# **ASSESSMENT DAY**

College of Business, Engineering and Technology School of Computer Science February 18, 2016

# Academic Assessment

	LEVEL	FOCUS	CONDUCTED BY	FREQUENCY
Academic Success Committee	Program	Quality of assessment practices	Committee of peers	Years 1 & 2
Instructional Program Review	Program / Cluster	<ul> <li>Enrollment, retention, completion</li> <li>Industry certifications and job placement</li> <li>Program budget and staffing</li> <li>Advisory committees</li> <li>Curriculum changes</li> </ul>	Committee of peers	Year 3
Assessment Day	Course/ Program	<ul> <li>Enrollment by demographics</li> <li>Graduation and retention</li> <li>Average class size</li> <li>Course success rate</li> <li>Placement rate</li> <li>SLOs, PLOs and ILOs</li> </ul>	Program Chair and Faculty	Years 1, 2, 3

# Programs

- 0908 Advanced Network Infrastructure
- 0921 Cable Installation
- 2013 Computer Engineering Technology
- 2067 Computer Information Technology
- 0938 Computer Programming
- <u>2047 Computer Programming and Analysis</u> (Software Engineering Technology)
- 2003 Electronics Engineering Technology
- 0902 Information Technology Admin.
- 0903 Information Technology Analysis
- <u>0905 Information Technology Support</u> <u>Specialist</u>

# 2005 - Internet Services Technology

- 0907 Microcomputer Repairer/Installer
- 0923 Network Communications (LAN)
- 0924 Network Communications (WAN)
- 0922 Network Infrastructure
- 0904 Network Server Administration
- 0906 Network Support Technician
- 2002 Network Systems Technology
- 2204 Simulation and Robotics Tech.
- 0909 Web Development Specialist
- 0925 Wireless Communications

# Courses (1 of 2)

CAP1801 Simulation Fundamentals

<u>CAP2905</u> Directed Study in Simulation and Robotics

CET1112 Digital Fundamentals

<u>CET2123</u> Microcomputer and Basic Digital Communications

<u>CET2615</u> Advanced Cisco Router Configuration

<u>CET2626</u> Building Cisco Remote Access Networks

<u>CET2949</u> Cooperative Education Experience in Computer Engineering Technology

CGS1060L Basic Computer Concepts Lab

<u>CGS2512</u> Advanced Computer Spreadsheets and Graphics Presentations

CGS2840 Cryptology

CIS2381 Foundations of Digital Forensics

<u>CIS2949</u> Cooperative Education Experience in Computer and Information Systems

COP2001 Computer Programming "C++"

COP2360 C# Programming

<u>COP2700</u> Introduction to Database Management CAP2023 Introduction to Game Programming

<u>CAP2949</u> Cooperative Education Experience in Simulation and Robotics

CET1112L Digital Fundamentals Lab

<u>CET2123L</u> Microcomputer and Basic Digital Communications Lab

CET2620 Cisco Wide Area Network (WAN)

CET2660 Fundamentals of Network Security

<u>CGS1002</u> Introduction to Microcomputer Operations

<u>CGS1570</u> Introduction to Computer Applications

<u>CGS2820</u> Web Programming (JavaScript, Ajax, ASP.Net)

<u>CGS2905</u> Directed Study in Computer Software Applications

<u>CIS2905</u> Directed Study in Computer and Information Systems

CNT2402 Certified Ethical Hacker

<u>COP2001L</u> Computer Programming "C++" Lab

COP2654 IPhone/I Pad Programming

COP2800 Computer Programming "Java"

CAP2804 Advanced Simulation Systems

CEN2002 Software Design and Development I

CET1600 Network Plus

CET2154 A+ Computer Repair

<u>CET2625</u> Building Scalable Cisco Internetworks

CET2850 Wireless and Mobile Security

CGS1060 Basic Computer Concepts

CGS2100 Microcomputer Applications

<u>CGS2821</u> Advanced Web Programming (XML, ASP.Net, SQL Server)

CIS2350 Principles of Information Assurance

CIS2935 Computer Science Seminar

<u>COP1000</u> Principles of Computer Programming

COP2220 Computer Programming "C

<u>COP2660</u> Programming for Mobile Devices: Android

<u>COP2805</u> Advanced Computer Programming "Java"

# Courses (2 of 2)

COP2842 Web Scripting (PHP)

COP2940 Computer Science Internship

CTS2141 Advanced C++ and Direct X Programming

CTS2306 Microsoft Windows Professional

<u>CTS2320</u> Implementing, Managing and Maintaining a Windows Network Infrastructure <u>CTS2370</u> Virtualization Infrastructure: Installation and Configuration

CTS2431 Data Organization and Management

DIG1109 Digital Imaging Fundamentals

<u>EET1011L</u> Introduction to Electrical Circuits Lab

EET1141 Analog Devices and Circuits

<u>EET1607L</u> Electronics Assembly and Cabling Lab

EET2326 Wireless Communications

<u>EET2949</u> Cooperative Education Experience in Electronics

ETM2315 Simulation Power and Control

COP2850 Web Programming Project

<u>COP2949</u> Cooperative Educational Experience in Computer Programming

<u>CTS2214</u> Project Management w/Microsoft Project

<u>CTS2310</u> Designing Windows Network Security

CTS2321 Linux Fundamentals

CTS2402 Visual Basic Programming

<u>CTS2431L</u> Data Organization and Management Lab

DIG2100 Web Design I

EET1021 Advanced Electrical Circuits

EET1141L Analog Devices and Circuits Lab

<u>EET2142</u> Analog Circuits and Basic Analog Communications

EET2326L Wireless Communications Lab

<u>EGS1000</u> Professional Performance for Technicians

ETM2315L Simulation Power and Control Lab

<u>COP2905</u> Directed Study in Computer Programming

CTS1851 Internet Web Foundations (HTML, CSS)

<u>CTS2302</u> Microsoft Windows Active Directory Services

CTS2311 Linux Networking and Security

<u>CTS2328</u> Managing and Maintaining a Windows Network Environment

<u>CTS2403</u> Advanced Visual Basic Programming

<u>CTS2801</u> Web Application Development -ActionScripting

EET1011 Introduction to Electrical Circuits

EET1021L Advanced Electrical Circuits Lab

EET1607 Electronics Assembly and Cabling

<u>EET2142L</u> Analog Circuits and Basic Analog Communications Lab

EET2905 Directed Study in Electronics

EGS2905 Directed Study in Electronics

# Action Items from Last Assessment Day

### Action Items for Improvement (12/10/2014):

- 1. There were some discrepancies on the names of some programs on the presentation and the current programs' name. School of Computer Sciences was going to notify Karla Moore about those changes.
- 2. School of Computer Sciences was going to check all the courses prefix and number on the College website for accuracy.
- 3. School of Computer Sciences was going to discuss new opportunities to attract more female at an early age. Perhaps the possibility of working with middle schools and recruitment.
- 4. Karla Moore will ask Advising and Admissions the possibility of presenting to Chairs and Assistance Chairs the process of admissions and advising.
- 5. Chair of the School of Computer Sciences proposed virtual face-to-face advising for potential students. Need to follow-up with Advising.
- 6. Learning Outcome Assessment:
  - a. Select a specific learning activity to measure outcomes.
  - b. Make sure all assessment measures have a result.

### Headcount by Major

Major	2012-2013	2013-2014	2014-2015
2047 – Computer Program Analysi	144	147	162
2067 – Computer Information Admin	113	104	126
2002 – Network Systems Tech	132	116	120
2013 – Computer Eng Technology	132	112	98
2003 – Electronics Engin Tech	55	54	63
2005 – Internet Services Tech	40	32	33
0938 – Computer Programming	19	30	30
0909 – Web Develop Specialist	29	26	26
2204 – Simulation and Robotics	27	19	16
0905 – Info Tech Support Specialist	3	8	9
0903 – Information Tech Analysi	2	5	8
0902 – Information Tech Adminis	1	3	5
0906 – Network Support Tech	8	2	5
0907 – Microcomputer Repairer	5	1	5
0904 – Network Server Adm	7	5	3
0908 – Advanced Network Infra	4	3	3
0923 – Network Comm (LAN)	1	2	3
0921 – Cable Installation	1	2	1
0922 - Network Infrastructure	6	5	1
0924 - Network Comm. (Wan)	2	3	1
0925 - Wireless Communications	2	2	
Total	707	662	690

College Headcount decreased: 2012/13 (9.6%), 2013/14 (6%), 2014/15 (7%)

### Average Age by Program

Program	2012-2013	2013-2014	2014-2015
0902 - Information Tech Adminis	48	28	27
0903 - Information Tech Analysi	46	38	38
0904 - Network Server Adm	29	34	41
0905 - Info Tech Support Specst	52	42	32
0906 - Network Support Tech	50	51	33
0907 - Microcomputer Repairer	34	27	23
0908 - Advanced Network Infra	29	30	34
0909 - Web Develop. Specialist	30	32	35
0921 - Cable Installation	34	42	35
0922 - Network Infrastructure	38	35	23
0923 - Network Comm. (Lan)	23	25	31
0924 - Network Comm. (Wan)	55	38	51
0925 - Wireless Communications	27	33	
0938 - Computer Programming	27	29	28
2002 - Network Systems Tech	34	34	33
2003 - Electronics Engin Tech	28	30	29
2005 - Internet Services Tech	32	34	36
2013 - Computer Eng Technology	31	32	34
2047 - Computer Program Analysi	29	29	27
2067 - Computer Information Adm	35	36	34
2204 - Simulation And Robotics	30	34	38

