

ASSESSMENT DAY

College of Business, Engineering and Technology

School of Engineering Technology (BSIT)

March 26, 2018

Strengths

Challenges

Recommendations

Academic Assessment

	LEVEL	FOCUS	CONDUCTED BY	FREQUENCY
Academic Success Committee	Program	<ul style="list-style-type: none"> Quality of assessment practices 	Committee of peers	Years 1 & 2
Instructional Program Review	Program / Cluster	<ul style="list-style-type: none"> Enrollment, retention, completion Industry certifications and job placement Program budget and staffing Advisory committees Curriculum changes 	Committee of peers	Year 3
Assessment Day	Course/ Program	<ul style="list-style-type: none"> Enrollment by demographics Graduation and retention Average class size Course success rate Placement rate SLOs, PLOs and ILOs 	Program Chair and Faculty	Years 1, 2, 3

Programs

[6334 - Bachelor of Science Information Technology - BSIT](#)

[3002 - Cybersecurity and Cyberforensics](#)

[3003 - Web Systems Software Development](#)

Action Items from Last Assessment Day

Assessment Day (03/06/2017)

1. Reform advisory board;
2. Revise program outcome assessment, align courses to program outcomes, adjust program outcome targets, ensure all outcomes have at least three assessment measures;
3. Complete the alumni survey;
4. Self-study report due to ABET on November 1, 2017

Program Learning Outcomes

Bachelor of Science in Information Technology (BSIT) - 6334

Graduates of the program will be able to:

1. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. Identify and analyze user needs and to take them into account in the selection, creation, integration, evaluation, and administration of computing-based systems.

Program Learning Outcomes

Cybersecurity and Cyberforensics Certificate- 3002

Graduates of the program will be able to:

1. Conduct a password audit.
2. Design a password security policy.
3. Identify elements of security policy.
4. Design and implement a firewall based on security risk management and policies.
5. Design and implement an intrusion detection system based on security policies.
6. Use cryptography and cryptographic protocols.
7. Identify anomalous network packets.
8. Create and verify a forensic image.
9. Recover evidence in a forensically sound manner.
10. Validate forensic tools.
11. Identify and manage computer and network incidents.
12. Use cryptography and cryptographic protocols.
13. Identify the function and purpose of malware.
14. Conduct a static and dynamic analysis of malware.
15. Conduct a hash analysis for known files.
16. Identify evidence of a server intrusion.

Program Learning Outcomes

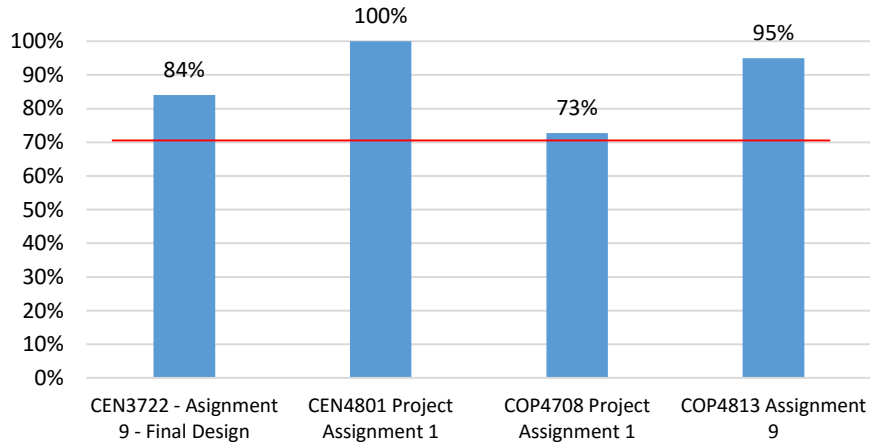
Web Systems Software Development 3003

Graduates of the program will be able to:

1. Implement internet based client server software systems.
2. Develop applications using modern web programming languages and technologies.
3. Design and implement database systems to support web applications.
4. Implement Software as a Service and Cloud based software systems.
5. Use current software project management techniques in software development.

