

**BACCALAUREATE PROPOSAL APPLICATION**  
**Form No. BAAC-02**

Section 1007.33(5)(d), Florida Statutes, and Rule 6A-14.095, F.A.C., outline the requirements for a Florida College System baccalaureate program proposal. The completed Proposal form shall be submitted by the college president to the Chancellor of the Florida College System at [ChancellorFCS@fldoe.org](mailto:ChancellorFCS@fldoe.org). In addition, a printed version shall be mailed to the Division of Florida Colleges at 325 West Gaines Street, Suite 1544, Tallahassee, Florida 32399-0400.

The proposal requires completion of the following components:

- Program summary
- Program description
- Workforce demand and unmet need
- Planning process
- Enrollment projections and funding requirements
- Student costs: tuition and fees
- Program implementation timeline
- Facilities and equipment specific to program area
- Library and media specific to program area
- Academic content
- Program termination
- Appendix tables
- Supplemental materials

Florida College System Institution Name: Pensacola State College  
 Florida College System Institution President: C. Edward Meadows

**PROGRAM SUMMARY**

1.1	Program Name:	<u>Cybersecurity</u>
1.2	Degree type:	<input type="checkbox"/> Bachelor of Science <input checked="" type="checkbox"/> Bachelor of Applied Science
1.3	How will the program be delivered (check all that apply):	<input checked="" type="checkbox"/> Face-to-face <input checked="" type="checkbox"/> Hybrid <input checked="" type="checkbox"/> Online
1.4	List the counties in the college's service district:	<u>Escambia County</u> <u>Santa Rosa County</u>
1.5	Degree CIP code (6 digit):	<u>11.1003</u>
1.6	Anticipated program implementation date:	<u>Fall 2016</u>
1.7	What is the primary associate degree pathway for admission to the program?	<u>The Associate in Science in Cybersecurity is the preferred academic pathway into the Bachelor of Applied Science (BAS) in Cybersecurity.</u>

An alternative pathway into the BAS in Cybersecurity program at Pensacola State College is the Associate in Science in Cyber Forensics. A student entering the BAS through this alternate academic pathway would require 12 credit hours of lower level prerequisite coursework beyond the Associate in Science degree, as listed below.

CET2890C Network Defense & Countermeasure....3cc  
 CET2614C Cisco CCNA Security.....3cc  
 CTS2125C Hardening the Network Infrastructure ..3cc  
 CTS2318 Information Security Management.....3cc

1.8	Is the degree a STEM focus area?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
1.9	List program concentration(s) (if applicable):	N/A	
1.10	Will the program be designated such that an eligible student will be able to complete the program for a total cost of no more than \$10,000 in tuition and fees?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

**PROGRAM DESCRIPTION**

**2.1 Describe the program.**

The Bachelor of Applied Science (BAS) degree in Cybersecurity is built on the ten fundamental domains identified in the world renowned Certified Information Security System Professional (CISSP) Certification. Graduates of this BAS degree program who enter from the preferred academic pathway, Associate in Science in Cybersecurity, will be prepared to earn 19 industry standard certifications (12 in the Associate in Science and 7 in the BAS). These certifications have been identified by industry partners as highly desirable in employees, provide quantifiable knowledge and skills in a specific technology, and are recognized worldwide. Throughout the program, students will work in a hands-on environment that will reinforce theoretical concepts and enable students to apply knowledge in real-world situations.

The program curriculum includes upper level courses in database, cloud, Microsoft system administrator, and operating system security in addition to risk management, ethics, and security testing. The curriculum, including the Associate in Science in Cybersecurity, includes 84 credit hours of cybersecurity coursework (45 credit hours at

the associate level and 39 credit hours at the baccalaureate level) as well as the 36 credit hour general education curriculum.

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## **WORKFORCE DEMAND AND UNMET NEED**

### **3.1 Describe the career path and potential employment opportunities for graduates of the program.**

The employability of graduates in the field of cybersecurity is directly linked to industry certifications. There are multitudes of IT-related fields in which the certifications linked to the proposed program are in high demand. The certifications are the primary credentials sought in job applicants. The proposed program, when paired with the Associate in Science in Cybersecurity, will prepare students to earn 19 industry standard certifications; these certifications will increase employment opportunities for the graduates of this program.

Graduates of this proposed program will be well-prepared to start careers as Information Security Analysts, Information Technology Specialists, Data Security Administrators, Information Security Officers, Information Security Specialists, Information Systems Security Analysts, Computer Security Specialists, Information Security Managers, and Technology Security Analysts.

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### **3.2 Describe the workforce demand, supply and unmet need for graduates of the program that incorporates, at a minimum, the shaded information from appendix tables A.1.1 to A.1.3.**

More than 209,000 cybersecurity jobs in the United States are unfilled, and job postings are up 74 percent over the past five years (Peninsula Press, March 2015). According to a 2014 report by Burning Glass Technologies, a labor market analysis firm, the demand for cybersecurity professionals over the past five years grew 3.5 times faster than demand for other IT jobs, and about 12 times faster than for all other jobs.

This employment situation is also reflected in Pensacola State College's service area. Unique job openings in this field, as of April 2015, totaled 368 in the College's two-county service area. Multiple sources indicate that cybersecurity related fields will experience sharp growth through the next decade, with the five-year job projections for Pensacola State College's service area at 3,176 and for the state of Florida at 204,249. Five year (2015–2020) growth rates are projected to be 6.4%, and the 2014–2022 growth rate is projected to be more than 15%. Additionally, the Florida Department of Economic Opportunity data indicates 102 job openings per year between 2015 and 2022 in the PSC service area.

With no other Florida College System or State University System institution offering a baccalaureate cybersecurity degree (CIP 11.1003) in the state according to TalentNet, Florida's Inventory of Training and Education Programs ([www.expertnet.com](http://www.expertnet.com), retrieved 14 September 2015), there is a clear need for this program which is designed to meet industry needs. The 386 job openings mentioned above represent an unduplicated

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count; to be clear, however, there was an average of seven different placements of job announcements for each of the 386 job openings. According to EMSI, this ratio (7:1) is a higher than average posting intensity for all other occupations and companies in the Pensacola State College service area (Workforce Region 1), indicating that it is more difficult for companies to locate qualified applicants for these positions than for other positions. Approximately 40% of the 2014 workforce in these areas is over the age of 45 and may be eligible for retirement in the next 10 years (EMSI). There will be an urgent need for this program to produce knowledgeable cybersecurity personnel with critical skillsets and the industry certifications that are required.

Regional trends for Escambia and Santa Rosa Counties indicate that the job market will begin to increase as the first cohort of students graduates from Pensacola State College with a Bachelor of Applied Science in Cybersecurity degree (EMSI, September 2014) and the job market rebounds from a low in 2012. Based on EMSI data, 392 job openings are predicted in the two county service area in five years.

Appendix Tables A.1.2 and A.1.3 include graduates from the University of West Florida's (UWF) Bachelor of Science in Computer Science degree. In the most recent year for which graduate data were available, the 2013-2014 academic year, there were 46 graduates. The calculated unmet need in Florida Workforce Region 1 is 56 jobs per year in PSC's service area between now and 2022. When adjoining counties in Alabama are considered, the calculated unmet need increases to 237 jobs per year. The actual unmet need is higher since the graduates of UWF's program included for consideration in this proposal did not complete the cybersecurity specialization and only a fraction of graduates after 2014-2015 will have completed the specialization. Additionally, UWF's program is defined under CIP code 11.0101-Computer and Information Sciences, General which will not report graduates from the cybersecurity specialization of UWF's general computer science degree separately when the 2014-2015 and later data are available.