	2012-2013	2013-2014	2014-2015
All Programs	32	32	32
Daytona State College	26.7	26.6	26.4

		(	Gen	de	r						
			20	)12-2	2013	2013-2014		2	2014-2015		
P	rogram		Fema	ale	Male	F	emale	Male	Fem	ale	Male
0902 - Information Te	ech Adminis				100%		33%	67%	209	%	80%
0903 - Information Te	ech Analysi		50%	b l	50%		60%	40%	389	%	63%
0904 - Network Serve	er Adm		29%	Ď	71%		20%	80%			100%
0905 - Info Tech Supp	ort Specst				100%			100%	229	%	78%
0906 - Network Supp	ort Tech		13%	6	88%			100%			100%
0907 - Microcompute	er Repairer				100%			100%			100%
0908 - Advanced Net	work Infra				100%			100%			100%
0909 - Web Develop.	Specialist		52%	6	48%		54%	46%	389	%	62%
0921 - Cable Installat	ion				100%			100%	100	%	
0922 - Network Infras	structure				100%			100%			100%
0923 - Network Comr	m. (Lan)				100%			100%			100%
0924 - Network Comr	n. (Wan)				100%			100%			100%
0925 - Wireless Comr	nunications				100%			100%			
0938 - Computer Prog	gramming		26%	6	74%		17%	83%	179	%	83%
2002 - Network Syste	ms Tech		13%	6	87%		12%	88%	149	%	86%
2003 - Electronics Eng	gin Tech		4%		96%		9%	91%	3%	6	97%
2005 - Internet Servic	ces Tech		35%	6	65%		28%	72%	309	%	70%
2013 - Computer Eng	Technology		18%	b l	82%		17%	83%	159	%	85%
2047 - Computer Prog	gram Analysi		17%	6	83%		17%	83%	199	%	81%
2067 - Computer Info	rmation Adm		23%	b l	76%		24%	76%	199	%	81%
2204 - Simulation And	d Robotics		11%	6	89%		5%	95%	6%	6	94%
	Malar		2012-2	013	20	13-2	2014	2014-2	015		
	iviajor	Fe	male	Male	Fema	ale	Male	Female	Male		
	Daytona State College	6	60%	40%	599	%	41%	60%	40%		

Race / Ethnicity by Program 2012-13

	Headcount	Amer Indian/ Alaska Native	Asian	Black or African Amer	Hispanic	Nat Hawaiian Pacif Islander	2 or More Races	White
0902 Info Tech Admin	1							100%
0903 Info Tech Analysis	2			50%		50%		
0904 Network Server Admin	7							
0905 Info Tech Support Spclst	3			29%				71%
0906 Network Support Tech	8			25%	13%			50%
0907 Microcomputer Repair	5							100%
0908 Adv Network Infrastruc	4				50%			50%
0909 Web Develop Specialist	29			10%	21%			69%
0921 Cable Installation	1							100%
0922 Network Infrastructure	6			17%				83%
0923 Network Comm (LAN)	1							100%
0924 Network Comm (WAN)	2				100%			
0925 Wireless Comm	2							100%
0938 Comp Programming	19			11%	5%			84%
2002 Network Systems Tech	132		2%	8%	13%	1%	2%	74%
2003 Electronic Engineer Tech	55		5%	7%	9%		4%	73%
2005 Internet Services Tech	40		3%	8%	18%		3%	68%
2013 Comp Engineer Tech	132	1%	4%	16%	18%		2%	59%
2047 Comp Program Analysis	144		5%	15%	10%		1%	68%
2067 Comp Info Admin	113		4%	11%	8%	1%	2%	73%
2204 Sim & Robotics	27			11%	7%			81%
Total All Programs	707	0%	3%	12%	12%	0%	1%	69%

Excludes individuals whose race / ethnicity is not reported. Blank cells or missing years indicate no enrollment.

Race / Ethnicity by Program 2013-14

	Headcount	Amer Indian/ Alaska Native	Asian	Black or African Amer	Hispanic	Nat Hawaiian Pacif Islander	2 or More Races	White
0902 Info Tech Admin	3		33%					33%
0903 Info Tech Analysis	5			20%	40%			40%
0904 Network Server Admin	5			20%				80%
0905 Info Tech Support Spclst	8		13%	13%	13%			63%
0906 Network Support Tech	2							100%
0907 Microcomputer Repair	1							100%
0908 Adv Network Infrastruc	3				33%			67%
0909 Web Develop Specialist	26	4%		12%	8%		4%	73%
0921 Cable Installation	2							100%
0922 Network Infrastructure	5			40%	20%			40%
0923 Network Comm (LAN)	2							100%
0924 Network Comm (WAN)	3				33%			67%
0925 Wireless Comm	2							100%
0938 Comp Programming	30			10%	7%			80%
2002 Network Systems Tech	116		4%	7%	14%	2%	2%	71%
2003 Electronic Engineer Tech	54		6%	9%	9%		4%	70%
2005 Internet Services Tech	32		3%	3%	25%			69%
2013 Comp Engineer Tech	112	1%	4%	17%	18%		1%	59%
2047 Comp Program Analysis	147	1%	5%	12%	13%		1%	67%
2067 Comp Info Admin	104	1%	6%	16%	11%	1%	4%	61%
2204 Sim & Robotics	19			11%	11%			79%
Total All Programs	662	1%	4%	12%	13%	0%	2%	67%

Race / Ethnicity by Program 2014-15

	Headcount	Amer Indian/ Alaska Native	Asian	Black or African Amer	Hispanic	Nat Hawaiian Pacif Islander	2 or More Races	White
0902 Info Tech Admin	5		20%	40%				40%
0903 Info Tech Analysis	8			13%	25%			50%
0904 Network Server Admin	3							100%
0905 Info Tech Support Spclst	9			11%	22%			67%
0906 Network Support Tech	5				40%			60%
0907 Microcomputer Repair	5							80%
0908 Adv Network Infrastruc	3							100%
0909 Web Develop Specialist	26	4%		4%	19%		8%	65%
0921 Cable Installation	1			100%				
0922 Network Infrastructure	1							100%
0923 Network Comm (LAN)	3				33%			67%
0924 Network Comm (WAN)	1							100%
0925 Wireless Comm								
0938 Comp Programming	30			10%	10%			73%
2002 Network Systems Tech	120		2%	7%	13%	2%	2%	73%
2003 Electronic Engineer Tech	63		3%	6%	11%		3%	73%
2005 Internet Services Tech	33		6%	6%	12%			73%
2013 Comp Engineer Tech	98		3%	10%	21%		1%	63%
2047 Comp Program Analysis	162	1%	4%	11%	15%		1%	65%
2067 Comp Info Admin	126	2%	4%	13%	13%		2%	64%
2204 Sim & Robotics	16			6%	13%			75%
Total All Programs	690	1%	3%	10%	15%	0%	1%	67%
DSC		0.5%	2%	14%	13%	0.2%	2%	67%

Excludes individuals whose race / ethnicity is not reported. Blank cells or missing years indicate no enrollment.

n Major		
2012-2013	2013-2014	2014-2015
50	53	43
49	47	37
32	35	29
18	13	21
19	11	19
17	15	19
29	27	18
23	22	17

### Graduates in M

1416/01	2012 2013	2013 2014	2014 2013
0905 - Info Tech Support Specst	50	53	43
0907 - Microcomputer Repairer	49	47	37
0906 - Network Support Tech	32	35	29
0938 - Computer Programming	18	13	21
0902 - Information Tech Adminis	19	11	19
2047 - Computer Program Analysi	17	15	19
2002 - Network Systems Tech	29	27	18
0921 - Cable Installation	23	22	17
0924 - Network Comm. (Wan)	22	19	15
0903 - Information Tech Analysi	20	22	14
0922 - Network Infrastructure	30	14	13
0923 - Network Comm. (Lan)	11	17	13
2013 - Computer Eng Technology	13	16	13
2067 - Computer Information Adm	11	8	13
0909 - Web Develop. Specialist	11	5	11
2005 - Internet Services Tech	8	6	9
0904 - Network Server Adm	15	12	8
0925 - Wireless Communications	10	13	7
2003 - Electronics Engin Tech	2	7	6
0908 - Advanced Network Infra	8	3	3
2204 - Simulation And Robotics	2	2	3
Total	400	367	331

Blank cells or missing years indicate no graduates.

Major

### Graduation Rates (1 of 3)

Major	Fall Cohort Year	# in Cohort	Graduated within 150% Time	150% Graduation Rate	Graduated within 200% Time	200% Graduation Rate
0902- Information Technology	2012	0				
Administration	2013	3	0	0.0%	0	0.0%
	2014	0				
0903- Information Technology	2012	1	0	0.0%	0	0.0%
Analysis	2013	1	1	100.0%	1	100.0%
	2014	4	0	0.0%	0	0.0%
0904- Network Server	2012	3	1	33.3%	1	33.3%
Administration	2013	3	0	0.0%	1	33.3%
	2014	1	0	0.0%	0	0.0%
0905- Information Technology	2012	1	0	0.0%	0	0.0%
Support Specialist	2013	3	0	0.0%	0	0.0%
	2014	5	2	40.0%	2	40.0%
0906- Network Support	2012	4	1	25.0%	2	50.0%
Technician	2013	0				
	2014	4	2	50.0%	2	50.0%
0907- Microcomputer	2012	1	0	0.0%	0	0.0%
Repairer/Installer	2013	0				
	2014	4	1	25.0%	1	25.0%
0908- Advanced Network	2012	1	0	0.0%	0	0.0%
Infrastructure	2013	0				
	2014	2	0	0.0%	0	0.0%
0909- Web Development	2012	10	3	30.0%	4	40.0%
Specialist	2013	11	0	0.0%	0	0.0%
	2014	9	0	0.0%	0	0.0%
0921- Cable Installation	2012	1	0	0.0%	0	0.0%
	2013	0				
	2014	1	0	0.0%	0	0.0%

Less than College average (150%- 44.8%, 200%- 49.23%)

Fall terms include prior Summer term enrollment in major.