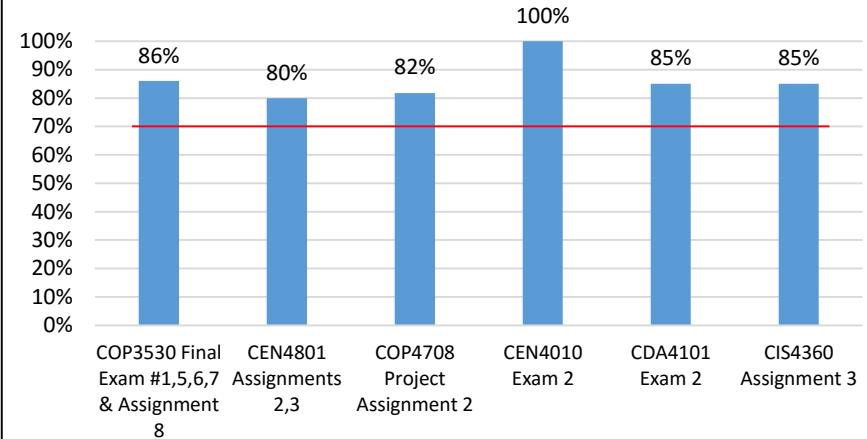
Assessment Results 2016-2017

PLO1 Results



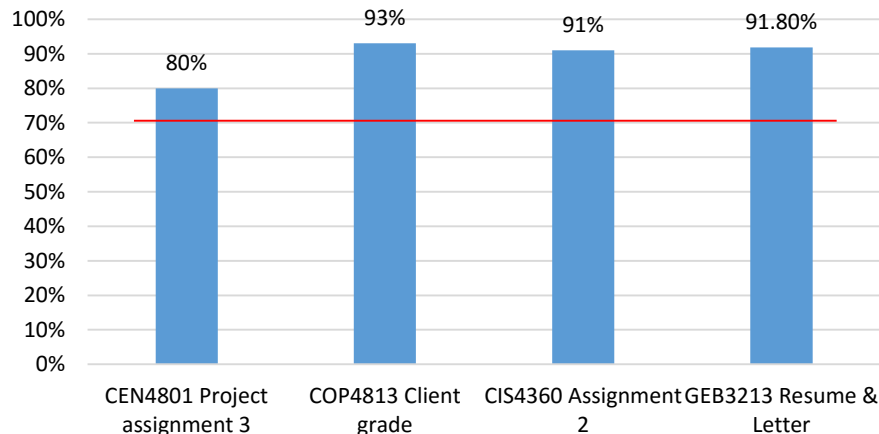
PLO1: Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions. *Target: 70% of students will achieve 70% or higher.*

PLO2 Results



PLO 2: Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline. *Target: 70% of students will achieve 70% or higher.*

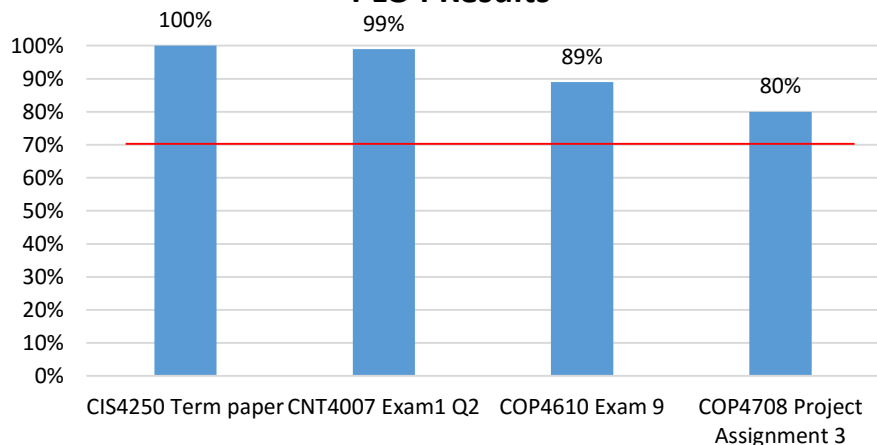
PLO3 Results



PLO 3: Communicate effectively in a variety of professional contexts. *Target: 70% of students will achieve 70% or higher.*

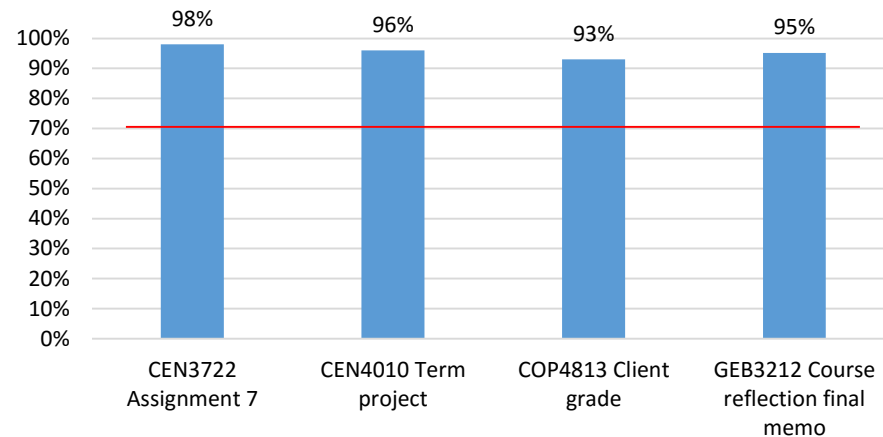
Assessment Results 2016-2017

PLO4 Results



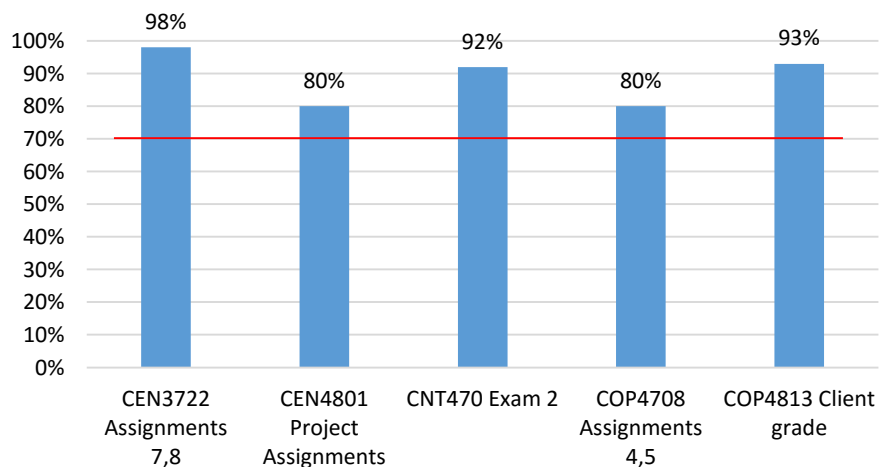
PLO 4: Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles. *Target: 70% of students will achieve 70% or higher.*

PLO5 Results



PLO 5: Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline. *Target: 70% of students will achieve 70% or higher.*

PLO6 Results



PLO6: Identify and analyze user needs and to take them into account in the selection, creation, integration, evaluation, and administration of computing-based systems. *Target: 70% of students will achieve 70% or higher.*