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**3.3 Describe any other evidence of workforce demand and unmet need for graduates as selected by the institution, which may include qualitative or quantitative data information, such as local economic development initiatives, emerging industries in the area or evidence of rapid growth, not reflected in the data presented in appendix tables A.1.1 to A.1.3. For proposed programs without a listed SOC linkage, provide a rationale for the identified SOC code(s).**

Dr. Andy Ozmont, Assistant Secretary for Cybersecurity and Communications at the U.S. Department of Homeland Security was quoted on June 23, 2015, in the Pensacola News Journal: "There is a desperate need for cybersecurity talent"(Appendix A). This sentiment is supported by the posting intensity for IT related positions in the College's service area. Economic Modeling Specialists, Inc. (EMSI) indicates that the posting intensity of vacant positions is 7:1 (seven postings per unique position), which is much higher than average and demonstrates the difficulty in filling vacant positions. Many jobs in this field are on the Florida Department of Economic Opportunity's Top 50 Fastest Growing Occupations list for the service area and for the state of Florida, and current educational programs

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are not able to meet the local need.

As stated in Florida Center for Cybersecurity, the Board of Governors' report submitted to the Governor and the Florida Legislature in December 2013, "Right now, Florida faces a narrow window of opportunity to capitalize on one of the most in-demand, high-paying, and rapidly growing fields of our time – cybersecurity." The report continues: "The demand is huge. Even when compared with other high-demand IT jobs, demand for cybersecurity jobs is growing more than three times faster. Business leaders say that they can't hire skilled cybersecurity workers fast enough, and our nation's military and homeland security agencies are looking for help in navigating the constantly changing world of cybersecurity research"(Appendix B). Additionally, the National Initiative for Cybersecurity Education (NICE), co-led by the Department of Defense and the National Science Foundation, has in its Strategic Plan, Component 2, "Bolster formal Cybersecurity education programs." Many of the jobs included in the needs assessment are also found on Top 50 bachelor degree occupation lists produced by the Florida Department of Economic Opportunity (Appendix C).

VISION 2015, the Greater Pensacola Chamber of Commerce five-year plan for job creation for the greater Pensacola region, includes software and information technology as one of the five industry clusters targeted for new business and industry development. The plan defines a goal to "expand the focus of the information assurance (IA) initiative to fully leverage the assets of the Navy's Center for Information Dominance and grow a cluster to complement their mission." The Chamber received a \$250,000 grant from the Florida Defense Support Task Force to help establish a research center for cyber warfare training and to support the growth of science and technology in the region. Additionally, the College is working with ITGulfCoast to provide educational opportunities to individuals in the IT industry. One of the goals of ITGulfCoast is to expand the region's IT presence.

Information technology strengths in the local region include diverse sectors with 293 IT companies employing nearly 3,200 individuals (<http://www.choosegreaterpensacola.com/Key-Industries-/Information-Technology.aspx>). The Pensacola area includes the presence of the Department of Defense cybersecurity commands (Naval Education and Training Command Center for Information Dominance and Navy Information Operations Center), a large and growing presence of Department of Homeland Security, and connectivity to the national and global high-speed networks (National Lambda Rail). It is imperative that there be a skilled technology workforce available.

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**3.4 If the education level for the occupation identified by the Florida Department of Economic Opportunity presented in appendix table A.1.1 is below a bachelor’s degree, provide justification for the inclusion of that occupation in the analysis.**

According to our industry partners, industry-standard certifications are the key to greater employability, higher income, and access to promotions in all job fields included in this proposal. The proposed program coupled with the preferred Associate in Science pathway will prepare students to earn 19 highly sought after industry certifications; therefore, graduates of the proposed program holding the industry certifications will be qualified for employment in a broad range of related fields. An applicant for any of the jobs in Table A.1.1, regardless of the minimum education requirements, who has completed Pensacola State College’s proposed Bachelor of Applied Science in Cybersecurity will be more competitive due to training provided by the highly qualified Pensacola State College faculty and the preparation toward earning the in-demand industry certifications.

A search on Monster.com conducted on October 20, 2015 for jobs listed as “cybersecurity” and “information security” for Pensacola, FL found 27 unique job postings, 23 of which (85.2%) required a Bachelor’s degree. As stated in section 3.2 and Table A.1.1, the DEO predicts 102 job openings per year or 8.5 job openings per month in the two county service area. This job search indicates that the DEO is underestimating the actual number of jobs by a factor of three.

Sixteen of the posted jobs in the Monster.com job search were seeking applicants with industry certifications which are embedded in the proposed curriculum at Pensacola State College (Appendix D). Many of the positions include the CISSP as a desired certification. All graduates from the proposed program will be qualified to take the required exam to earn this in-demand certification. Some of the jobs included in Appendix D are senior-level positions rather than entry-level. The proposed Bachelor of Applied Science in Cybersecurity can be completed by the traditional student who moves seamlessly from the Associate Degree pathway, but it will also accommodate the working professional who wishes to earn the baccalaureate degree to become eligible for promotion or job mobility.

Based on this snapshot of the workforce demand, graduates from the Pensacola State College Bachelor of Applied Science in Cybersecurity will be academically qualified for all positions listed in Appendix D. In fact, the bachelor’s degree is the most commonly required academic credential among the current vacant positions. Desired certifications that are embedded in the PSC curriculum were specifically listed in 59.3% of the open jobs. Another 18.5% of the postings did not list specific certifications, but since these positions included job duties related to program certifications it is posited that 77.8% of jobs examined were looking for industry certifications that are embedded in the proposed curriculum, most of which require the bachelor degree.

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## PLANNING PROCESS

### 4.1 Summarize the internal planning process.

An essential component of Pensacola State College's mission is to assist community partners to meet regional workforce needs and to provide the training and education to meet workforce demand. On August 22, 2013, the Pensacola News Journal editorial board, in reference to proposed additional baccalaureate degrees at Pensacola State College, asserted that the College is a "key player in matching up students, both traditional and nontraditional, with a curriculum that will allow them to find work upon graduation" (Appendix E).

The internal planning process at Pensacola State College to assess the need for the proposed Bachelor of Applied Science in Cybersecurity began in October of 2012 with preliminary research concerning local demand for graduates and discussions with various College personnel. The preliminary research was positive, so the program concept was presented to a number of College groups including the Baccalaureate Leadership Team (Appendix F) and the Curriculum Council (Appendix G). All groups were in agreement that the PSC student and community workforce need was great enough to pursue the program. The internal planning process included student surveys regarding the proposed baccalaureate program (Appendix H). Survey results were overwhelmingly supportive of the development of the program.

Curriculum development began in November 2012 and has continued through the submission of this proposal. Due to the changing nature of the cybersecurity field, the curriculum has been updated several times to reflect new developments and to ensure alignment with necessary industry certifications. Curriculum development and planning has been accomplished with the assistance of the faculty program coordinator of the IT-related Associate in Science degree programs, other discipline-related faculty members, and associated administrators. A significant amount of input was also gathered from Advisory Committee members and other community partners. National cybersecurity guidelines were also reviewed along with cybersecurity curricula from across the country. Presentation of the final Pensacola State College curriculum to the College's Curriculum Council and development of new courses will begin upon approval of the proposed program.

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### 4.2 Summarize the external planning process.

Input concerning new programs under consideration was gathered from community partners and potential employers. Surveys to members of the Greater Pensacola Chamber of Commerce (Appendix I) and Advisory Committee members external to the College (Appendix J) were designed and distributed. The external surveys indicated that 34.3% of surveyed employers anticipated that more than 15 current employees would pursue a bachelor's degree in the next 3-5 years, and 68% of those employers offer promotion opportunities or other incentive programs for employees who complete a bachelor's degree. More specifically, 28.6% of surveyed employers indicated that employees with cybersecurity degrees would enhance their ability to meet organizational

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goals. External processes also included the advisory board for the current Bachelor of Applied Science degree at Pensacola State College (Appendix K).