Graduation within 200% time includes graduates within 150% time.

### Graduation Rates (2 of 3)

Major	Fall Cohort Year	# in Cohort	Graduated within 150% Time	150% Graduation Rate	Graduated within 200% Time	200% Graduation Rate
0922- Network Infrastructure	2012	5	2	40.0%	2	40.0%
	2013	1	0	0.0%	0	0.0%
	2014	1	0	0.0%	0	0.0%
0022 Notwork Communication (LAN)	2012	1	1	100.0%	1	100.0%
0925- Network communication (LAN)	2013	1	0	0.0%	0	0.0%
	2014	2	0	0.0%	0	0.0%
0024 Notwork Communication (M/AN)	2012	2	1	50.0%	2	100.0%
0924- Network communication (WAN)	2013	2	1	50.0%	1	50.0%
	2014	0				
0925- Wireless Communication	2012	0				
	2013	1	1	100.0%	1	100.0%
	2014	0				
0938- Computer Programming	2012	4	0	0.0%	0	0.0%
	2013	17	1	5.9%	2	11.8%
	2014	15	0	0.0%	0	0.0%
2002 Network Systems Technology	2010	47	12	25.5%	16	34.0%
2002- Network Systems Technology	2011	29	8	27.6%	8	27.6%
	2012	45	16	35.6%	16	35.6%
2003- Electronics Engineering	2010	29	0	0.0%	1	3.4%
Technology	2011	18	1	5.6%	1	5.6%
	2012	23	0	0.0%	0	0.0%
2005 Internet Convises Technology	2010	21	2	9.5%	2	9.5%
2005- Internet Services lechnology	2011	14	1	7.1%	1	7.1%
	2012	7	1	14.3%	1	14.3%

Less than College average (150%- 44.8%, 200%- 49.23%)

Fall terms include prior Summer term enrollment in major.

Graduation within 200% time includes graduates within 150% time.

Major	Fall Cohort Year	# in Cohort	Graduated within 150% Time	150% Graduation Rate	Graduated within 200% Time	200% Graduation Rate
2012 Computer Engineering	2010	50	5	10.0%	7	14.0%
Technology	2011	45	4	8.9%	5	11.1%
	2012	32	4	12.5%	4	12.5%
2047 Computer Programming 9	2010	57	9	15.8%	11	19.3%
Analysis	2011	45	6	13.3%	7	15.6%
	2012	42	6	14.3%	6	14.3%
2067- Computer Information	2010	46	10	21.7%	11	23.9%
Technology	2011	38	3	7.9%	5	13.2%
	2012	35	3	8.6%	3	8.6%
2204- Simulation & Robotics	2010	7	0	0.0%	0	0.0%
Technology	2011	6	0	0.0%	0	0.0%
	2012	4	1	25.0%	1	25.0%

### **Retention Rates (1 of 3)**

Programs		Registered	Exclusions	Adjusted	Retaine	d by DSC	Retai Pro	ned by gram	Total Retained
				Conort	N	%	N	%	Retained
0902 Information Tech Adminis	2011	2		2	1	50.00%			50.00%
	2013	3		3	1	33.33%			33.33%
0903 Information Tech Analysi	2011	2	1	1	1	100.00%			100.00%
	2012	1		1					0.00%
	2013	1	1	0					
0904 Network Server Adm	2011	3		3					0.00%
	2012	3		3			1	33.33%	33.33%
	2013	5	1	4	1	25.00%	2	50.00%	75.00%
0905 Info Tech Support Specst	2011	3		3					0.00%
	2012	1		1					0.00%
	2013	6	1	5	1	20.00%			20.00%
0906 Network Support Tech	2011	4	1	3	1	33.33%			33.33%
	2012	6	2	4	1	25.00%	1	25.00%	50.00%
	2013	2	1	1					0.00%
0907 Microcomputer Repairer	2011	2		2			2	100.00%	100.00%
	2012	4	1	3			1	33.33%	33.33%
	2013	1		1			1	100.00%	100.00%
0908 Advanced Network Infra	2012	2		2			1	50.00%	50.00%
	2013	2		2			1	50.00%	50.00%
0909 Web Develop. Specialist	2011	20		20	1	5.00%	8	40.00%	45.00%
	2012	23	4	19	4	21.05%	6	31.58%	52.63%
	2013	22	3	19	3	15.79%	6	31.58%	47.37%
0921 Cable Installation	2012	1		1					0.00%
	2014	1		1	1	100.00%			100.00%

#### Less than College average (FT- 60.48%, PT- 52.08%)

Registered - Includes all students enrolled in the fall term of the specified year, with the specified program as their primary major.

Exclusions - Includes students who are deceased or graduated fall of the specified year or the following spring or summer.

Not retained - Students who were not registered the following fall term.

Retained by DSC - Students who were still registered at DSC the following fall but with a different primary major.

Retained by Program - Students who were registered the following fall with the same primary major.

### Retention Rates (2 of 3)

Programs		Registered	Exclusions	Adjusted Cohort	Retaine	d by DSC	Retaiı Proş N	Retained by Program N %		
0922 Network Infrastructure	2011	3		3	2	66.67%	1	33.33%	100.00%	
	2012	5	1	4			3	75.00%	75.00%	
	2013	4	1	3	1	33.33%			33.33%	
0923 Network Comm. (Lan)	2011	1		1					0.00%	
	2012	2	1	1			1	100.00%	100.00%	
	2013	2		2					0.00%	
0924 Network Comm. (Wan)	2012	2		2	1	50.00%	1	50.00%	100.00%	
	2013	3	1	2	1	50.00%	1	50.00%	100.00%	
0925 Wireless Communications	2011	1		1			1	100.00%	100.00%	
	2012	2	1	1					0.00%	
	2013	2	1	1					0.00%	
0938 Computer Programming	2011	16	1	15	1	6.67%	4	26.67%	33.33%	
	2012	9	2	7	2	28.57%	1	14.29%	42.86%	
	2013	21	2	19	3	15.79%	5	26.32%	42.11%	
2002 Network Systems Tech	2011	117	26	91	14	15.38%	36	39.56%	54.95%	
	2012	117	24	93	19	20.43%	30	32.26%	52.69%	
	2013	94	18	76	11	14.47%	36	47.37%	61.84%	
2003 Electronics Engin Tech	2011	47	6	41	6	14.63%	14	34.15%	48.78%	
	2012	48	1	47	3	6.38%	15	31.91%	38.30%	
	2013	37	3	34	8	23.53%	16	47.06%	70.59%	

#### Less than College average (FT- 60.48%, PT- 52.08%)

Registered - Includes all students enrolled in the fall term of the specified year, with the specified program as their primary major.

Exclusions - Includes students who are deceased or graduated fall of the specified year or the following spring or summer.

Not retained - Students who were not registered the following fall term.

Retained by DSC - Students who were still registered at DSC the following fall but with a different primary major.

Retained by Program - Students who were registered the following fall with the same primary major.

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### Retention Rates (3 of 3)

Programs		Registered Exclusior		Adjusted	Retaine	d by DSC	Retained by Program		Total Retained
				Cohort	N	%	N	%	Retained
2005 Internet Services Tech	2011	38	4	34	4	11.76%	14	41.18%	52.94%
	2012	30	4	26	3	11.54%	11	42.31%	53.85%
	2013	23	4	19	2	10.53%	7	36.84%	47.37%
2013 Computer Eng	2011	113	6	107	12	11.21%	48	44.86%	56.07%
lechnology	2012	108	15	93	22	23.66%	34	36.56%	60.22%
	2013	90	10	80	19	23.75%	28	35.00%	58.75%
2047 Computer Program	2011	111	8	103	19	18.45%	41	<b>39.81%</b>	58.25%
Analysis	2012	116	15	101	15	14.85%	38	37.62%	52.48%
	2013	108	15	93	17	18.28%	40	43.01%	61.29%
2067 Computer Information	2011	79	10	69	12	17.39%	31	44.93%	62.32%
Adm	2012	84	8	76	12	15.79%	30	39.47%	55.26%
	2013	81	4	77	10	12.99%	30	38.96%	51.95%
2204 Simulation And Robotics	2011	22	5	17	3	17.65%	5	<b>29.4</b> 1%	47.06%
	2012	20	2	18	2	11.11%	7	38.89%	50.00%
	2013	14	2	12	2	16.67%	6	50.00%	66.67%

#### Less than College average (FT- 60.48%, PT- 52.08%)

Registered - Includes all students enrolled in the fall term of the specified year, with the specified program as their primary major.

Exclusions - Includes students who are deceased or graduated fall of the specified year or the following spring or summer.

Not retained - Students who were not registered the following fall term.

Retained by DSC - Students who were still registered at DSC the following fall but with a different primary major.

Retained by Program - Students who were registered the following fall with the same primary major.