Assessment Data 2015-2016 and 2016-2017: Programs and Institutional Learning Outcomes

Program	Critical/ Creative Thinking		Communicatio n		Cultural Literacy		Information and Technical Literacy	
	15/16	16/17	15/16	16/17	15/16		15/16	16/17
Bachelor of Science in Information Technology (BSIT) - 6334	91%-92%	72.7%-100%	50%-90%	80%-98%	78%-100%	80%-100%	78%-100%	72.7%-100%
3002 - Cybersecurity and Cyberforensics	NR	72.7%-100%	NR	80%-98%	NR	80%-100%	NR	72.7%-100%
3003 – Web Systems Software Development	NR	72.7%-100%	NR	80%-98%	NR	80%-100%	NR	72.7%-100%

NR: No reported

Course Success Rates

Major	Course	2013-2014		2014-2015		2015-2016		2016-2017		
		Attempted	% Successful	Attempted	% Successful	Attempted	% Successful	Attempted	% Successful	
6334- BS Information Technology	CDA4101					52	81%	50	90%	↑
	CEN4010					25	92%			
	DEN4801					11	82%			
	CEN3722							27	70%	
	CEN4010							23	96%	
	CEN4801							16	81%	
	CET3010	90	82%	93	84%	20	100%			
	CET3116	70	69%	98	67%	80	54%	95	51%	
	CET3679	52	98%	54	93%	24	100%			
	CET4748	35	100%	41	98%	24	92%			
	CET4860	13	92%	32	84%	37	70%	48	79%	↑
	CET4861	8	88%	12	92%	16	88%	12	100%	
	CET4862	17	88%	12	75%	21	100%	20	85%	
	CET4884	14	93%	33	94%	25	100%	21	95%	
	CIS4250					11	91%	29	97%	↑
	CIS4360					72	72%	84	65%	
	CNT3104					34	94%	41	93%	
	CNT4007					46	67%	39	90%	↑
	CNT4703					6	83%	41	93%	
	COP3530					88	47%	86	69%	
	COP4610					71	96%	45	98%	↑
	COP4708	67	97%	70	91%	67	91%	44	82%	
	COP4709	19	79%	16	56%	11	55%	10	80%	↑
	COP4813	34	62%	73	77%	57	75%	28	79%	
	COP4834	17	76%	18	67%	12	58%	10	90%	
	COT3100	47	89%	76	84%	94	90%	97	80%	
	CTS3348	81	75%	91	75%	85	82%	46	76%	
	Major	817	81%	968	81%	989	79%	912	79%	

■ Indicates a success rate of 90% or higher
■ Indicates a success rate between 70% and 89%
■ Indicates a success rate below 70%

Course Success Rates by Multiple Session/Sub-session Only (1 of 3)

Major, Associated Courses and Sub-session			2013-2014		2014-2015		2015-2016		2016-2017			
			Attempted	% Successful	Attempted	% Successful	Attempted	% Successful	Attempted	% Successful		
6334- BS Information Technology	CDA4101	FA Full term					22	77%	20	100%	↑	
		SP Full term					30	83%	30	83%		
		Course					52	81%	50	90%	↑	
	CEN3722	FA Full term								12	50%	
		SU Full term								15	87%	
		Course								27	70%	
	CET3116	FA Full term	28	54%	32	59%	34	47%	37	43%		
		SP Full term	28	79%	36	69%	30	60%	47	53%		
		SU Full term	14	79%	30	73%	16	56%	11	64%	↑	
		Course	70	69%	98	67%	80	54%	95	51%		
	CET4860	FA Full term	6	100%	14	79%	22	64%	25	76%	↑	
		SP Full term	7	86%	18	89%	15	80%	23	83%		
		Course	13	92%	32	84%	37	70%	48	79%		
	CET4861	FA Full term	8	88%			4	75%	9	100%		
		SP Full term			12	92%	12	92%	1	100%	↑	
		SU Full term							2	100%		
		Course	8	88%	12	92%	16	88%	12	100%	↑	

Indicates a success rate of 90% or higher
 Indicates a success rate between 70% and 89%
 Indicates a success rate below 70%

Course Success Rates by Multiple Session/Sub-session Only (2 of 3)

Major, Associated Courses and Sub-session			2013-2014		2014-2015		2015-2016		2016-2017	
			Attempted	% Successful	Attempted	% Successful	Attempted	% Successful	Attempted	% Successful
6334- BS Information Technology	CET4862	FA Full term	8	88%	12	75%	10	100%	4	100%
		SP Full term	9	89%			6	100%	14	79%
		SU Full term					5	100%	2	100%
		Course	17	88%	12	75%	21	100%	20	85%
	CIS4250	FA B term							14	100%
		SU Full term							15	93%
		Course							29	97%
	CIS4360	FA Full term					33	70%	45	60%
		SP Full term					39	74%	39	72%
		Course					72	72%	84	65%
	CNT3104	FA A term							22	91%
		SU Full term							19	95%
		Course							41	93%
	CNT4007	FA Full term					11	64%	19	89%
		SP Full term					35	69%	20	90%
		Course					46	67%	39	90%
	CNT4703	FA A term							15	93%
		SU Full term							26	92%
		Course							41	93%
	COP3530	FA Full term					29	45%	39	67%
		SP Full term					43	49%	28	75%
SU Full term						16	44%	19	63%	
Course						88	47%	86	69%	
COP4610	FA Full term					32	94%	27	100%	
	SP Full term					39	97%	18	94%	
	Course					71	96%	45	98%	