Substantial input regarding the curriculum of the proposed program was received through discussion with community members, business partners, and IT-related trade and professional organizations. Topics discussed ranged from overall program goals to specific certifications desired for entry-level hires. The College held discussions with Global Business Solutions, Inc. (GBSI), members of ITGulfCoast (composed of numerous IT companies), members of Navy Federal Credit Union's IT department, and members of Innovation Coast (an alliance of technology and knowledge based companies in Northwest Florida), as well as representatives from the U.S. Department of Homeland Security, Corry Station's Center for Information Dominance, AppRiver, and other community partners. Particular interest was paid to the perspective of those individuals holding the Certified Information Systems Security Professional (CISSP) certification.

Though each company expects a different skill-set in entry-level employees, many companies have similar core skill requirements. As such, the College, in conjunction with its business partners, used the ten domains of the CISSP certification as the framework for the curriculum of the proposed degree. Individuals earning the degree will have a vast breadth of knowledge and will be able to earn the highly desirable International Information Systems Security Certification Consortium, Inc., (ISC)<sup>2</sup> credential. College personnel and community partners agree that individuals holding the BAS degree and the (ISC)<sup>2</sup> credential will be well prepared to acquire entry-level positions in areas in IT-security consulting, security management, security auditing, security architecture, and network architecture. The proposed BAS has been designed as a practitioner's degree. Those who complete the BAS degree and receive the associated certifications will be well-qualified to take advantage of many opportunities, locally as well as statewide, for employment in the fields related to cybersecurity.

In support of President Obama's National Initiative for Cybersecurity Education (NICE), the College is pursuing designation from the National Security Administration as a National Center of Academic Excellence in Cyber Operations. The designation requires the College to meet rigorous standards related to ten criteria including academic content, robust and active course offerings, faculty and student involvement in cyber related research, and service learning. The College has contracted with a Cybersecurity education and training expert to assist in navigating the application process. The College anticipates completing the necessary steps to receive the National Centers of Academic Excellence in Information Assurance 2-Year Education designation for the spring semester of 2016. If approved, Pensacola State College will be the third Florida state college to receive this prestigious honor.

The University of West Florida (UWF) is the State University System institution within the College's service district. There are no non-public regionally-accredited postsecondary institutions in the College's service area. Pensacola Christian College, a private non-

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regionally accredited institution, is also in the College's service area.

The President of Pensacola State College (PSC), Dr. Edward Meadows, meets regularly with Dr. Judy Bense, President, UWF. During the April, 2013 Presidents' meeting, PSC's proposed new baccalaureate programs were discussed. Additionally, on April 17, 2013, Dr. Meadows and Dr. Erin Spicer, PSC's Vice President, Academic Affairs, met with Dr. Martha Saunders, Provost and Vice President of Academic Affairs at UWF, and other UWF senior administrative officers to discuss the proposed programs in-depth (Appendix L). University of West Florida personnel shared their intent to develop a Cybersecurity concentration area within the Computer Science degree but did not share details about the proposed program. Additional meetings were scheduled with UWF discipline personnel to discuss the curricula of the degree(s) to be offered. Two of those meetings were cancelled by UWF representatives.

Meetings between PSC and UWF discipline related personnel took place on September 23, 2013, and November 1, 2013. Each institution shared the outline of its proposed program (Appendix M). Attendees included administrators and faculty from each of the two institutions, representatives from the Greater Pensacola Chamber of Commerce, and a representative from Global Business Solutions, Inc., a local business likely to employ graduates of a cybersecurity program. At each meeting, there was discussion regarding the proposed programs, differences between the programs, possible articulation between the institutions, and opportunities to share students and resources between PSC and UWF. Both meetings were cordial and provided for continued cooperation, and there appeared to be agreement that the programs were not duplicative.

In December, 2013, the Florida Department of Education received a letter from The University of West Florida expressing concerns that the proposed program duplicated UWF's efforts to deliver a Cybersecurity degree. After receiving a copy of that letter, PSC conducted an additional comprehensive review to compare the two proposed programs and to ensure that PSC's program was not a duplication of a program available in the College's service area (Appendix N). The review confirmed that the proposed program has a different foundation, philosophy, focus, and curriculum from UWF's program; therefore, the decision was made to continue with the proposal for the baccalaureate degree in Cybersecurity. In a letter to Jan Ignash, Vice Chancellor and Chief Academic Officer of the State University System dated January 22, 2014, UWF indicated that their objection to PSC's program would be withdrawn if the proposed PSC program was designated as a Bachelor of Applied Science. Based on the applied, workforce preparation nature of the proposed degree and UWF's request, the proposed program was designated as a Bachelor of Applied Science.

Through the summer and fall of 2014, PSC personnel continued to meet with UWF personnel to discuss possible articulation agreements. It was determined that PSC's Associate in Arts (AA) degree in Computer Science will articulate easily into the UWF Bachelor of Science in Computer Science. However, because of the applied nature of

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PSC’s Associate in Science (AS) degrees in Cybersecurity and Cyber-Forensics as compared to the more theoretical nature of UWF’s Bachelor of Science (BS) degree in Computer Science, it was agreed that the IT-related AS degrees would not articulate into the BS in Computer Science.

A letter sent to Dr. Bense, UWF President, dated October 26, 2015 summarized the current status of the proposed program and requested communication regarding any further concerns (Appendix O). As of November 20, 2015 no reply has been received. Information about the proposed new baccalaureate programs at Pensacola State College was also shared with Gulf Coast State College and Northwest Florida State College.

**4.3 List engagement activities; this list shall include APPRiSe, meetings, and other forms of communication among institutional leadership regarding evidence of need, demand, and economic impact.**

	Date(s)	Institution	Description of activity
APPRiSe	N/A		
Public universities in college’s service district	Monthly	University of West Florida	Meeting between Dr. Meadows (PSC President) and Dr. Bense (UWF President).
	April 17 2013	University of West Florida	Meeting of executive leadership of PSC and UWF to review programs.
	Sept 23 2013	University of West Florida	Meeting of PSC and UWF faculty and staff to discuss programs at each institution.
	Fall 2013	Northwest Florida State College	Information about new program sent via e-mail.
	Fall 2013	Gulf Coast State College	Information about new program sent via e-mail.
	Nov 1 2013 May 4, 2015 May 15, 2015  Nov 2013- May 2015 Additional meetings	University of West Florida	Meetings between PSC and UWF discipline personnel for discussion of the proposed Cybersecurity program as well as possible articulation of the Associate in Arts and Associate in Science programs into existing UWF programs.
	Nov, 18, 2015		Finalization of articulation agreement for the AA in Computer Science to BS in Computer Science. Articulation of the AS degrees was not pursued due to fundamental differences between the programs.

Regionally accredited institutions in the college's service district	Not applicable.		
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**ENROLLMENT PROJECTIONS AND FUNDING REQUIREMENTS**

**5.1 Provide a brief explanation of the sources and amounts of revenue that will be used to start the program.**

Pensacola State College has restricted funds identified for new program development and start-up, and the initial implementation of the program will be supported through these funds. Additionally, funding for the new program will rely upon College operating funds (FL College System program funds). As the program matures, student tuition and fees are predicted to cover program costs as represented in Table A.2.

**5.2 Provide a narrative justifying the estimated and projected program enrollments, outcomes, revenues and expenditures as they appear in Appendix Table A.2.**

**Enrollment Projections**

Based on startup numbers for other baccalaureate programs at Pensacola State College coupled with informal requests from students and the regional push for cybersecurity jobs, an initial cohort of 40 students is expected to begin no later than Fall 2016. The second cohort is predicted to be 40 students, followed by cohorts of 55 and 60 students for each of years three and four, respectively, as prospective students gain awareness of the program.