### Average Class Size by Course (1 of 2)

Major and Associated Course		2012-	2013	2013	-2014	2014-2015	
	25	Sections	Avg. Size	Sections	Avg. Size	Sections	Avg. Size
	CET1600	9	21	9	20	9	21
	CET2615	2	23	1	17	2	14
	CET2620	2	14	2	13	2	11
	CET2625			1	13		
	CET2660	3	25	3	24	2	24
	CET2850	1	11	1	10		
	CGS2840			2	13	1	19
2002 Network Systems Tech	CIS2350	2	12	2	14	3	19
	CIS2381	1	13	1	8	2	6
	CTS2306	5	14	5	14	3	20
	CTS2320	1	15	1	9	1	15
	CTS2321	4	22	5	15	4	22
	CTS2328	3	11	1	9	1	9
	CTS2370			2	8	3	13
	Major	33	18	36	15	33	18
	EET2142	1	6	1	11		
2003 Electronics Engin Tech	EET2326			1	6	1	10
	Major	1	6	2	9	1	10
	CGS2820	2	20	2	22	2	23
	CGS2821	2	14	1	20	1	21
2005 Internet Services Tech	COP2842	1	21	1	30	1	35
2005 Internet Services Tech	COP2850	1	12	1	5	1	11
	CTS1851	7	20	6	25	7	23
	Major	13	19	11	23	12	23
	CET1112	3	15	2	14	2	20
	CET1178	2	8				
	CET2123	2	17	2	14		
	CET2154	12	19	12	18	11	23
2013 Computer Eng Technology	EET1011	4	14	3	18	3	22
	EET1021	2	20	2	15	3	12
	EET1141	2	19	2	17	2	15
	EET1607	5	16	4	19	3	21
	Major	32	17	27	17	24	20

To prevent data from skewing, the following instructional methods are excluded: Labs associated with lectures, Private/Performance, Clinicals, Co-op, DIS, Field trips and Internships.

Major and Associate		2012	2-2013	2013	8-2014	2014-2015	
	acourses	Sections	Avg. Size	Sections	Avg. Size	Sections	Avg. Size
	CEN2002	2	20	1	25	1	29
	CGS1060	8	26	7	24	6	20
	COP1000	16	24	18	25	19	26
	COP2001	6	21	6	24	5	22
	COP2220	3	31	3	28	3	24
	COP2360			1	19	1	17
	COP2654			1	17		
2047 Computer Program	COP2660			1	16	1	12
Analysis	COP2700	4	25	4	22	4	23
	COP2800	4	29	4	26	6	29
	COP2805	1	14				
	COP2905	3	8				
	CTS2141	1	11				
	CTS2402	2	22				
	CTS2801	1	16				
	Major	51	23	46	24	46	24
	CGS2100	45	23	42	25	41	24
	CGS2512	1	27			2	14
2067 Computer	CTS2214	1	36	1	32	2	20
mormation Adm	CTS2431	1	14	1	9	1	14
	Major	48	23	44	25	46	23
2204 Simulation And	CAP1801	1	8			1	7
2204 Simulation And	CAP2023	1	8	1	29	1	24
KUDULICS	Major	2	8	1	29	2	16

To prevent data from skewing, the following instructional methods are excluded: Labs associated with lectures, Private/Performance, Clinicals, Co-op, DIS, Field trips and Internships.

### Average Class Size by Instructional Method- Multiple Methods Only (1 of 2)

Diaine Annais				2012	-2013	2013	-2014	2014	-2015
Major, Associated Courses and Instructional Method				Sections	Avg. Size	Sections	Avg. Size	Sections	Avg. Size
		Lecture		9	21	9	20	8	21
	CET1600	Online						1	22
			Course	9	21	9	20	9	21
		Hybrid		1	21				
CET26	CET2CC0	Lecture		1	23				
	CE12660	Online		1	31	3	24	2	24
			Course	3	25	3	24	2	24
2002 NETWORK SYSTEMS		Lecture		2	12	2	14	1	15
TECH CIS2350	Online						2	21	
		Course	2	12	2	14	3	19	
	Hybrid		1	13	1	8	1	4	
	CIS2381	Online						1	8
			Course	1	13	1	8	2	6
		Hybrid		3	23	4	12	1	17
	CTS2321	Online		1	19	1	29	3	23
			Course	4	22	5	15	4	22
		Lecture		1	21				
2005 INTERNET SERVICES TECH	COP2842	Online				1	30	1	35
			Course	1	21	1	30	1	35
		Hybrid						1	4
		Lecture		2	22	2	21	2	23
	CIS1851	Online		5	20	4	27	4	28
			Course	7	20	6	25	7	23
		Lecture		3	15	2	14		
	CET1112	Online			1			2	20
			Course	3	15	2	14	2	20
		Hybrid		1	20	1	10		
	CET2123	Lecture		1	13	1	17		
			Course	2	17	2	14		
		Hybrid		7	22	7	21	6	24
	0573454	Lecture	ĺ	5	14	4	13	3	21
2013 COMPUTER ENG	CE12154	Online				1	24	2	26
TECHNOLOGY			Course	12	19	12	18	11	23
		Hybrid		2	17				
	FFT4046	Lecture	j	2	12	3	18		
	EE11011	Online	i					3	22
			Course	4	14	3	18	3	22
		Lecture		2	20	2	15		
	EET1021	Online	İ					3	12
			Course	2	20	2	15	3	12

#### 2012-2013 2013-2014 2014-2015 **Major, Associated Courses and Instructional Method** Sections Avg. Size Sections Avg. Size Sections Avg. Size Lecture **CGS1060** Online Course Hybrid Lecture **COP1000** Online **2047 COMPUTER** Course **PROGRAM ANALYSIS** Hybrid COP2001 Online Course Lecture **CTS2402** Online Course Hybrid Lecture **2067 COMPUTER** CGS2100 **INFORMATION ADM** Online Course Lecture **2204 SIMULATION** Online CAP2023 AND ROBOTICS Course

### Average Class Size by Instructional Method- Multiple Methods Only (2 of 2)

#### College Total

	-		
Instructional Mathed	2012-2013	2013-2014	2014-2015
Instructional Method	Avg. Size	Avg. Size	Avg. Size
Hybrid	22	22	22
Lecture	23	23	23
Online	27	28	30
College Total	24	24	25

Source: IR Program Assessment Data

To prevent data from skewing, excludes labs, OJT, clinicals, private/performance, open lab, co-op, directed independent study and internships.

		2012	-2013	2013	-2014	2014	-2015
Major	Course	Attempted	% Successful	Attempted	% Successful	Attempted	% Successful
	CET1600	186	88%	176	82%	192	87%
	CET2615	45	87%	17	100%	27	100%
	CET2620	28	89%	25	100%	21	95%
	CET2625			13	100%		
	CET2660	75	95%	73	92%	48	90%
	CET2850	11	100%	10	100%		
	CGS2840			26	100%	19	100%
2002- Network Systems	CIS2350	23	96%	29	93%	56	71%
rechnology	CIS2381	13	77%	8	50%	12	83%
	CTS2306	70	89%	70	87%	60	95%
	CTS2320	15	100%	9	89%	15	93%
	CTS2321	87	89%	76	86%	87	83%
	CTS2328	32	100%	9	89%	9	89%
	CTS2370			15	87%	38	82%
	Major	585	90%	556	88%	584	87%
2002 Electronico Encin	EET2142			6	100%	10	80%
2003- Electronics Engin	EET2326			9	100%	10	80%
Tech	Major	0		15	100%	20	80%
	CGS2820	39	77%	43	79%	46	70%
	CGS2821	28	75%	21	90%	21	86%
2005- Internet Services	COP2842	21	71%	30	87%	36	86%
Technology	COP2850	12	75%	6	83%	11	100%
	CTS1851	142	68%	150	59%	161	68%
	Major	242	71%	250	69%	275	73%
	CET1112	46	72%	27	85%	39	64%
	CET1178	16	100%				
	CET2123	33	70%	27	89%	3	100%
2013- Computer	CET2154	223	84%	219	84%	255	82%
	EET1011	57	86%	54	70%	67	79%
Engineering Technology	EET1021	40	75%	29	90%	35	94%
	EET1141	37	68%	34	85%	30	80%
	EET1607	82	85%	75	88%	63	81%
	Major	534	81%	465	84%	492	81%

### Course Success Rates (1 of 2)

Indicates more than 5% decrease from prior year.