Indicates a success rate of 90% or higher

Indicates a success rate between 70% and 89%

Indicates a success rate below 70%

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

Major, Associated Courses and Sub-session			2013-2014		2014-2015		2015-2016		2016-2017	
			Attempted	% Successful	Attempted	% Successful	Attempted	% Successful	Attempted	% Successful
6334- BS Information Technology	COP4708	FA Full term	28	100%	30	90%	24	92%	12	83%
		SP Full term	21	90%	24	88%	29	100%	25	80%
		SU Full term	18	100%	16	100%	14	71%	7	86%
		Course	67	97%	70	91%	67	91%	44	82%
	COT3100	FA Full term	1	100%			46	93%	53	83%
		SP Full term	46	89%	76	84%	48	88%	44	77%
		Course	47	89%	76	84%	94	90%	97	80%
	CTS3348	FA Full term	31	71%	40	70%	43	88%	27	78%
		SP Full term	33	79%	51	78%	31	77%	19	74%
		SU Full term	17	76%			11	73%		
		Course	81	75%	91	75%	85	82%	46	76%



Indicates a success rate of 90% or higher
 Indicates a success rate between 70% and 89%
 Indicates a success rate below 70%

Grade Distribution (1 of 2)

Major	Term	Course	2016-2017					
			Pass (A, B, C)	Fail (D, F)	FNs	Ws	W1s	Incs
6334- BS Information Technology	Summer 2016	CEN3722	13	0	2	0	0	0
		CET3116	7	3	0	1	0	0
		CET4861	2	0	0	0	0	0
		CET4862	2	0	0	0	0	0
		CET4884	20	0	0	1	0	0
		CIS4250	14	0	0	0	0	0
		CNT3104	18	1	0	0	0	0
		CNT4703	24	2	0	0	0	0
		COP3530	12	0	2	5	0	0
		COP4708	6	0	0	1	0	0
		Total	118 (86.8%)	6 (4.4%)	4 (2.9%)	8 (5.9%)	0 (0%)	0 (0%)
	Fall 2016	CDA4101	20	0	0	0	0	0
		CEN3722	6	1	3	2	0	0
		CEN4801	13	2	0	1	0	0
		CET3116	16	8	6	7	0	0
		CET4860	19	1	1	4	0	0
		CET4861	9	0	0	0	0	0
		CET4862	4	0	0	0	0	0
		CIS4250	14	1	0	0	0	0
		CIS4360	27	3	8	7	0	0
		CNT3104	20	2	0	0	0	0
		CNT4007	17	1	0	1	0	0
		CNT4703	14	0	0	1	0	0
		COP3530	26	6	3	4	0	0
		COP4610	27	0	0	0	0	0
		COP4708	10	1	0	1	0	0
		COP4813	22	2	2	2	0	0
COT3100	44	4	0	5	0	0		
CTS3348	21	0	2	4	0	0		
Total	329 (77.4%)	32 (7.5%)	25 (5.9%)	39 (9.2%)	0 (0%)	0 (0%)		

Grade Distribution (2 of 2)

Major	Term	Course	2016-2017					
			Pass (A, B, C)	Fail (D, F)	FNs	Ws	W1s	Incs
6334- BS Information Technology	Spring 2017	CDA4101	25	2	0	2	1	0
		CEN4010	22	0	0	1	0	0
		CET3116	25	5	10	7	0	0
		CET4860	19	0	0	3	1	0
		CET4861	1	0	0	0	0	0
		CET4862	11	0	0	3	0	0
		CIS4360	28	1	2	7	1	0
		CNT4007	18	1	0	0	1	0
		COP3530	21	2	0	5	0	0
		COP4610	17	0	1	0	0	0
		COP4708	20	1	0	4	0	0
		COP4709	8	1	0	1	0	0
		COP4834	9	1	0	0	0	0
		COT3100	34	5	0	4	1	0
		CTS3348	14	1	0	2	2	0
		Total	272 (77.5%)	20 (5.7%)	13 (3.7%)	39 (11.1%)	7 (2%)	0 (0%)

Average Class Size by Course

Major and Associated Courses		2013-2014		2014-2015		2015-2016		2016-2017	
		Sections	Avg. Size	Sections	Avg. Size	Sections	Avg. Size	Sections	Avg. Size
6334 - BS Info Tech - BSIT	CDA4101					2	26	2	25
	CEN3722							3	9
	CEN4010					1	25	1	23
	CEN4801					1	11	1	16
	CET3010	3	30	3	31	1	20		
	CET3116	4	18	3	33	3	27	3	32
	CET3383	2	28	1	42				
	CET3679	3	17	2	27	1	24		
	CET4748	1	35	2	21	1	24		
	CET4860	2	7	2	16	2	19	2	24
	CET4861	1	8	1	12	2	8	3	4
	CET4862	2	9	1	12	3	7	3	7
	CET4884	2	7	2	17	2	13	1	21
	CIS4250							2	15
	CIS4360					2	36	2	42
	CNT3104					1	34	2	21
	CNT4007					3	15	2	20
	CNT4703					1	6	3	14
	COP3530					3	29	3	29
	COP4610					2	36	2	23
	COP4708	3	22	3	23	3	22	3	15
	COP4709	1	19	1	16	1	11	1	10
	COP4813	1	34	1	73	1	57	1	28
	COP4834	2	9	1	18	1	12	1	10
COT3100	2	24	2	38	2	47	3	32	
CTS3348	3	27	2	46	3	28	2	23	
Major	40	20	35	28	42	23	46	20	

Performance Funding - Graduation Rates

Major	Fall Cohort Year	# in Cohort	150% Graduates	150% Graduation Rate	200% Graduates	200% Graduation Rate
6334 - BS Info Tech - BSIT	2011	43	16	37.2%	21	48.8%
	2012	32	5	15.6%	7	21.9%
	2013 – In progress	19	4	21.1%	6	31.6%
	2014 – In progress	100	35	35.0%	35	35.0%

College average (150%- 57.3%, 200%- 63.3%)

Fall terms include prior Summer term enrollment in major.