**Outcomes Projections**

Based on input from students and the current and future demand for graduates from this program coupled with the high starting salary, Pensacola State College expects a highly motivated student population in the proposed program. These contributing factors are predicted to result in a high program completion rate in a short period of time.

**Revenues and Expenditures**

The current number of faculty, coupled with an active search for additional qualified faculty, and the current instructional space are sufficient to sustain the program at this enrollment level. If enrollment increases at a higher than expected rate, additional faculty and additional computer classrooms will be designated.

There will be slight increases in operating expenses in areas such as materials, supplies, and instructional technology. A new computer classroom or laboratory, with appropriate equipment, is included in the budget, though current space is expected to be sufficient to sustain the program for several years. The budget reflects the additional computer space in the form of \$41,000 for renovation and \$59,000 in Information Technology Equipment in the 2017-2018 academic year (year two).

Revenues sources for the program include tuition, student fees, Florida College System Program Funds (Formerly Community College Program Fund), funds from the College’s Auxiliary Operations (e.g., bookstore, food service and vending revenues), course fees, and donations received through the PSC Foundation.

**STUDENT COSTS: TUITION AND FEES**

**6.1 Anticipated cost for a baccalaureate degree (tuition and fees for lower and upper division credit hours) at the proposing FCS institution (tuition and fees x credit hours).**

	Cost per credit hour			Number of credit hours		Total cost
Tuition & Fees for lower division:	\$104.58	X	Credit hours	81	=	\$8,470.98
Tuition & Fees for upper division:	\$120.89	X	Credit hours	39	=	\$4,714.71
Tuition & Fees (Total):					=	\$13,185.69

**6.2 Estimated cost for a baccalaureate degree (tuition and fees) at each state university in the college’s service district.**

Institution Name: University of West Florida (UWF)

Tuition & Fees:	\$212.00	X	Credit hours	122	=	\$25,864.00
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**6.3 Estimated cost for a baccalaureate degree (tuition and fees) at each nonpublic institution in the college’s service district (if available)\***

Institution Name: Pensacola Christian College (PCC)

Tuition & Fees:	\$2,343.00	X	Semesters	8	=	\$18,744.00
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Note. \*If the institution does not provide the tuition cost per credit hour, please provide the cost information provided on the institution’s website.

**PROGRAM IMPLEMENTATION TIMELINE**

7.1	APPRiSe notice:	N/A
7.2	Board of Trustees approval:	20 August 2013
7.3	Notice of Intent:	28 October 2013
7.4	Completed proposal submission:	16 September 2015
7.5	Targeted State Board of Education consideration:	December 2015
7.6	Targeted SACSCOC approval (if applicable):	SACSOC will be notified upon state approval of the program.
7.7	Targeted initial teacher preparation program approval(if applicable):	N/A
7.8	Targeted date upper division courses are to begin:	August 2016

## FACILITIES AND EQUIPMENT SPECIFIC TO PROGRAM AREA

### **8.1 Describe the existing facilities and equipment that will be utilized for the program.**

The College has three computer classrooms equipped with Dell workstations and dedicated for use in the Information Technology programs, such as cybersecurity, a smaller classroom used for instruction in network cabling, 5 computer classrooms in the nearby Academic Computing Center, and multiple additional computer classrooms across the campuses.

An additional space available for program use is the Collaborative Learning Center, located in the Library on the Pensacola Campus and designed for a collaborative approach to teaching and learning. The room includes six circular tables accommodating six students each and equipped with three 21-inch workstations with touch-screen navigation. Each workstation projects to the screens on each side of the room; students can view three different solutions to a single problem simultaneously. The Center is designed so that students can work in groups and share solutions with the class at large.

Specialized instructional software at the College includes the following:

- ProDiscover; Forensic Tool Kit; and Paraben Forensics Tool Kit – Forensics software tools;
- CrypTool – Encryption/decryption software tool;
- Invisible Secrets – Steganography tool;
- md5 Summer – Hashing algorithm tool;
- Wireshark – Packet sniffing tool;
- Sam Spade – IP sniffing tool;
- SuperScan4 – Computer vulnerability tool; and
- NMAP – Network vulnerability tool.

Additionally, the College purchased NETLab, a series of servers and software for virtual networks simulating real-world applications and allowing students to learn to defend against cyber-attacks.

To support students in achieving IT certifications, the College also purchased Transcender, a web-based IT certification test preparation solution. Test preparation includes Microsoft, Comptia CISCO, ITIL, Oracle, ISC2, PMI, LPI, and VMWare.

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### **8.2 Describe the new facilities and equipment that will be needed for the program (if applicable).**

Current instructional space is sufficient to support the program for several years. However, if enrollment is beyond expectations, in the 2017-2018 fiscal year budget the College has included the establishment of an additional computer lab dedicated to cybersecurity and related programs and estimated at \$41,000 for renovations and \$58,000 for computer equipment. Locations for additional computer classroom space have been identified.

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The College's current inventory of software will be augmented with the use of on-line subscriptions, software supplied by specific certification texts, and the Michigan Cyber Range. The College has a software review program to ensure that course content remains current as operating systems and software change. Additionally, the College follows a student computer refresh program to ensure that computers in classrooms are replaced every three to five years.

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#### **LIBRARY AND MEDIA SPECIFIC TO PROGRAM AREA**

**9.1 Describe the existing library and media resources that will be utilized for the program.**

Students will have access to an array of databases specific to the cybersecurity baccalaureate program. Database subscriptions provide full-text electronic articles from newspapers, periodicals, and journals. An extensive collection of complete texts of electronic books and a sophisticated research platform comprised of reference, academic, and general interest e-books are available. A librarian serves as liaison to the baccalaureate programs and incoming baccalaureate students receive an orientation to the library and available services.

The Library participates in the College Center for Library Automation (CCLA) and the Panhandle Library Access Network (PLAN). Full library services, including reference, library instruction, circulation, reserve, interlibrary loan, and quiet study areas are available on every campus. The library is also accessible online through the Internet and mobile devices.

Cybersecurity databases at the College include Computer Database (Gale), Applied Science and Technology Database (EBSCO), Military and Intelligence (Gale), Military and Government (EBSCO), and ABI Inform (Proquest).

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**9.2 Describe the new library and media resources that will be needed for the program (if applicable).**

No new library and media resources have been identified; students already have access to adequate resources through the Pensacola State College libraries. Each year funds are allocated for the purchase of library resources. Departments request library resources early in the spring semester each year, and the library uses funds budgeted to collection development to acquire the requested resources.

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#### **ACADEMIC CONTENT**

**10.1 List the admission requirements for the program.**

Admission requires an associate degree or at least sixty college credit hours in a related discipline with all common prerequisites satisfied.

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**10.2 What is the estimated percentage of upper division courses in the program that will be taught by faculty with a terminal degree?**

Adhering to the Southern Association of Colleges and Schools Commission on

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Colleges' Principle 3.5.4, at least 25% of the credit hours in the program will be taught by faculty with an appropriate terminal degree.

If any of the faculty hired have not completed the appropriate doctoral degree, the College is prepared to provide financial support for coursework toward completion of the degree as has been done for faculty in other baccalaureate disciplines. Following completion of these doctoral degrees, it is expected that well beyond 25% of the upper level credit hours in the program will be taught by faculty holding terminal degrees.

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**10.3 What is the anticipated average student/teacher ratio for each of the first three years based on enrollment projections?**

The first three-year average student/teacher ratio is expected to be no more than 18:1.

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**10.4 What is the anticipated SACSCOC accreditation date, if applicable?**

Pensacola State College received full approval from the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) for the offering of baccalaureate degrees in July 2010 (Appendix P). Upon receipt of approval from the Florida Board of Education, the College will follow standard protocol to notify SACSCOC of the additional degree to be offered.

