional Certification in Customer Service	50	88%		10%	62%	16%
NOCTI Accounting Basic	51	41%		2%	12%	27%
Quickbooks Certified User	6	0%				
Administrative Assistant	1,115	63%	7%	17%	20%	19%
Adobe Certified Associate (Dreamweaver)	20	100%	5%		25%	70%
Adobe Certified Associate (Flash)	1	100%				100%
Adobe Certified Associate (Photoshop)	186	65%	11%	11%	24%	18%
Adobe Certified Expert (Photoshop)	1	0%				
Microsoft Office Master	22	100%		23%	50%	27%
Microsoft Office Specialist (MOS) Bundle Certification (3 of 5)	826	59%	7%	19%	19%	15%
National Professional Certification in Customer Service	58	90%		5%	22%	62%
Staff Credential	1	100%			100%	

Program Versus Certification

Program Title	Takers	Pass Rate	Grades			
			9	10	11	12
Communications Technology	2,102	70%	13%	12%	18%	27%
Adobe Certified Associate (Dreamweaver)	75	63%	1%	31%	8%	23%
Adobe Certified Associate (Flash)	70	44%		1%	34%	9%
Adobe Certified Associate (Photoshop)	1,924	70%	14%	11%	17%	28%
Autodesk Certified Associate - AutoCAD	1	0%				
National Professional Certification in Customer Service	32	100%		28%	53%	19%
Digital Design	6,684	73%	10%	19%	21%	23%
Adobe Certified Associate (Dreamweaver)	303	78%	1%	26%	19%	31%
Adobe Certified Associate (Flash)	334	75%	2%	12%	32%	29%
Adobe Certified Associate (Photoshop)	4,930	76%	7%	20%	23%	25%
Adobe Certified Associate (Premiere Pro)	3	0%				
Adobe Certified Expert (Acrobat)	1	100%		100%		
Adobe Certified Expert (Photoshop)	92	98%	29%	32%	22%	15%
Adobe Certified Expert (Premiere Pro)	1	0%				
Certified Professional Food Manager (ServSafe®)	3	33%				33%
Child Development Associate	1	100%				100%
CompTIA A+	1	0%				
Microsoft Office Master	134	100%	55%	27%	12%	6%
Microsoft Office Specialist (MOS) Bundle Certification (3 of 5)	864	46%	24%	10%	5%	7%
National Professional Certification in Customer Service	16	88%		6%	19%	63%
ParaPro Assessment	1	100%		100%		
Advanced Technology Applications	335	39%			8%	31%
Adobe Certified Associate (Dreamweaver)	2	0%				
Adobe Certified Associate (Flash)	9	0%				
Adobe Certified Associate (Photoshop)	36	56%			3%	53%
Autodesk Certified Associate - AutoCAD	172	23%			10%	13%
Autodesk Certified Associate - AutoCAD Architecture	22	0%				
Autodesk Certified Associate - Inventor	10	90%				90%
Autodesk Certified Associate - Revit Architecture	1	0%				
Autodesk Certified Professional - AutoCAD	2	0%				
Certified Solidworks Associate (CSWA)	39	54%				54%
Certified Solidworks Professional (CSWP)	1	100%				100%
Mastercam Certified Programmer Mill Level I	2	100%			50%	50%
NCCER Carpentry Fundamentals - Level 1	35	100%			20%	80%
NCCER Masonry - Level 1	4	100%				100%

Certification Versus Program

Certification Title	Takers	Pass Rate	Grades			
			9	10	11	12
Autodesk Certified Associate - AutoCAD	1,321	37%	3%	5%	16%	13%
Advanced Technology Applications	172	23%			10%	13%
Aerospace Technologies	2	100%			100%	
Architectural Drafting	68	43%		1%	19%	22%
Communications Technology	1	0%				
Construction Technology	6	0%				
Cooperative Diversified Education - OJT	1	0%				
Drafting	88	53%	1%	6%	18%	28%
Drafting/Illustrative Design Technology	794	32%	4%	4%	14%	11%
Electronic Drafting	4	0%				
Engineering Technology - Secondary	107	53%	10%	9%	22%	11%
Materials and Processes Technology	14	36%		29%	7%	
Mechanical Drafting	1	100%				100%
Pathways to Engineering	3	100%			100%	
Structural Drafting	8	100%				100%
Technology Education	2	0%				
Technology Studies	49	73%		14%	39%	20%
Technology Systems	1	0%				
Autodesk Certified Associate - Revit Architecture	111	57%		4%	21%	32%
Advanced Technology Applications	1	0%				
Architectural Drafting	17	0%				
Drafting/Illustrative Design Technology	35	43%		11%	14%	17%
Pathways to Engineering	58	83%			31%	52%
CompTIA A+	379	45%	2%	11%	12%	20%
Business Computer Programming	1	100%		100%		
Computer Systems Technology	72	69%		13%	21%	36%
Digital Design	1	0%				
Game, Simulation & Animation Programming	9	44%		44%		
Game, Simulation & Animation Visual Design	1	100%		100%		
Information Technology	17	24%		6%	6%	12%
Network Support Services	106	48%	2%	14%	11%	21%
Network Systems Administration	1	100%		100%		
PC Support Services	164	32%	3%	5%	10%	14%
Web Design	7	71%		14%	29%	29%

Questions?



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