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

Source: IR Program Assessment Data

Performance Funding - Retention Rates

Program and Cohort Year	Registered	Exclusions	Adjusted Cohort	Retained by DSC		Retained by Program		DSC Total Retained	
				N	%	N	%		
6334 - BS Info Tech - BSIT	2012	169	31	138	6	4.35%	82	56.42%	60.77%
	2013	165	15	150	58	38.67%	38	25.33%	64.00%
	2014	200	27	174	13	8.05%	95	54.60%	62.65%
	2015	106	15	91	3	3.3%	58	63.74%	67.04%
3002 – Cybersecurity and Cyberforensics	2015	11	2	9	1	11.1%	3	33.33%	44.44%

College average (64.4%)

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.

Source: IR Program Assessment Data

Fall 2015 to Fall 2016 Retention Rates by Race/Ethnicity

Major	Fall Term	Registered	Exclusions	Adjusted Cohort	Retained by Program	
					N	%
6334- BS Information Technology	Asian	3	1	2	2	100%
	Black	7	0	7	1	14.3%
	Hawaii/Pac	1	0	1	1	100%
	Hispanic	11	3	8*	7	87.5%
	Two or More Races	4	1	3*	2	66.7%
	Unknown/Prefer not to answer	2	0	2	0	0%
	White	78	10	68	46	67.6%
3002 – Cybersecurity and Cyberforensics	Two or More Races	1	0	1	0	0%
	White	10	2	8*	3	37.5%

**one student retained by DSC*

College average (African American: 48.1%, Hispanic: 62.1%)

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.

Adjusted Cohort - Registered students less exclusions.

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.

Source: IR Program Assessment Data

Placement Rates (College average: 94.5%)

Program Title	Major	2010/11		2011/12		2012/13		2013/14		2014/15		Average Annual Salary
		DSC%	FCS%	DSC%	FCS%	DSC%	FCS%	DSC%	FCS%	DSC%	FCS%	
BS Information Technology	6334							43%	69%	N/A	75%	-
Cybersecurity and Cyberforensics	3002									75%	75%	\$ **,***

N/A - No placement data for the program.

\$**,*** Less than 10 graduates found employed.

Note: Programs with no graduates are excluded from this report for the reporting year.

Headcount by Major

Major	2013-2014	2014-2015	2015-2016	2015-2016
3003 - WEB SYSTEMS SOFTWARE DEVELOPMENT				2
3002 - CYBERSEC./CYBERFORENSIC		6	9	16
6332 - BS-ENGR TECH - IT	188	80	19	-
6334 - BS-INFO TECH - BSIT	60	225	252	237
Total	248	311	280	255

College Enrollment Decreased: 3%(13/14); 0.73%(14/15); 1.14% (15/16); 5.5%(16/17)

Graduates in Major

Major	2013-2014	2014-2015	2015-2016	2016-2017
3003 – Web Systems Software Development				4
3002 - Cybersec./Cyberforensic		4	15	9
6332 - BS-Engr. Tech - IT	19	19	9	-
6334 - BS-Info Tech - BSIT	7	13	24	29
Department Total	47	64	73	

Average Age by Program

Program	2013-2014	2014-2015	2015-2016	2016-2017
3003 – Web Systems Software Development				45.6
3002 - Cybersec./Cyberforensic		29.0	34.0	42.9
6334 - BS-Info Tech - BSIT	31.8	31.1	32.0	33.0

Calculation excludes individuals whose birthdates are not reported.