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**10.5 What is the anticipated Florida Department of Education initial teacher preparation approval date, if applicable?**

N/A

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**10.6 What specialized program accreditation will be sought, if applicable?**

N/A

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**10.7 What is the anticipated specialized program accreditation date, if applicable?**

N/A

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**10.8 Are there similar programs listed in the Common Prerequisites Manual for the CIP code (and track, if any) proposed for this program?**       Yes       No

There are no similar baccalaureate programs to the CIP code the College is proposing. There is a CIP code 11.0101 titled Computer Information Sciences, General offered by UWF; however, the College's proposed program is a very specialized cybersecurity program under CIP11.1003. After a comprehensive review of the proposed program and UWF's program under CIP 11.0101, it was determined that that Pensacola State College's proposed Bachelor of Applied Science in Cybersecurity is a very different program from UWF's Bachelor of Science in Computer Science with specialization in Cybersecurity. PSC's proposed program is built on a foundation of worldwide standards in the cybersecurity field, includes more applied cybersecurity coursework than UWF's program, and prepares graduates for the workplace through numerous industry certifications. Students from PSC's proposed program will be prepared to start immediately in the work place in understanding and identifying the risks,

developing security plans, making equipment recommendations, and installing, configuring, and managing that equipment to protect the corporate environment. Additionally, PSC's proposed program likely serves a different student population than UWF's program. The average age of Pensacola State College Associate in Science students is 31, and the average age of students in the Associate in Science in Cybersecurity is 31 and the average age of students in the Associate in Science in Cyber Forensics is 32.

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**10.9 List the established common prerequisites for this CIP code (and track, if any) as listed in the Common Prerequisites Manual proposed for this program:**

There is no listing for CIP code 11.1003 in the Common Prerequisites Manual. Pensacola State College has prepared the Common Prerequisite Application for Unique CIP/Degree Program form for this proposed degree (Appendix Q).

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**10.10 Describe any proposed revisions to the established common prerequisites for this CIP (and track, if any).**

Prerequisite courses proposed on the Common Prerequisite Application for Unique CIP/Degree Program (Appendix P) form include the following:

- CGS1061C Introduction to Computers in Technology
- CET2890C Network Defense and Countermeasures
- CET2614C Cisco CCNA Security
- CTS2120C Security+
- CTS2106C Linux+
- CTS2125C Hardening the Network Infrastructure
- CTS2318 Information Security Management

**10.11 List all courses required once admitted to the baccalaureate program by term, in sequence. For degree programs with concentrations, list courses for each concentration area. Include credit hours per term, and total credits for the program:**

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**Final Two Years of Baccalaureate Program by Semester**

Course	Credit Hours
<b>Semester 1 (12 credit hours)</b>	
CAP3134 Database Security .....	3
CEN3083 Securing the Cloud.....	3
CIS3367 Operations Systems Security .....	3
ENC1102 English Composition II .....	3
<b>Semester 2 (15 credit hours)</b>	
CGS3812 Business Continuity and Disaster Recovery .....	3
CIS4201 Laws and Legal Aspects of Information Technology...	3
CIS4385 Computer Forensics and Investigations.....	3
Literature (LIT, AML, or ENL prefix).....	3
General Education Elective .....	3
<b>Semester 3 (15 credit hours)</b>	
Humanities (General Education Core Course) .....	3



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CTS3326 Security for Microsoft Systems Administrators .....	3
CIS3353 Security Testing and Auditing .....	3
CIS4357 Advances Security Practitioner .....	3
Any Natural Sciences General Education Course.....	3

**Semester 4 (15 credit hours)**

ISM4314 Project and Change Management .....	3
CIS4596 Cybersecurity Capstone .....	3
CIS4512 Information Security and Risk Management .....	3
CIS4253 Ethics in Information Technology .....	3
Social Sciences (General Education Core Course).....	3

**Total Credit Hours for Final Two Years.....** 57

**Total Credit Hours for the Program .....** 120

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10.12 Is the program being proposed as a limited access program? (If yes, identify admission requirements and indicate enrollment capacity):  Yes  No

**PROGRAM TERMINATION**

**11.1 Plan of action if program must be terminated, including teach-out alternatives for students.**

Pensacola State College is committed to the success of students seeking the Bachelor of Applied Science in Cybersecurity and will assist students in the event that the program is identified for termination.

A Plan of Action, based upon the SACSCOC “Good Practices for Closing a Program,” will be utilized if the College should have to terminate the BAS in Cybersecurity:

- The College will notify SACSCOC in advance of any termination actions in the program;
  - Students enrolled in the BAS in Cybersecurity program, faculty, and staff will be immediately notified of termination action by the College;
  - Enrolled students will be provided with a range of teach-out options;
  - No new students will be admitted to the program once termination is decided; and
  - The department head, faculty, and academic advisors will customize a plan of completion for each individual student. Students will be provided with a high level of academic assistance, support, and service in the teach-out transition phase to ensure minimal disruption in their course of study and pursuit of their professional careers.
-

**Appendix Table A.1.**

**INSTRUCTIONS FOR COMPLETING THE DEMAND SECTION OF APPENDIX TABLE A.1.1 and A.1.1.2:** To complete the following table, use the [CIP to Standard Occupational Classification \(SOC\) crosswalk](#) of the U.S. Department of Education to identify the SOC codes for occupations associated with the proposed program’s CIP code. Fill in Table A.1.1 using the employment projections data produced by the Florida Department of Economic Opportunity (DEO), pursuant to Section 445.07, F.S., for the workforce region aligned with the college’s service district for each SOC code associated with the proposed program’s CIP code. The employment projections data may be accessed at <http://www.floridajobs.org/labor-market-information/data-center/statistical-programs/employment-projections>. For proposed programs without a listed SOC linkage, identify the appropriate SOC codes for which the program prepares graduates. Insert additional rows as needed. The total job openings column value shall be divided by eight to reflect total annual job openings. The annualized salary shall be calculated by multiplying the average hourly wage times 40, and then multiplying that value times 52. Complete table A.1.1.2 in the same manner as A.1.1 for any additional sources of employment projections. Duplicate Table A.1.1.2 for additional sources as needed.

<b>DEMAND: FLORIDA DEPARTMENT OF ECONOMIC OPPORTUNITY (DEO) EMPLOYMENT PROJECTIONS</b>										
A.1.1	Occupation			Number of Jobs				Salary		Education Level
	Name/Title	SOC Code	County/Region	Base Year	Projected Year	Level Change	Total Job Openings (divided by 8)	Avg. Hourly Wage	Annualized Salary	
	Computer and Information Systems Managers	113021	Workforce Region 1	139	159	14.4	4.5	\$53.07	\$110,386	Bachelor
	Computer Systems Analysts	151121	Workforce Region 1	279	309	10.8	8.9	\$31.77	\$66,082	Associate
	Information Security Analyst	151122	Workforce Region 1	98	116	18.4	3.6	\$41.69	\$86,715	PSAV
	Computer Programmers	151131	Workforce Region 1	267	290	8.6	9	\$31.85	\$66,248	PSAV
	Software Developers, Applications	151132	Workforce Region 1	494	599	21.3	18	\$33.87	\$70,450	Associate
	Web Developers	151134	Workforce Region 1	234	277	18.4	8.8	\$21.47	\$44,658	PSAV
	Database Administrators	151141	Workforce Region 1	108	132	22.2	4.8	\$31.45	\$65,416	Associate