### **Course Success Rates (2 of 2)**

		2012	2-2013	201	3-2014	201	4-2015
Major	Course	Attempted	% Successful	Attempted	% Successful	Attempted	% Successful
	CEN2002	40	53%	25	84%	29	83%
	CGS1060	205	77%	170	79%	117	77%
	COP1000	385	69%	451	74%	488	71%
	COP2001	127	61%	141	70%	110	69%
	COP2220	93	63%	86	63%	73	<b>52%</b>
	COP2360			19	58%	17	59%
2047	COP2654			17	88%		
2047- Computer	COP2660			16	63%	12	92%
Programming &	COP2700	100	36%	87	54%	92	55%
Analysis	COP2800	115	64%	104	65%	173	68%
	COP2805	14	71%				
	COP2905	23	96%				
	CTS2141	11	91%				
	CTS2402	44	52%				
	CTS2801	16	88%				
	Major	1,173	66%	1,116	71%	1,111	69%
	CGS2100	1,048	79%	1,043	82%	986	80%
2067- Computer	CGS2512	27	89%	1	100%	28	89%
information	CTS2214	36	69%	32	78%	39	85%
Technology	CTS2431	14	64%	9	56%	14	79%
	Major	1,125	79%	1,085	81%	1,067	80%
2204 Cimulation 9	CAP1801	8	75%			7	57%
2204- Simulation &	CAP2023	8	63%	29	76%	24	71%
RUDULICS	Major	16	69%	29	76%	31	68%
	Total	3,675	76%	3,516	79%	3,580	77%

### **Course Success Rates by Campus – Multiple Campus Only**

Major Accessiot	od Coursos	and Comput	2012	2-2013	201	3-2014	2014-2015	
iviajor, Associat	ed Courses	and Campus	Attempted	% Successful	Successful	% Successful	Successful	% Successful
2002 Notwork		Adv Tech College	153	88%	117	82%	113	86%
2002- Network	CET1600	DeLand	33	85%	27	82%	32	82%
Systems rechnology		Course	186	88%	144	82%	145	85%
2005 Justowest		Adv Tech College	43	70%	30	73%	30	<b>67%</b>
2005-Internet	CTS1851	New Smyrna Beach					3	75%
Services rechnology		Course	43	70%	30	73%	33	67%
		Adv Tech College	11	100%				
	CET1178	DeLand	5	100%				
2013- Computer		Course	16	100%				
Engineering		Adv Tech College	163	85%	130	86%	119	84%
Technology	CET34E4	DeLand	32	75%	28	85%	34	77%
	CE12154	Flagler/Palm Cst	28	89%	10	91%	13	72%
		Course	223	84%	168	86%	166	82%
2047- Computer		Adv Tech College	149	70%	109	73%	90	64%
Programming &	COP1000	DeLand	28	86%	44	85%	48	89%
Analysis		Course	177	72%	153	76%	138	71%
		Daytona	397	82%	318	81%	263	83%
2007 O .		DeLand	68	91%	60	90%	48	83%
2067- Computer	CC52100	Deltona	25	96%	36	82%	38	88%
Tochnology	CG22100	Flagler/Palm Cst	45	89%	47	87%	40	87%
ieciniology		New Smyrna Beach	31	74%	31	91%	23	74%
		Course	566	84%	492	83%	412	83%

Excludes fully online courses.

Indicates more than 5% difference between campuses.

### Course Success Rates by Instructional Method – Multiple Methods Only (1 of 3)

	Major Associated Courses and Instructional Method				2012-2013		3-2014	2014-2015	
Major, Associated Cours	es and Instruc	tional Method		Attempted	% Successful	Attempted	% Successful	Attempted	% Successful
		Lecture		186	88%	176	<b>82%</b>	170	85%
	CET1600	Online						22	100%
			Course	186	88%	176	<b>82%</b>	192	87%
		Hybrid		21	95%				
	CET2660	Lecture		23	96%				
	CE12000	Online		31	94%	73	92%	48	90%
			Course	75	95%	73	92%	48	90%
2002 Notwork Systems		DIS				1	100%		
Zuuz- Network Systems	CI622E0	Lecture		23	96%	28	93%	15	<b>67%</b>
reciniology	C132350	Online						41	73%
			Course	23	96%	29	93%	56	71%
		Hybrid		13	77%	8	<b>50%</b>	4	75%
	CIS2381	Online						8	88%
		Course	13	77%	8	<b>50%</b>	12	83%	
		Hybrid		68	87%	47	85%	17	76%
	CTS2321	Online		19	95%	29	<b>86%</b>	70	84%
			Course	87	89%	76	86%	87	83%
		DIS				6	100%	2	100%
	EET2142	Lecture		6	100%	11	100%		
2003- Electronics Engineering			Course	6	100%	17	100%	2	100%
Tech		DIS				3	100%		
	EET2326	Lecture				6	100%	10	80%
			Course			9	100%	10	80%
		DIS				1	100%		
	CGS2821	Online		28	75%	20	90%	21	86%
			Course	28	75%	21	90%	21	86%
		DIS						1	100%
	COP2842	Lecture		21	71%				
	012042	Online				30	87%	35	86%
2005- Internet Services			Course	21	71%	30	87%	36	86%
Technology		DIS				1	100%		
	COP2850	Online		12	75%	5	80%	11	100%
			Course	12	75%	6	83%	11	100%
		Hybrid						4	75%
	CTS10E1	Lecture		43	70%	41	73%	45	<b>67%</b>
CTS185	C131031	Online		99	68%	109	54%	112	68%
			Course	142	68%	150	59%	161	68%

Indicates more than 5% decrease from prior year.

				201	2-2013	2013-2014		2014-2015	
Major, Associate	ed Courses and In	structional Me	ethod	Attempted	% Successful	Attempted	% Successful	Attempted	% Successful
		Lecture		46	72%	27	85%		
	CET1112	Online						39	64%
			Course	46	72%	27	85%	39	64%
		DIS						3	100%
	CET2422	Hybrid		20	65%	10	100%		
	CE12123	Lecture		13	77%	17	82%		
			Course	33	70%	27	89%	3	100%
2012 Commuter		Hybrid		152	84%	145	86%	141	84%
2013- Computer	CET24E4	Lecture		71	85%	50	86%	62	76%
Engineering		Online				24	71%	52	81%
EET1011 EET1021			Course	223	84%	219	84%	255	82%
		Hybrid		33	91%				
	EET1011	Lecture		24	79%	54	<b>70%</b>		
	ECITOIT	Online						67	79%
			Course	57	86%	54	70%	67	79%
		Lecture		40	75%	29	90%		
	EET1021	Online						35	94%
			Course	40	75%	29	90%	35	94%
		Lecture		10	80%				
	CGS1060	Online		195	77%	170	79%	117	77%
			Course	205	77%	170	79%	117	77%
		Hybrid		16	50%				
	COP1000	Lecture		161	75%	202	76%	195	71%
	COPIOOO	Online		208	67%	249	72%	293	71%
2047 Computer			Course	385	69%	451	74%	488	71%
2047- Computer		Hybrid		1	0%				
Analysis	COP2001	Online		126	62%	141	70%	110	69%
Analysis			Course	127	61%	141	70%	110	69%
		DIS				1	100%		
	COP2220	Online		93	63%	85	62%	73	<b>52%</b>
			Course	93	63%	86	63%	73	52%
		Lecture		15	53%				
стѕ	CTS2402	Online		29	52%				
			Course	44	52%				

Indicates more than 5% decrease from prior year.

### Course Success Rates by Instructional Method – Multiple Methods Only (3 of 3)

			2012-	·2013	2013-	2014	2014-2015		
Major, Associated	l Courses and li	nstructional Meth	od	Attempted	% Successful	Attempted	% Successful	Attempted	% Successful
	CGS2100	Hybrid						27	63%
2067- Computer Information		Lecture		566	84%	593	83%	469	84%
		Online		482	74%	450	80%	490	76%
		<b>C</b> οι	urse	1048	79%	1043	82%	986	80%
Technology	CG\$2512	DIS				1	100%		
		Online		27	89%			28	89%
		<b>C</b> οι	urse	27	89%	1	100%	28	89%
2204 Cimulation		Lecture		8	63%				
2204- Simulation & Robotics	CAP2023	Online				29	76%	24	71%
		Cou	urse	8	63%	29	76%	24	71%

### Course Success Rates by Multiple Session/Sub-session Only (1 of 6)

Maian	Major, Associated Courses and Sub-session				201	2-2013	2013-2014		2014-2015	
iviajor	, Associated Cou	rses and	Sub-session		Attempted	% Successful	Attempted	% Successful	Attempted	% Successful
		FA	Full term		76	88%	91	86%	88	85%
	CET1600	SP	Full term		86	85%	67	73%	81	89%
	CE11000	SU	Full term		24	96%	18	94%	23	87%
				Course	186	88%	176	82%	192	87%
		FA	Full term		23	78%	17	100%	18	100%
	CET2615	SP	Full term		22	95%			9	100%
				Course	45	87%	17	100%	27	100%
		FA	Full term		16	81%	16	100%	12	92%
	CET2620	SP	Full term		12	100%	9	100%	9	100%
				Course	28	89%	25	100%	21	95%
	FA	Full term		52	94%	40	90%	27	89%	
	CET2660	SP	Full term		23	96%	33	94%	21	90%
				Course	75	95%	73	92%	48	90%
		FA	Full term				17	100%	19	100%
CGS2840 2002- Network	SP	Full term				9	100%			
				Course			26	100%	19	100%
		FA	Full term		11	91%	16	88%	15	67%
	SP	Full term		12	100%	12	100%	41	73%	
Tachnology	CI32350	SU	Full term				1	100%		
recimology				Course	23	96%	29	93%	56	71%
		FA	Full term		36	86%	25	84%	23	100%
	CT52206	SP	Full term		18	89%	29	86%	23	87%
	C132300	SU	Full term		16	94%	16	94%	14	100%
				Course	70	89%	70	87%	60	95%
		FA	Full term		40	93%	28	82%	43	91%
	CT52221	SP	Full term		47	85%	39	90%	44	75%
	C132321	SU	Full term				9	78%		
				Course	87	89%	76	86%	87	83%
		FA	Full term		8	100%				
	CTC2220	SP	Full term		20	100%	9	<b>89%</b>	9	89%
CTS2	C132320	SU	Full term		4	100%				
				Course	32	100%	9	89%	9	89%
		FA	Full term				9	89%	19	79%
	CT\$2270	SP	Full term				6	83%	16	81%
	C132370	SU	Full term						3	100%
				Course			15	87%	38	82%

Indicates more than 5% difference between sessions or sub-sessions.