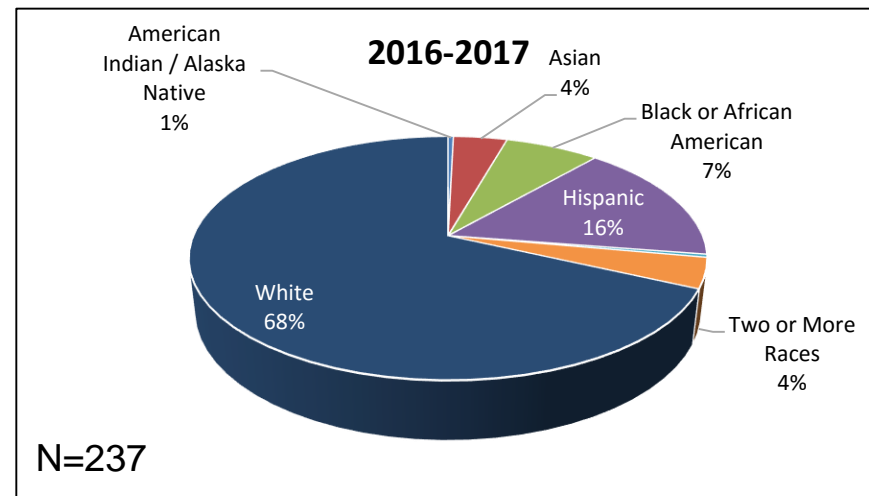
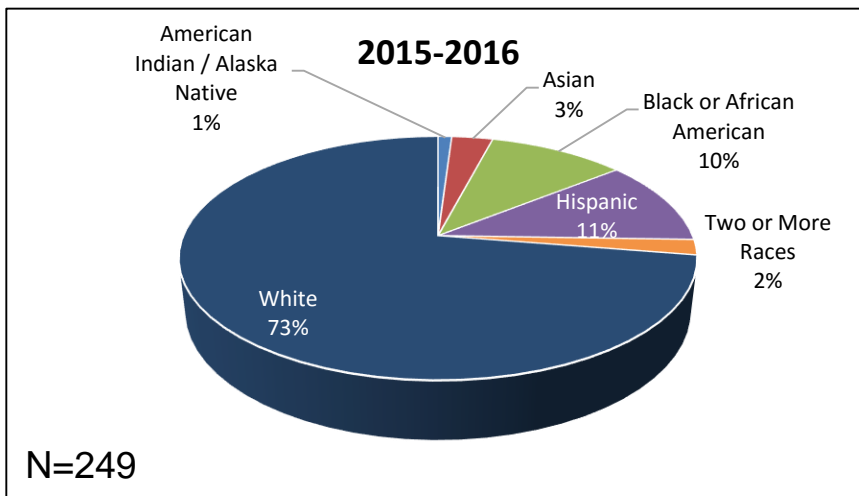
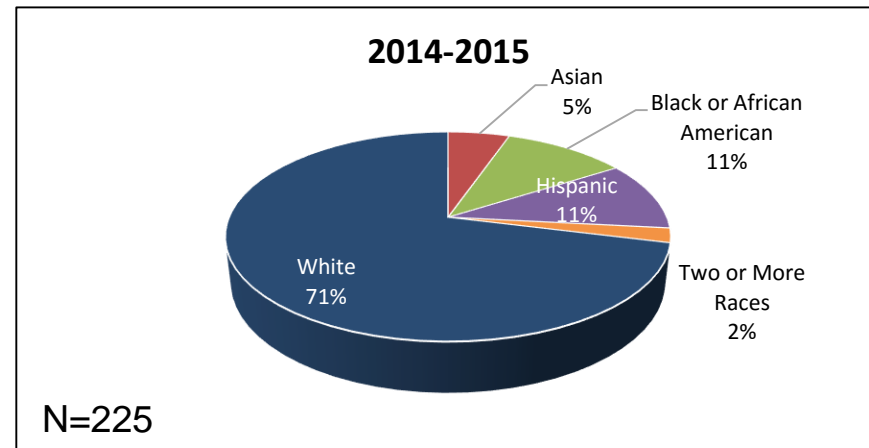
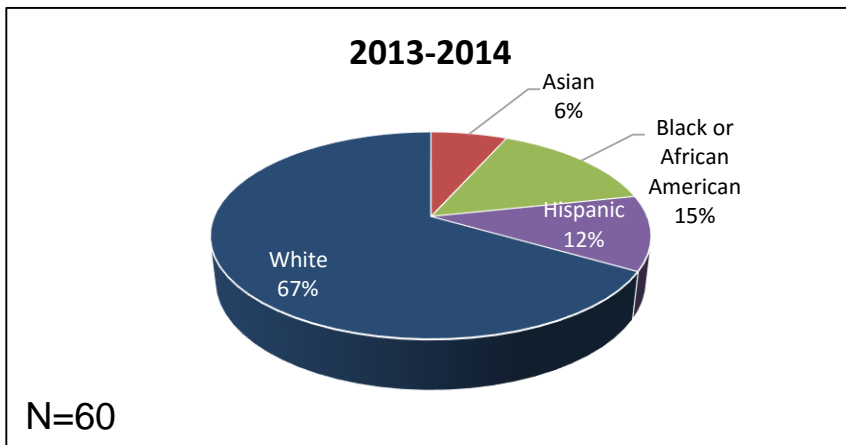
	2012-2013	2013-2014	2014-2015	2015-2016
All Programs	32	32	32	40.5
Daytona State College	26.7	26.6	26.4	26

Gender

Program	2013-2014		2014-2015		2015-2016		2016-2017	
	Female	Male	Female	Male	Female	Male	Female	Male
3003 – Web Systems Software Development	-	-	-	-	-	-	100%	0%
3002 - Cybersec./Cyberforensic	-	-	0%	100%	11%	89%	20%	80%
6334 - BS-Info Tech - BSIT	18%	82%	20%	80%	21%	79%	21%	79%

Major	2013-2014		2014-2015		2015-2016		2016-2017	
	Female	Male	Female	Male	Female	Male	Female	Male
Daytona State College	59%	41%	60%	40%	60%	40%	60%	40%