**DEMAND: FLORIDA DEPARTMENT OF ECONOMIC OPPORTUNITY (DEO) EMPLOYMENT PROJECTIONS**

A.1.1	Occupation			Number of Jobs				Salary		Education Level
	Name/Title	SOC Code	County/Region	Base Year	Projected Year	Level Change	Total Job Openings (divided by 8)	Avg. Hourly Wage	Annualized Salary	
	Network and Computer Systems Architects and Admins.	151142	Workforce Region 1	196	232	18.4	7.8	\$31.26	\$65,021	Associate
	Computer Network Architects	151143	Workforce Region 1	288	330	14.6	9.4	\$38.50	\$80,080	PSAV
	Computer User Support Specialists	151151	Workforce Region 1	481	545	13.3	20.5	\$18.55	\$38,584	PSAV
	Computer Network Support Specialists	151152	Workforce Region 1	164	187	14	7.1	\$22.06	\$45,885	PSAV
<b>Total</b>							102	\$32.05	\$66,957	

**DEMAND: OTHER ENTITY INDEPENDENT OF THE COLLEGE – (Alabama Department of Labor)**

A.1.1.2	Occupation			Number of Jobs				Salary		Education Level
	Name/Title	SOC Code	County/Region	Base Year (2012)	Projected Year (2022)	Level Change	Average Annual Openings	Avg. Hourly Wage	Annualized Salary	
	Computer and Information Systems Managers	113021	Alabama Workforce Region 9- Choctaw, Clarke, Monroe, Washington, Conecuh, Mobile, Baldwin, Escambia Counties	260	320	22.3	10	49.16	102,254	Bachelor
	Computer Systems Analysts	151121	Alabama Workforce Region 9	300	400	31.2	15	28.81	59,920	Associate
	Information Security Analyst	151122	Alabama Workforce Region 9	20	20	0	0	36.10	75,091	PSAV
	Computer Programmers	151131	Alabama Workforce Region 9	490	560	14.7	20	28.52	59,319	PSAV
	Software Developers, Applications	151132	Alabama Workforce Region 9	210	280	29.7	10	35.73	74,326	Associate
	Web Developers	151134	Alabama Workforce Region 9	90	100	17.4	5	23.48	48,846	PSAV
	Database Administrators	151141	Alabama Workforce Region 9	290	390	34.7	15	30.35	63,119	Associate

**DEMAND: OTHER ENTITY INDEPENDENT OF THE COLLEGE – (Alabama Department of Labor)**

A.1.1.2	Occupation			Number of Jobs			Salary		Education Level	
	Name/Title	SOC Code	County/Region	Base Year (2012)	Projected Year (2022)	Level Change	Average Annual Openings	Avg. Hourly Wage		Annualized Salary
	Network and Computer Systems Architects and Admins.	151142	Alabama Workforce Region 9	610	710	17.3	20	30.64	63,726	Associate
	Computer Network Architects	151143	Alabama Workforce Region 9	30	40	21.9	0	37.37	77,721	PSAV
	Computer User Support Specialists	151151	Alabama Workforce Region 9	1,230	1,730	40.8	70	19.45	40,456	PSAV
	Computer Network Support Specialists	151152	Alabama Workforce Region 9	210	260	27.5	10	21.99	45,731	PSAV
<b>Total</b>							175	\$31.05	\$64,591.73	

**INSTRUCTIONS FOR COMPLETING THE SUPPLY SECTION OF APPENDIX TABLE A.1.2:** To complete the following table, use the Integrated Postsecondary Education Data System of the National Center for Education Statistics to identify the number of degrees awarded by other regionally accredited postsecondary institutions in the college’s service district under the same or related CIP code(s) as the proposed program. The data center is located at <http://nces.ed.gov/ipeds/datacenter/>. Include degrees awarded for the most recent year available and for the four prior years for each program. If the program has not had degrees awarded for five years or more, add the degrees awarded for the years available, and divide by that number of years, for the average.

<b>SUPPLY: NATIONAL CENTER FOR EDUCATION STATISTICS, INTEGRATED POSTSECONDARY EDUCATION DATA SYSTEM</b>								
A.1.2	Program		Number of Degrees Awarded					5-year
	Institution Name	CIP Code	Prior Year 4 2009-2010	Prior Year 3 2010-2011	Prior Year 2 2011-2012	Prior Year 1 2012-2013	Most Recent Year 2013-2014	average or average of years available if less than 5 years
	No institutions offer CIP 11.1003 in the PSC service area.	11.1003	0	0	0	0	0	0
	University of West Florida* Computer and Information Sciences, General	10.0101	36	39	42	34	46	39.4
<b>Total</b>							<b>46</b>	<b>39.4</b>

\*All graduate numbers from UWF predate the creation of the cybersecurity specialization within the general Bachelor of Science in Computer Science degree. Due to UWF’s use of the Computer and Information Sciences, General CIP code (10.0101), data will not be available to show graduates from a particular specialization within the general computer science degree.

**INSTRUCTIONS FOR COMPLETING THE ESTIMATES OF UNMET NEED SECTION OF APPENDIX TABLE A.1.3:** To complete the following table, column A should be derived from Tables A.1.1 and A.1.1.2 and the totals in columns B and C should be derived from Table A.1.2. Input the figures in the “Total” row in Table A.1.1 and A.1.1.2 for total job openings and Table A.1.2 for most recent year and 5-year average (these figures should be same for all sources). The range of estimated unmet need should be derived from 1) subtracting the figure in column B from the figure in column A and 2) subtracting the figure in column C from the figure in column A. Add rows for additional sources as needed.

<b>ESTIMATES OF UNMET NEED</b>					
A.1.3	DEMAND	SUPPLY		RANGE OF ESTIMATED UNMENT NEED	
	(A)	(B)	(C)	(A-B)	(A-C)
	Total Job Openings (divided by 8)	Most Recent Year (2013-2014)	5-year average or average of years available if less than 5 years	Difference	Difference
DEO	102				
Other: Alabama Department of Labor	175				
<b>Total</b>	<b>277</b>	<b>46</b>	<b>39.4</b>	<b>231</b>	<b>237.6</b>

**Appendix Table A.2**

**INSTRUCTIONS FOR COMPLETING THE PROJECTED BACCALAUREATE PROGRAM ENROLLMENT SECTION OF APPENDIX TABLE A.2:**

To complete the following table, enter the projected enrollment information for the first four years of program implementation. Unduplicated headcount enrollment refers to the actual number of students enrolled. Full-time equivalent (FTE) refers to the full-time equivalent of student enrollment.

<b>PROJECTED BACCALAUREATE PROGRAM ENROLLMENT</b>		Year 1	Year 2	Year 3	Year 4
A.2.1	Unduplicated headcount enrollment:				
A.2.1.1	Admitted Student Enrollment (First-time)	40	40	55	60
A.2.1.2	Total Admitted Student Enrollment	40	80	90	110
A.2.2	FTE Enrollment:				
A.2.2.1	Program Student Credit Hours (Resident)	480	960	1,080	1,320
A.2.2.2	Program Student Credit Hours (Non-resident)	0	0	0	0
A.2.2.3	Total Program Student Credit Hours	480	960	1,080	1,320
A.2.2.4	Program FTE (30 credits) - (Resident)	16	32	36	44
A.2.2.5	Program FTE (30 credits) - (Non-resident)	0	0	0	0
A.2.2.6	Total Program FTE	16	32	36	44

**INSTRUCTIONS FOR COMPLETING THE PROJECTED DEGREES AND WORKFORCE OUTCOMES SECTION OF APPENDIX TABLE A.2:**

To complete the following table, enter the projected number of degrees awarded, the projected number of graduates employed and the projected average starting salary for program graduates for the first four years of program implementation.

<b>PROJECTED DEGREES AND WORKFORCE OUTCOMES</b>		Year 1	Year 2	Year 3	Year 4
A.2.3	Degrees	0	30	35	50
A.2.4	Number Employed	N/A	30	35	50
A.2.5	Average Starting Salary	\$N/A	\$65,000	\$65,000	\$65,000



**INSTRUCTIONS FOR COMPLETING THE REVENUES AND EXPENDITURES SECTION OF APPENDIX TABLE A.2:** To complete the following table, enter the projected program expenditures and revenue sources for the first four years of program implementation.