### Course Success Rates by Multiple Session/Sub-session Only (2 of 6)

	Major Associated Courses and Sub-session				2012	2-2013	2013-2014		2014-2015	
Major, A	Associated Co	urses an	d Sub-sessio	on	Attempted	% Successful	Attempted	% Successful	Attempted	% Successful
		FA	Full term				1	100%	1	100%
	EET2142	SP	Full term		6	100%	11	100%	1	100%
2003-	CC12142	SU	Full term				5	100%		
Electronics				Course	6	100%	17	100%	2	100%
Tech		FA	Full term				6	100%	10	80%
	EET2326	SU	Full term				3	100%		
				Course			9	100%	10	80%
		FA	Full term		20	55%	15	80%	19	74%
CGS2820	SP	Full term		19	100%	28	<b>79%</b>	27	67%	
				Course	39	77%	43	79%	46	70%
		FA	Full term		10	70%	1	100%		
	CGS2821	SP	Full term		18	78%	20	90%	21	86%
				Course	28	75%	21	90%	21	86%
2005-		FA	Full term		21	71%	30	87%	35	86%
Internet	COP2842	SP	Full term						1	100%
Services				Course	21	71%	30	87%	36	86%
Technology		FA	Full term		12	75%	5	80%		
	COP2850	SP	Full term				1	100%	11	100%
				Course	12	75%	6	83%	11	100%
		FA	Full term		59	68%	53	51%	83	65%
	CTC19E1	SP	Full term		64	66%	70	64%	53	74%
	C131031	SU	Full term		19	79%	27	63%	25	64%
				Course	142	68%	150	59%	161	68%

### Course Success Rates by Multiple Session/Sub-session Only (3 of 6)

Major	Maior. Associated Courses and Sub-session					2-2013	201	3-2014	2014-2015	
	Associated Co	Juises and	a Sub-session	1	Attempted	% Successful	Attempted	% Successful	Attempted	% Successful
		FA	Full term		31	71%	15	87%	19	53%
	CET1112	SP	Full term		15	73%	12	83%	20	75%
				Course	46	72%	27	85%	39	64%
		FA	Full term		13	77%	17	82%	3	100%
	CET2123	SP	Full term		20	65%	10	100%		
				Course	33	70%	27	89%	3	100%
		FA	Full term		106	82%	94	85%	124	78%
	CET21E4	SP	Full term		82	82%	99	82%	110	82%
	CE12154	SU	Full term		35	97%	26	92%	21	100%
				Course	223	84%	219	84%	255	82%
		FA	Full term		33	91%	32	<b>59%</b>	42	79%
2013- Computer	EET1011	SP	Full term		24	79%	22	86%	25	80%
				Course	57	86%	54	70%	67	79%
Engineering		FA	Full term		18	83%	16	88%	10	100%
Technology	EET1021	SP	Full term		22	68%	13	92%	25	92%
Technology				Course	40	75%	29	90%	35	94%
		FA	Full term		17	41%	18	83%	6	83%
	EET1141	SP	Full term		20	90%	16	88%	24	79%
				Course	37	68%	34	85%	30	80%
		FA	Full term		37	81%	24	88%	20	80%
	EET1607	SP	Full term		45	89%	34	85%	24	79%
	EE11007	SU	Full term				17	94%	19	84%
				Course	82	85%	75	88%	63	81%
		FA	Full term				1	100%	4	75%
	EET2040	SP	Full term				2	100%	1	100%
E	CC12949	SU	Full term				1	100%		
				Course			4	100%	5	80%

### Course Success Rates by Multiple Session/Sub-session Only (4 of 6)

Major Ass	Major Associated Courses and Sub-session			2012-2013		2013-2014		2014-2015		
lviajor, Asso	ociated Courses	and Sub-s	ession		Attempted	% Successful	Attempted	% Successful	Attempted	% Successful
			B term		1	100%	1	100%		
		FA	Full term		5	100%	1	100%	1	100%
			Se	ession	6	100%	2	100%	1	100%
			A term				1	100%		
	CET2949		B term				1	100%		
		58	Full term		3	100%	5	100%	2	100%
			Se	ession	3	100%	7	100%	2	100%
		SU	Full term		7	86%	6	100%	2	100%
			C	ourse	16	94%	15	100%	5	100%
			B term		30	63%	25	80%	19	53%
CGS 2047- Computer CO		FA	Full term		39	77%	26	88%	21	86%
			Se	ession	69	71%	51	84%	40	70%
			A term	ĺ	22	68%	26	96%	17	88%
	CGS1060	SP	B term		31	55%	17	71%	22	68%
			Full term		27	81%	28	75%	11	82%
			Se	ession	80	68%	71	82%	50	78%
		SU	Full term	ĺ	56	98%	48	<b>69%</b>	27	85%
			C	ourse	205	77%	170	79%	117	77%
		FA	Full term		156	64%	181	69%	191	62%
			A term	ĺ			57	72%	59	85%
			B term	ĺ					19	63%
	COP1000	SP	Full term	ĺ	180	72%	147	77%	156	72%
Programming & Analysis			Se	ession	180	72%	204	75%	234	74%
		SU	Full term	ĺ	49	78%	66	83%	63	84%
			C	ourse	385	69%	451	74%	488	71%
			B term				23	65%	19	53%
		SP	Full term	ĺ	85	56%	68	71%	45	71%
	COP2001		Se	ession	85	56%	91	69%	64	66%
		SU	Full term	ĺ	42	71%	50	72%	46	74%
			C	ourse	127	61%	141	70%	110	69%
		FA	Full term		93	63%	85	62%	73	52%
	COP2220	SP	Full term	ĺ			1	100%		
			C	ourse	93	63%	86	63%	73	52%
		FA	Full term		49	29%	43	51%	50	66%
	COP2700	SP	Full term	İ	51	43%	44	57%	42	43%
			C	ourse	100	36%	87	54%	92	55%
			B term						17	88%
cc		FA	Full term	i	61	67%	50	68%	55	58%
			Se	ession	61	67%	50	68%	72	65%
	COP2800		B term	i					22	82%
		SP	Full term	i	54	61%	54	63%	79	67%
			Se	ession	54	61%	54	63%	101	70%
			C	ourse	115	64%	104	65%	173	68%

Indicates more than 5% difference between sessions or sub-sessions.

Source: IR Program Assessment Data

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### Course Success Rates by Multiple Session/Sub-session Only (5 of 6)

Diaion Ass	Major Associated Courses and Sub-session					2013-2014		2014-2015	
iviajor, Ass	oclated Course	s and Sub	session	Attempted	% Successful	Attempted	% Successful	Attempted	% Successful
		FA	Full term	6	83%				
	CODODE	SP	Full term	13	100%				
	COP2905	SU	Full term	4	100%				
			Cours	e 23	96%				
			A term			1	100%	3	100%
		-	B term	3	100%	1	100%	3	100%
		FA	Full term	3	100%	11	91%	6	83%
			Sessio	n 6	100%	13	92%	12	92%
2047- Computer		İ	A term			1	100%	2	100%
Programming & Analysis	COP2949		B term	1	100%			i i	
		SP	Full term	11	100%	12	100%	14	100%
			Sessio	n 12	100%	13	100%	16	100%
		SU	Full term	12	92%	10	90%	7	100%
			Cours	e 30	97%	36	94%	35	97%
		FA	Full term	29	52%				
	CTS2402	SP	Full term	15	53%				
			Cours	e 44	52%				
			A term	27	85%	25	92%	25	100%
			B term	59	69%	57	79%	58	74%
		FA	Full term	367	80%	383	81%	372	78%
			Sessio	n 453	79%	465	81%	455	79%
		52100	A term	54	80%	54	76%	49	78%
	CGS2100		B term	81	69%	54	76%	37	84%
		SP	Full term	281	79%	317	83%	279	82%
			Sessio	n 416	77%	425	81%	365	82%
		SU	Full term	179	87%	153	86%	166	77%
			Cours	e 1048	79%	1043	82%	986	80%
		FA	Full term			1	100%	16	94%
2067- Computer	CGS2512	SP	Full term	27	89%			12	83%
Information Technology			Cours	e 27	89%	1	100%	28	89%
			A term	6	100%	1	100%		
			B term	3	100%	2	100%	4	100%
		FA	Full term	7	100%	6	100%	4	75%
			Sessio	n 16	100%	9	100%	8	88%
		İ	A term	İ		4	100%		
	CIS2949		B term	3	67%	2	100%	2	100%
		SP	Full term	17	100%	9	100%	10	100%
			Sessio	n 20	95%	15	100%	12	100%
		SU	Full term	10	90%	9	100%	10	100%
			Cours	e 46	96%	33	100%	30	97%

Indicates more than 5% difference between sessions or sub-sessions.