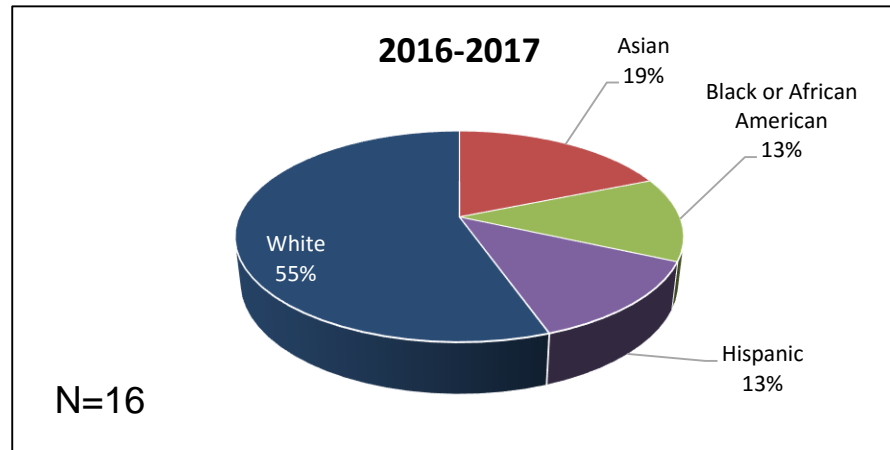
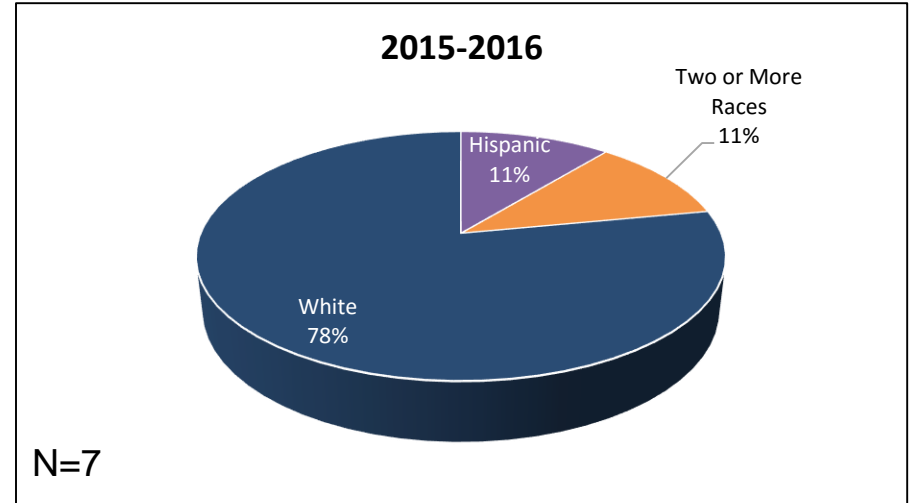
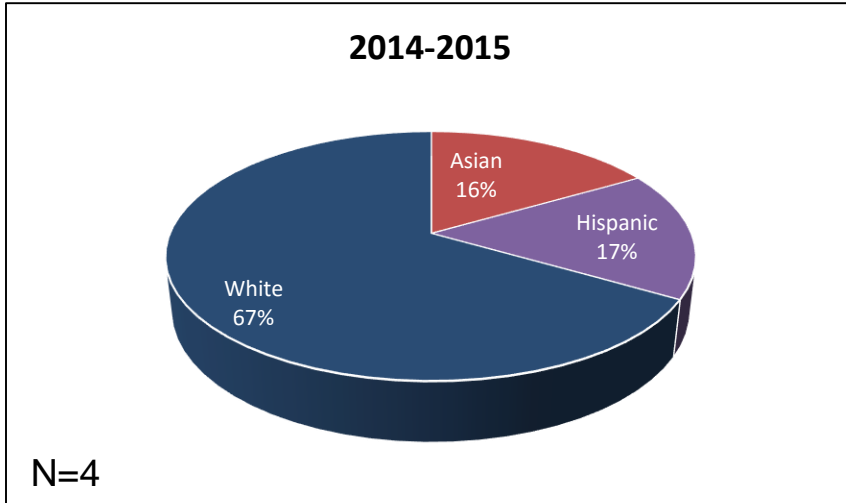
Race / Ethnicity by Program 6334 – BS Information Tech BSIT



DSC Averages 2016-2017							
Amer Indian/ Alaska Native	Asian	Black or African Amer	Hispanic	Nat Hawaiian Pacif Islander	2 or More Races	White	
0.4%	2%	14%	15%	0.2%	2%	66%	

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

Race / Ethnicity by Program 3002 – Cybersecurity /Cyber Forensic

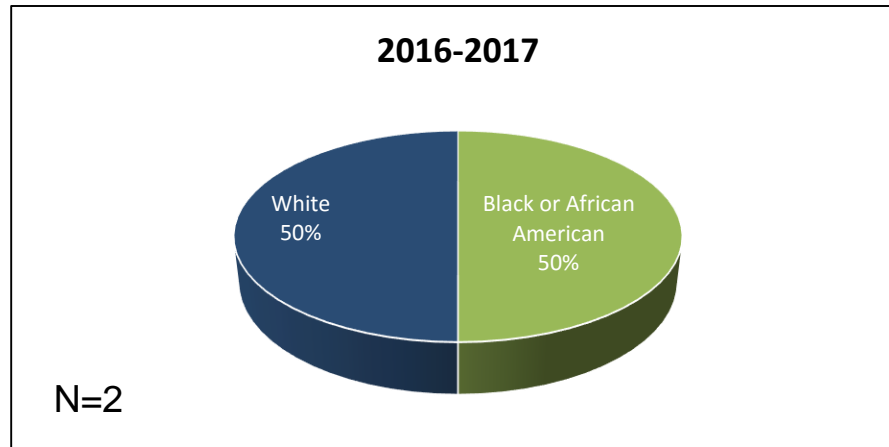


DSC Averages 2016-2017							
Amer Indian/ Alaska Native	Asian	Black or African Amer	Hispanic	Nat Hawaiian	Pacif Islander	2 or More Races	White
0.4%	2%	14%	15%	0.2%		2%	66%