<b>REVENUES AND EXPENDITURES</b>				
<b>I. PROJECTED PROGRAM EXPENDITURES</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>
<b>INSTRUCTIONAL</b>				
1. Faculty Full-Time FTE	1.5	2.5	2.5	2.5
2. Faculty Part-Time FTE	1.0	1.0	1.0	1.0
1. Faculty Full-Time Salaries/Benefits	\$79,538	\$132,563	\$132,563	\$132,563
2. Faculty Part-Time Salaries/Benefits	\$15,360	\$15,360	\$15,360	\$15,360
3. Faculty Support: Lab Assistants	0	0	0	0
<b>OPERATING EXPENSES</b>				
1. Academic Administration	0	0	0	0
2. Materials/Supplies	\$1,000	\$1,000	\$1,000	\$1,000
3. Travel	0	0	0	0
4. Communication/Technology	0	0	0	0
5. Library Support	0	0	0	0
6. Student Services Support	0	0	0	0
7. Professional Services	0	0	0	0
8. Accreditation	0	0	0	0
9. Support Services	0	0	0	0

CAPITAL OUTLAY				
1. Library Resources	0	0	0	0
2. Information Technology Equipment	\$1,000	\$59,000	\$1,000	\$1,000
3. Other Equipment	0	0	0	0
4. Facilities/Renovation	0	\$41,000	0	0
TOTAL PROJECTED PROGRAM EXPENDITURES	\$96,898	\$248,923	\$149,923	\$149,923
II. NATURE OF EXPENDITURES				
1. Recurring	\$96,898	\$148,923	\$149,923	\$149,923
2. Nonrecurring	0	\$100,000	0	0
TOTAL	\$96,898	\$248,923	\$149,923	\$149,923
III. SOURCES OF FUNDS				
A. REVENUE				
1. Special State Nonrecurring	0	0	0	0
2. Upper Level - Resident Student Tuition Only	\$44,059	\$88,118	\$99,133	\$121,162
Upper Level - Nonresident Student Fees Only	0	0	0	0
Upper Level - Other Student Fees	\$13,968	\$27,936	\$31,428	\$38,412
3. Contributions or Matching Grants	0	0	0	0
4. Other Grants or Revenues	0	0	0	0
5. Florida College System Program Funds	\$38,871	\$132,869	\$19,362	\$0
6. Unrestricted Fund Balance	0	0	0	0
7. Interest Earnings	0	0	0	0
8. Auxiliary Services	0	0	0	0
9. Federal Funds – Other	0	0	0	0
B. CARRY FORWARD	0	0	0	\$9,651
TOTAL FUNDS AVAILABLE	\$96,898	\$248,923	\$149,923	\$149,923
TOTAL UNEXPENDED FUNDS (CARRY FORWARD)	\$0	\$0	\$0	\$0

## Supplemental Materials B.1

### SUPPLEMENTAL MATERIALS

- B.1 Summarize any supporting documents included with the proposal, such as meeting minutes, survey results, letters of support, and other supporting artifacts.

#### Supplemental Materials

Appendix A: Pensacola News Journal Article - June 23 2015  
Appendix B: FL Center for Cybersecurity – Board of Governors Report  
Appendix C: Florida Department of Economic Opportunity Computer/Cybersecurity Job Titles  
Appendix D: Results of Monster.com Job Search  
Appendix E: Pensacola News Journal Editorial –August 22 2013  
Appendix F: Baccalaureate Leadership Team Meetings  
Appendix G: Curriculum Council Meeting Minutes and Recommendations  
Appendix H: Student Survey Results  
Appendix I: Business Survey Results (from Chamber of Commerce)  
Appendix J: Program Advisory Committee Survey Results  
Appendix K: Advisory Committee Minutes  
Appendix L: Meetings with PSC President, Dr. Meadows, and UWF President, Dr. Bense (agenda and notes)  
Appendix M: Meetings with UWF Faculty and Staff (agendas and minutes)  
Appendix N: Comparison of Proposed Cybersecurity Programs at UWF and PSC, Letter to FL Department of Education from UWF and Letter to Vice Chancellor and Chief Academic Officer  
Appendix O: Letter to Dr. Bense dated October 26, 2015  
Appendix P: SACSCOC Letter of Approval for Baccalaureate Degree  
Appendix Q : Common Prerequisite Application for Unique CIP/Degree Program  
Appendix R: Letters of Support

- B.2 List any objections or alternative proposal received from other postsecondary institutions for this program.

In December, 2013, the Florida Department of Education received a letter from the University of West Florida expressing concerns that PSC’s proposed program duplicated UWF’s efforts to deliver a Cybersecurity degree. After receiving a copy of that letter, PSC conducted an additional comprehensive review to compare the two proposed programs and to ensure that PSC’s program was not duplicative of UWF’s offering. The review confirmed that PSC’s proposed program has a very different foundation, philosophy, focus, and curriculum than UWF’s program; therefore the decision was made to continue with the proposal for the baccalaureate degree in Cybersecurity. In a letter to Jan Ignash, Vice Chancellor and Chief Academic Officer of the State University System dated January 22, 2014, UWF indicated that their objection to PSC’s program would be withdrawn if the proposed PSC program was designated as a Bachelor of Applied Science. Based on the applied, workforce preparation nature of the proposed degree and UWF’s request, PSC’s proposed program was designated as a Bachelor of Applied Science (Appendix N).

**Appendix A:**  
**Pensacola News Journal Article**  
**23 June 2015**

# LOOKING FOR CYBER COPS

## Homeland Security taps local cybersecurity talent

**CARLOS GIESEKEN**  
CGIESEKEN@PNJ.COM

Much like opposing basketball coaches game-planned against Michael Jordan, the hope of cybersecurity professionals is to contain cyber attacks, knowing they won't be able to stop them all.

"Bad things are going to happen," said Andy Ozmont, Ph.D., assistant secretary for cybersecurity and communications at the U.S. Department of Homeland Security (DHS). "You aren't solving a problem; you are keeping it at a place where you can manage it."

Ozmont spoke during a cybersecurity roundtable discussion held Monday morning at New World Landing in Pensacola. It was held in conjunction with a two-day Cybersecurity Job Fair. DHS hopes to fill about 35 Corry Station positions ranging in salary from \$40,000 to \$150,000 per year.

"There is a desperate need for cybersecurity talent," Ozmont said. "You have a great pool of talent in this area. This is our opportunity to build our capability in Corry Station as rapidly as possible."

Other panelists in the roundtable included Escambia County Commissioner Doug Underhill, Pensacola City Council President Andy Terhaar, and Rep. Clay Ingram.

Ozmont described a desire to build an educational pipeline from grade school through college and into federal employment. Along the way, students would be exposed to different career paths within the field in addition to opportunities for training, education and scholarships that move them to higher levels.

"We don't create successes with home runs," Underhill said. "Cyber is the ultimate collaborative environ-

**See Cybersecurity, Page 4A**

## Cybersecurity

Continued from Page 1A

ment. Even to take small steps in cyber, it takes a huge team to do it."

Numerous cybersecurity and computer science professionals and educators were in attendance and contributed to the discussion.

Chris Hendricks is the team lead for the Pensacola CoderDojo at the University of West Florida Innovation Institute. CoderDojos are a network of local clubs where children between 7 and 17 learn how to program by making games, animations, websites and programs.

"We give people a place to play," he said. "As the core of this community grows up with this in mind, how do we give these kids a sandbox to play in without hacking the school board?"

Randy Ramos, CEO of Global Business Solutions Inc., almost immediately raised his hand, committing to build a training environment where young programmers can practice their skills.

"It is the community that needs to come together and do this," he said. "There is a tremendous opportunity here to reach down into K through 12, so let's support it."