### Course Success Rates by Multiple Session/Sub-session Only (6 of 6)

Major A	speciated Co		d Sub cossion	201	2012-2013		2013-2014		2014-2015	
ividjor, As		urses an	a sub-session	Attempted	% Successful	Attempted	% Successful	Attempted	% Successful	
		FA	Full term					7	57%	
CAP1801	CAP1801	SP	Full term	8	75%					
			Course	e 8	75%			7	57%	
		FA CAP2949 SP	A term					2	100%	
Simulation &			Full term			1	100%	1	100%	
Robotics	64 530 40		Sessio	n		1	100%	3	100%	
	CAP2949		Full term	1	100%	1	100%			
		SU	Full term			2	100%			
			Cours	e 1	100%	4	100%	3	100%	

Placement Rates (1 of 2)											
		2010	0/11	2011	/12	201	2/13	Average Annual			
Program Title	Major(s)	DSC%	FCS%	DSC%	FCS%	DSC%	FCS%	Salary			
Advanced Network Infrastructure	0908	100%	80%	83%	75%	50%	78%	\$**,***			
Cable Installation	0921	88%	93%	72%	67%	87%	80%	\$**,***			
Computer Engineering Technology	2013	62%	76%	60%	71%	78%	62%	\$**,***			
Computer Information Technology	2067	50%	73%	100%	80%	75%	59%	\$**,***			
Computer Programming	0938	50%	82%	63%	78%	75%	86%	\$**,***			
Computer Programming and Analysis (Software Engineering Technology)	2047	67%	80%	88%	82%	80%	83%	\$**,***			
Electronics Engineering Technology	2003	100%	77%	63%	81%	100%	78%	\$**,***			
Information Technology Administration	0902	100%	86%	100%	95%	100%	100%	\$**,***			
Information Technology Analysis	0903	79%	84%	75%	80%	100%	96%	\$** <i>,</i> ***			
Information Technology Support Specialist	0905	83%	88%	92%	88%	94%	97%	\$ 31,764			
Internet Services Technology	2005	100%	81%	100%	78%	75%	55%	\$** <i>,</i> ***			

Notes:

Graduates in cohort year are tracked in the following year and reported 1 year later.

All continuing education outcomes are based on enrollment data for the fall semester and preliminary winter/spring semester.

All employment outcomes are based on the October - December quarterly data each year.

Individuals are only counted in one educational sector.

Full quarter earnings displayed only when 10 or more graduates are employed full time/full quarter.

Placement Rates (2 of 2)											
		2010	0/11	2011	/12	201	.2/13	Average Annual			
Program Title	Major(s)	DSC%	FCS%	DSC%	FCS%	DSC%	FCS%	Salary			
<u>Microcomputer</u> <u>Repairer/Installer</u>	0907	74%	92%	93%	91%	85%	88%	\$ 33,448			
<u>Network</u> Communications (LAN)	0923	77%	80%	82%	81%	82%	83%	\$**,***			
Network Communications (WAN)	0924	77%	77%	79%	79%	89%	89%	\$**,***			
Network Infrastructure	0922	79%	71%	79%	73%	76%	67%	\$ 34,332			
Network Server Administration	0904	77%	75%	76%	86%	100%	95%	\$**,***			
<u>Network Support</u> <u>Technician</u>	0906	77%	82%	89%	81%	96%	94%	\$**,***			
<u>Network Systems</u> <u>Technology</u>	2002	63%	71%	76%	75%	96%	96%	\$**,***			
Simulation and Robotics Technology	2204	75%	75%	71%	71%	0%	0%	\$**,***			
<u>Web Development</u> Specialist	0909	100%	85%	100%	68%	83%	54%	\$**,***			
Wireless Communications	0925	71%	80%	73%	83%	100%	97%	\$**,***			

Notes:

Graduates in cohort year are tracked in the following year and reported 1 year later.

All continuing education outcomes are based on enrollment data for the fall semester and preliminary winter/spring semester.

All employment outcomes are based on the October - December quarterly data each year.

Individuals are only counted in one educational sector.

Full quarter earnings displayed only when 10 or more graduates are employed full time/full quarter.

## **Program Learning Outcomes**

Network Systems Technology, code 2002 Certificate Advance Network Infrastructure, code 0908 Certificate Network Infrastructure, code 0922 Certificate Network Server Administration, code 0904 Certificate Network Support Technician, code 0906 Certificate Cable Installation, code 0921 Certificate Network Communications (LAN), code 0923 Certificate Network Communications (WAN), code 0924 Certificate Wireless Communications, code 0925

Graduates of the program will be able to:

- 1. Analyze a problem, and identify and define the network services requirements appropriate to its solution.
- 2. Design, implement and evaluate a network services based system, process, component, or program to meet desired needs.
- 3. Apply knowledge of network services appropriate to the discipline.
- 4. Function effectively on teams to accomplish a common goal.
- 5. Apply and understand professional, ethical, legal, security, and social issues and responsibilities.
- 6. Communicate effectively with a range of audiences.
- 7. Analyze the local and global impact of network services on individuals, organizations and society.
- 8. Recognize the need for, and an ability to engage in, continuing professional development.
- 9. Use current techniques, skills, and tools necessary for network services practices.
- 10. Apply network services foundations and theory in the modeling and design of network services based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices.
- 11. Apply design and development principles in the construction of network services systems of varying complexity.



Analyze a problem, and identify and define the network services requirements appropriate to its solution



Apply knowledge of network services appropriate to the discipline



Design, implement and evaluate a network services based system, process, component, or program to meet desired needs



Function effectively on teams to accomplish a common goal



Apply and understand professional, ethical, legal, security, and social issues and responsibilities. \*Results given in class average



Analyze the local and global impact of network services on individuals, organizations and society



Communicate effectively with a range of audiences



Recognize the need for, and an ability to engage in, continuing professional development



Use current techniques, skills, and tools necessary for network services practices





Apply network services foundations and theory in the modeling and design of network services based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices

Apply design and development principles in the construction of network services systems of varying complexity

## **Program Learning Outcomes**

AS Internet Services Technology, code 2005 Certificate Information Technology Administration, code 0902 Certificate Web Development Specialist, code 0909

Graduates of the program will be able to:

- 1. Use relevant tools necessary for Internet development.
- 2. Apply and demonstrate independent problem solving and trouble shooting skills in web site development, database, and web database integration.
- 3. Demonstrate knowledge and understanding of computer hardware and networked environments.
- 4. Design, implement and manage database applications.

5. Communicate effectively with customers, supervisors and peers both orally and in writing, including technical training for users.

6. Function as a member of a team in the solution of problems.

7. Contribute to chosen field by gaining employment in a related field or by continuing professional development.

8. Evaluate and practice ethical and professional behaviors in the area of Internet Services Technology.



Use relevant tools necessary for Internet development





Apply and demonstrate independent problem solving and trouble shooting skills in web site development, database, and web database integration



Demonstrate knowledge and understanding of computer hardware and networked environments

Design, implement and manage database applications



Communicate effectively with customers, supervisors and peers both orally and in writing, including technical training for users



Contribute to chosen field by gaining employment in a related field or by continuing professional development



Function as a member of a team in the solution of problems



Evaluate and practice ethical and professional behaviors in the area of Internet Services Technology

## **Program Learning Outcomes**

AS Computer Engineering Technology, code 2013 Certificate Microcomputer Repairer Technology, code 0907

Graduates of the program will be able to:

1. Apply knowledge of mathematics, basic science, and engineering technology to solve problems encompassing the fundamental areas of computer engineering technology.

2. Apply knowledge of one or more disciplines to the application, installation, operation, and/or maintenance of computer systems.

3. Conduct and create experiments to acquire needed data and to analyze and interpret the data to solve engineering technology problems.

4. Comply and function as a member of a diverse multidisciplinary team in the solution of engineering problems.

5. Demonstrate proficiency in communicating ideas and information orally and in writing.

6. Relate the need for, and an ability to learn and apply new concepts as required in the continually evolving and rapidly changing practice of computer engineering technology.

7. Comprehend ethical responsibility and professional integrity issues as related to computer technology.

8. Comprehend contemporary technological and societal issues and the impact of computer technology on society in both a local and global context.



Apply knowledge of mathematics, basic science, and engineering technology to solve problems encompassing the fundamental areas of computer engineering technology



Conduct and create experiments to acquire needed data and to analyze and interpret the data to solve engineering technology problems



Apply knowledge of one or more disciplines to the application, installation, operation, and/or maintenance of computer systems



Comply and function as a member of a diverse multidisciplinary team in the solution of engineering problems



Demonstrate proficiency in communicating ideas and information orally and in writing



Comprehend ethical responsibility and professional integrity issues as related to computer technology



Relate the need for, and an ability to learn and apply new concepts as required in the continually evolving and rapidly changing practice of computer engineering technology



Comprehend contemporary technological and societal issues and the impact of computer technology on society in both a local and global context

## **Program Learning Outcomes**

AS Computer Programming and Analysis (Software Engineering Technology), code 2047 Certificate Computer Programming, code 0938 Certificate Computer Specialist, code 0901

Graduates of the program will be able to:

- 1. Use current techniques, skills, tools, and emerging technologies necessary for computing practices.
- 2. Apply critical thinking and problem solving skills in designing algorithms and programming code in various programming languages.
- 3. Demonstrate knowledge and understanding of computer hardware and networked environments.
- 4. Demonstrate proficiency with Internet structure, organization, and Web site development.
- 5. Design, implement and manage database applications.
- 6. Communicate effectively with customers, supervisors and peers both orally and in writing, including technical training for users.
- 7. Ability to function as a member of a team in the solution of problems.
- 8. Contribute to chosen field by gaining employment in a related field or by continuing professional development.
- 9. Evaluate and practice ethical and professional behaviors in the area of computer programming and analysis.