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

Race / Ethnicity by Program

3003 – Web Systems Software Development

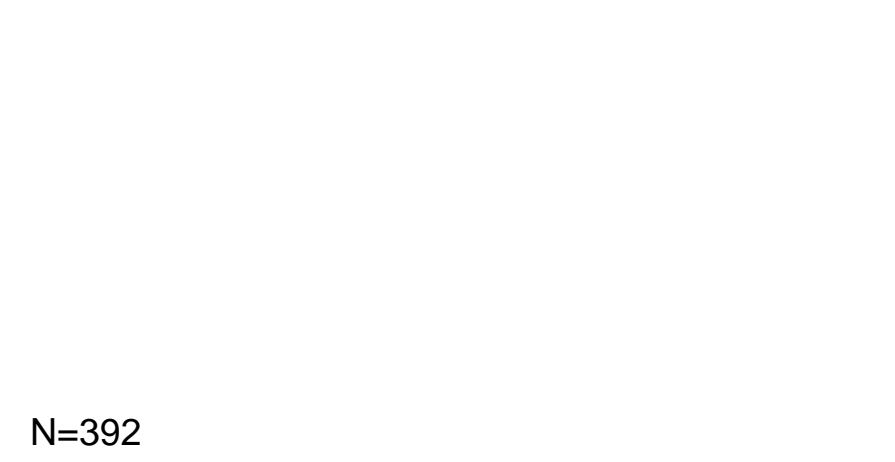
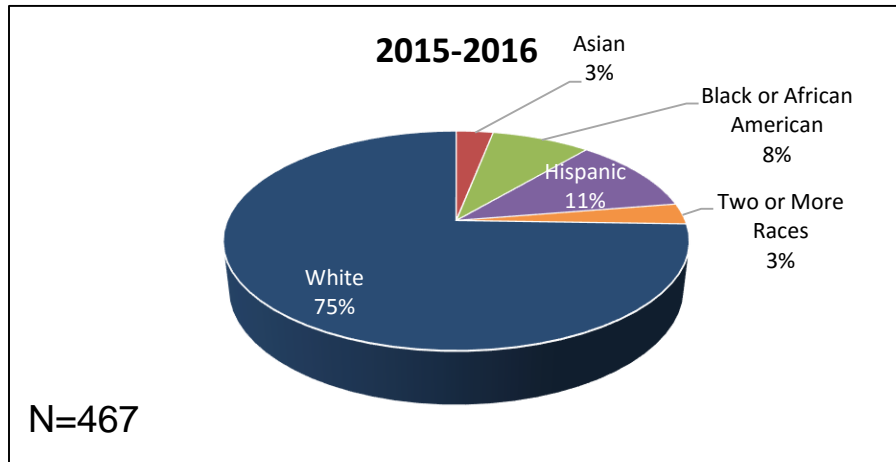
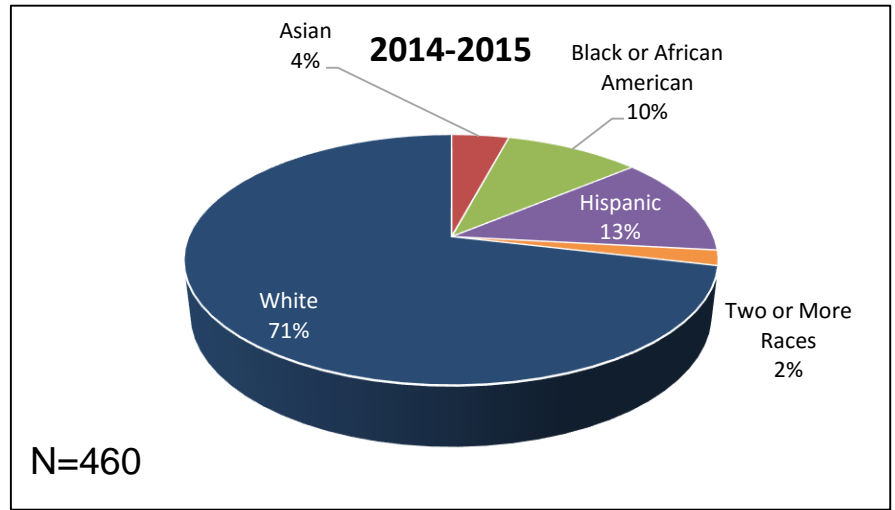
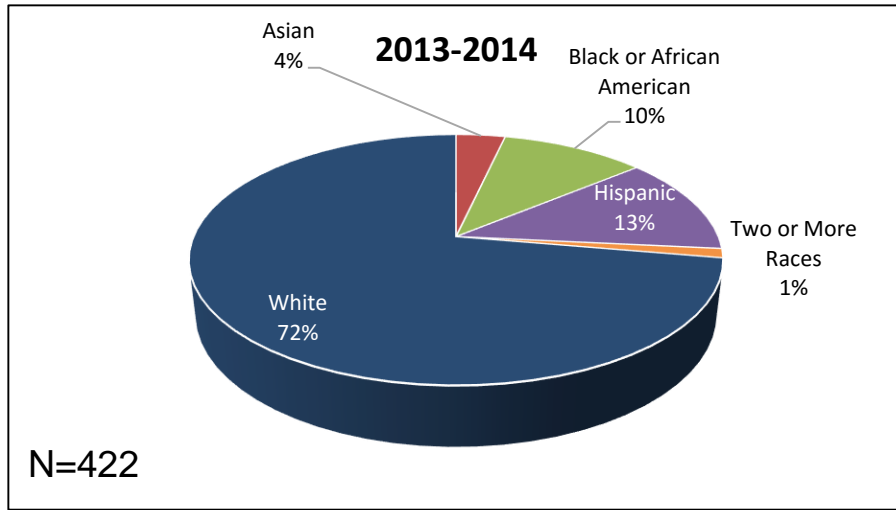


DSC Averages 2016-2017							
Amer Indian/ Alaska Native	Asian	Black or African Amer	Hispanic	Nat Hawaiian	Pacif Islander	2 or More Races	White
0.4%	2%	14%	15%	0.2%	0.2%	2%	66%

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

Source: IR Program Assessment Data

Race / Ethnicity by Program School of Engineering Technology



DSC Averages 2016-2017

Amer Indian/ Alaska Native	Asian	Black or African Amer	Hispanic	Nat Hawaiian Pacif Islander	2 or More Races	White
0.4%	2%	14%	15%	0.2%	2%	66%

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