Use current techniques, skills, tools, and emerging technologies necessary for computing practices



Apply critical thinking and problem solving skills in designing algorithms and programming code in various programming languages



Demonstrate knowledge and understanding of computer hardware and networked environments



Demonstrate proficiency with Internet structure, organization, and Web site development



#### Design, implement and manage database applications



Communicate effectively with customers, supervisors and peers both orally and in writing, including technical training for users



Ability to function as a member of a team in the solution of problems





Contribute to chosen field by gaining employment in a related field or by continuing professional development

Evaluate and practice ethical and professional behaviors in the area of computer programming and analysis

## **Program Learning Outcomes**

AS Computer Information Technology, code 2067 Certificate Information Technology Analysis, code 0903 Certificate Information Technology Support Specialist, code 0905

Graduates of the program will be able to:

1. Use current techniques, skills, tools, and emerging technologies necessary for computing practices.

2. Create information systems solutions for transactional, operational, managerial and executive problems.

3. Demonstrate knowledge and understanding of computer hardware and networked environments.

- 4. Demonstrate proficiency with Internet structure, organization, and Web site development.
- 5. Design, implement and manage database applications.

6. Communicate effectively with customers, supervisors and peers both orally and in writing, including technical training for users.

7. Participate and function as a member of a team in the solution of problems.

8. Contribute to chosen field by gaining employment in a related field or by continuing professional development.

9. Evaluate and practice ethical and professional behaviors in the area of computer information technology.



Use current techniques, skills, tools, and emerging technologies necessary for computing practices



Create information systems solutions for transactional, operational, managerial and executive problems



Demonstrate knowledge and understanding of computer hardware and networked environments

**5**3



Demonstrate proficiency with Internet structure, organization, and Web site development



Design, implement and manage database applications



Communicate effectively with customers, supervisors and peers both orally and in writing, including technical training for users



Participate and function as a member of a team in the solution of problems



Contribute to chosen field by gaining employment in a related field or by continuing professional development



Evaluate and practice ethical and professional behaviors in the area of computer information technology

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## **Program Learning Outcomes**

#### AS Simulation and Robotics Technology, code 2204

Graduates of the program will be able to:

1. Apply knowledge of mathematics, basic science, and engineering to solve problems encompassing the fundamental areas of simulation and robotics technology.

2. Apply knowledge of one or more disciplines to the operation and maintenance of simulation and robotics systems.

3. Identify and apply software solutions appropriate to simulation and robotics systems.

4. Conduct experiments to acquire needed data, and to analyze and interpret data to solve engineering technology problems.

5. Use computers and other modern tools and skills to solve technical problems.

6. Function as a member of a multidisciplinary team in the solution of engineering problems.

7. Demonstrate proficiency in communicating ideas and information orally and in writing.

8. Relate the need for, and an ability to learn new concepts as required within the field of simulation and robotics technology.

9. Comprehend ethical responsibility and professional integrity issues related to the practice of simulation and robotics technology.

10. Comprehend contemporary technological and societal issues, and the impact of technology on society in both a local and global context.



Apply knowledge of mathematics, basic science, and engineering to solve problems encompassing the fundamental areas of simulation and robotics technology





Apply knowledge of one or more disciplines to the operation and maintenance of simulation and robotics systems

Identify and apply software solutions appropriate to simulation and robotics systems

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Conduct experiments to acquire needed data, and to analyze and interpret data to solve engineering technology problems



Use computers and other modern tools and skills to solve technical problems



Function as a member of a multidisciplinary team in the solution of engineering problems



Demonstrate proficiency in communicating ideas and information orally and in writing



Comprehend ethical responsibility and professional integrity issues related to the practice of simulation and robotics technology



Relate the need for, and an ability to learn new concepts as required within the field of simulation and robotics technology



Comprehend contemporary technological and societal issues, and the impact of technology on society in both a local and global context

## **Program Learning Outcomes**

#### AS Electronics Engineering Technology, code 2003

Graduates of the program will be able to:

1. Apply knowledge of mathematics, basic science, and engineering to solve problems encompassing the fundamental areas of electronic engineering technology.

2. Apply knowledge of one or more disciplines within electronic engineering technology to the solution of technical problems.

3. Identify and analyze applications of electrical components or systems to meet desired needs.

4. Create and conduct experiments to acquire needed data, and to analyze and interpret data to solve engineering technology problems.

5. Demonstrate proficiency in the use of computers and other modern tools and skills to solve technical problems.

6.Comply with and function as a member of a diverse multidisciplinary team in the solution of engineering problems.

7. Demonstrate proficiency in communicating ideas and information orally and in writing.

8. Relate the need for, and an ability to learn new concepts as required for the continuing practice of electronic engineering technology.

9. Comprehend ethical responsibility and professional integrity issues related to the practice of electronic engineering technology.

10. Comprehend contemporary technological and societal issues, and the impact of technology on society in both a local and global context.



Apply knowledge of mathematics, basic science, and engineering to solve problems encompassing the fundamental areas of electronic engineering technology



Apply knowledge of one or more disciplines within electronic engineering technology to the solution of technical problems



Identify and analyze applications of electrical components or systems to meet desired needs.



Create and conduct experiments to acquire needed data, and to analyze and interpret data to solve engineering technology problems





Demonstrate proficiency in the use of computers and other modern tools and skills to solve technical problems

Comply with and function as a member of a diverse multidisciplinary team in the solution of engineering problems



Demonstrate proficiency in communicating ideas and information orally and in writing



Comprehend ethical responsibility and professional integrity issues related to the practice of electronic engineering technology



Relate the need for, and an ability to learn new concepts as required for the continuing practice of electronic engineering technology



Comprehend contemporary technological and societal issues, and the impact of technology on society in both a local and global context

### Assessment Data 2013-2014 and 2014-2015: Programs and Institutional Learning Outcomes

Program	Critica Th	l/ Creative hinking	Comn	nunication	Cultura	al Literacy	Information and Technical Literacy	
	13/14	14/15	13/14	14/15	13/14	14/15	13/14	14/15
<u>0908 - Advanced Network</u> <u>Infrastructure</u>	88.30%	96.7%-100%	61.50%	87.5%-93.7%	58.60%	75.00%	33.33%	80%-100%
0921 - Cable Installation	88.30%	96.7%-100%	61.50%	87.5%-93.7%	58.60%	75.00%	33.33%	80%-100%
<u> 2013 - Computer Engineering</u> <u>Technology</u>	50.00%	72%-86%	73.30%	73%-86%	58.60%	75.00%	58.50%	100.00%
<u>2067 - Computer Information</u> <u>Technology</u>	78.6%	80%-88%	61.50%	<mark>66.67%</mark> -93.7%	58.60%	74%-78%	33.33%	<mark>58%</mark> -81%
0938 - Computer Programming	78.6%	80%-88%	61.50%	<mark>66.67%</mark> -93.7%	58.60%	74%-78%	33.33%	<mark>58%</mark> -81%
2047 - Computer Programming and Analysis (Software Engineering Technology)	78.6%	80%-88%	61.50%	<mark>66.67%</mark> -93.7%	58.60%	74%-78%	33.33%	<mark>58%</mark> -81%
2003 - Electronics Engineering Technology	50%	72%-95%	73.3%	73%-86%	58.6%	75.00%	58.6%	100.00%
0902 - Information Technology Administration	78.60%	80%-88%	61.50%	87.5%-93.7%	58.60%	75.00%	33.33%	<mark>58%</mark> -80%
0903 - Information Technology Analysis	78.6%	80%-88%	61.50%	<mark>66.67%</mark> -93.7%	58.60%	74%-78%	33.33%	<mark>58%</mark> -81%
0905 - Information Technology Support Specialist	78.6%	80%-88%	61.50%	<mark>66.67%</mark> -93.7%	58.60%	74%-78%	33.33%	<mark>58%</mark> -81%
2005 - Internet Services Technology	78.60%	80%-88%	61.50%	87.5%-93.7%	58.60%	75.00%	33.33%	<mark>58%</mark> -80%

### Assessment Data 2013-2014 and 2014-2015: Programs and Institutional Learning Outcomes

Program	Critical/ Creative Thinking		Communication		Cultural Literacy		Information and Technical Literacy	
	13/14	14/15	13/14	14/15	13/14	14/15	13/14	14/15
<u>0907 - Microcomputer</u> <u>Repairer/Installer</u>	50.00%	72%-86%	73.30%	73%-86%	58.60%	75.00%	58.50%	100.00%
0923 - Network Communications (LAN)	88.30%	96.7%-100%	61.50%	87.5%-93.7%	58.60%	75.00%	33.33%	80%-100%
0924 - Network Communications (WAN)	88.30%	96.7%-100%	61.50%	87.5%-93.7%	58.60%	75.00%	33.33%	80%-100%
0922 - Network Infrastructure	88.30%	96.7%-100%	61.50%	87.5%-93.7%	58.60%	75.00%	33.33%	80%-100%
0904 - Network Server Administration	88.30%	96.7%-100%	61.50%	87.5%-93.7%	58.60%	75.00%	33.33%	80%-100%
<u>0906 - Network Support Technician</u>	88.30%	96.7%-100%	61.50%	87.5%-93.7%	58.60%	75.00%	33.33%	80%-100%
2002 - Network Systems Technology	88.30%	96.7%-100%	61.50%	87.5%-93.7%	58.60%	75.00%	33.33%	80%-100%
2204 - Simulation and Robotics Technology	62.5%	72%-77%	73.3%	73%-86%	58.60%	75.00%	58.60%	100.00%
0909 - Web Development Specialist	78.60%	80%-88%	61.50%	87.5%-93.7%	58.60%	75.00%	33.33%	<mark>58%</mark> -80%
0925 - Wireless Communications	88.30%	96.7%-100%	61.50%	87.5%-93.7%	58.60%	75.00%	33.33%	80%-100%