Karen Sindel, of the National Flight Academy, spoke about the success it has had in educating and involving students from 47 states and seven foreign countries in science, technology, engineering and mathematics. Its educational programs expose students to aerodynamics, propulsion, navigation, communications, flight physiology and meteorology.

"In six days, we improve their STEM knowledge 10 percent," she said. "We are the only facility in the world like this and we are in your backyard."

Ozmont said a big challenge to cybersecurity is getting people to understand that all Internet-connected devices are susceptible to attack.

"People recognize that their computer is at risk," he said. "But their thermostat, refrigerator or car also have an opportunity for cyber risk."

The job fair continues today from 9 a.m. to 5 p.m. at 600 S. Palafox St. For a detailed overview and resources on 'How to Apply,' visit [DHS.gov/How-Apply](http://DHS.gov/How-Apply) or email [CybersecurityJobs@hq.dhs.gov](mailto:CybersecurityJobs@hq.dhs.gov).

**Appendix B:**  
**Florida Center for Cybersecurity**  
**A Board of Governors Report**

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# Florida Center for Cybersecurity



## Making Florida *the* Cyber State

A Board of Governors Report  
Submitted to the Florida Legislature and Governor  
December 2013



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### Florida Center for Cybersecurity

**R**ight now, Florida faces a narrow window of opportunity to capitalize on one of the most in-demand, high-paying, and rapidly growing fields of our time—cybersecurity. With six-figure starting salaries, this specialized STEM field can keep thousands of Florida graduates working in the state by creating new high-skilled jobs, attracting high-tech companies to open their doors here, and serving as a vital resource to businesses and national defense.

Within the next 12 months, one of a handful of states will emerge as the leader in cybersecurity and become the magnet that attracts the billions of dollars of private-sector and military spending that will be invested in this emerging field. Florida can become this leader.

Recognizing this need and opportunity, the 2013 Florida Legislature requested this report to provide a plan and budget to create the Florida Center for Cybersecurity, to be housed under the leadership of the University of South Florida. The charge: Secure Florida's place as the national leader in this burgeoning field. USF, through collaboration with its sister institutions across the State University System and private partners, can meet the challenge. The plan and proposed investments laid out in this report provide the blueprint for Florida to develop cybersecurity as a central pillar of its economic future.

The demand is huge. Even when compared with other high-demand IT jobs, demand for cybersecurity jobs is growing more than three times faster. Business leaders say they can't hire skilled cybersecurity workers fast enough, and our nation's military and homeland security agencies are looking for help in navigating the constantly changing world of cybersecurity research.

The question now becomes: how many of the hundreds of billions of dollars of public- and private-sector investment to be targeted at cybersecurity does Florida want to attract?

Across the State University System and at the state's independent colleges and universities, pockets of good work are now being done in this field. These include the first-of-its-kind cybersecurity master's degree approved by USF's Board of Trustees, a recent local cybersecurity outreach effort by the University of West Florida, a cybersecurity program being promoted by the Florida Institute of Technology, and a cybersecurity-emphasized bachelor's degree at Embry Riddle University, to name a few. These efforts are valuable, and there is plenty of work to go around. But if Florida wants to claim a place of national prominence in this field, it needs a center that draws these disparate pockets into a unified statewide partnership.

The Florida Center for Cybersecurity (FCC) will provide focus, organization, a cohesive workforce development strategy, faculty skills and expertise, and avenues for collaboration among many currently independent state experts.

"The diverse threats we face are increasingly cyber-based... We are losing data, money, and ideas through cyber intrusions. This threatens innovation and, as citizens, we are also increasingly vulnerable to losing our personal information... in the future, resources devoted to cyber-based threats will equal or even eclipse the resources devoted to non-cyber based terrorist threats."

– James B. Comey, FBI Director, in a statement before the Senate Committee on Homeland Security and Governmental Affairs, November 14, 2013

### The mission:

- Position Florida as the national leader in cybersecurity and its related workforce through education, community engagement and innovative, interdisciplinary research;
- Create thousands of new high-paying jobs in the state's cybersecurity industry;
- Serve as a statewide facilitator for cybersecurity education—providing degrees, certificates and training while contributing to Board of Governors priorities and encouraging students in non-IT majors to obtain industry-recognized cybersecurity specializations to enhance employability and wages upon earning their desired degrees;
- Enhance Florida's cybersecurity workforce, including reintegrating military veterans by utilizing their specialized skills and training;
- Act as a cybersecurity clearinghouse for statewide business and higher education communities—sharing knowledge, resources and training opportunities to help mitigate cybersecurity threats, and optimizing investment to eliminate unnecessary duplication;
- Attract new financial, healthcare, transportation, utility and defense companies to Florida.

It is a bold, long-term vision with a high-impact, short-term return on investment.

The FCC's budget request for \$16.1 million in operating funds, coupled with millions more in repurposed existing university funds and private support, will facilitate the awarding of thousands of new high-tech, in-demand degrees, certificates and industry certifications, beginning in the spring of 2014. Annual estimates at USF alone are an additional 550 cybersecurity certificates awarded, 475 undergraduate certificates or concentrations, 270 graduate certificates or concentrations, nearly 900 more bachelor's degrees, 215 master's degrees and 50 more doctoral degrees.

These graduates will enter the workforce prepared for the six-figure-salary jobs that are waiting for them. In the last five years, the number of cybersecurity-related job postings nationwide grew by more than 70 percent, compared to postings for more general technology jobs that grew by 20 percent and postings for all jobs that grew by 6 percent.

Meanwhile, employers and the state economy will benefit from an infusion of new skills and knowledge, as well as the "multiplier-effect" that a cybersecurity workforce provides. It has been estimated that for every IT job created, an additional 1.58 jobs will be gained in a particular region.

A new state-of-the-art cybersecurity facility, built with a phased-in investment of \$30 million, will provide a central resource for the entire state, particularly with the inclusion of a sensitive compartmented information facility (SCIF) used to analyze and help protect classified information. With one such facility available for research among institutions and public and private partners, Florida can maximize efficiencies—in much the same way as the Magnet Lab at Florida State University and the research vessels assigned to the Florida Institute of Oceanography.

The demand for cybersecurity professionals over the past five years grew 3.5 times faster than the demand for other IT jobs and about 12 times faster than for all jobs.

– *Computerworld magazine*

In short, a presence in the cybersecurity industry will quickly bring Florida's economy new revenue, new jobs and an unparalleled cybersecurity knowledge base. It will drive the State University System further toward national prominence as a coordinated unit, preparing graduates for the practical, high-paying jobs of today and tomorrow.

**T**his report has been prepared in response to a mandate by the 2013 Florida Legislature, whose vision for the creation of the Florida Center for Cybersecurity was enacted into law via proviso language in the General Appropriations Act for Fiscal Year 2013-2014 and signed by Gov. Rick Scott. Full text of the Legislature's charge to the Board of Governors is provided below:

*The Board of Governors shall submit a report no later than December 1, 2013, to the Legislature and the Governor that provides a plan for the creation of a Florida Center for Cybersecurity to be principally located at, and under the leadership of, the University of South Florida. The goals of the Florida Center for Cybersecurity shall be: to position Florida as the leading state in cybersecurity and its related workforce; to create new jobs in the cybersecurity industry in the state; to educate students to excel in cybersecurity professions in the state; to enhance the capabilities of the existing cybersecurity workforce in the state; to work with the business community statewide to identify and remedy any cybersecurity vulnerabilities; and to attract financial services, healthcare, defense industry and other companies to relocate to, or startup within, the state. The report shall include any proposed capital and operational startup costs as well as a budget to support the ongoing operations of the proposed Florida Center for Cybersecurity.*

*Chapter 2013-40, Laws of Florida, Page 46.*



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### Risks and threats

Cybersecurity is increasingly vital as more and more people are connected by the Internet, businesses rely more heavily on cloud-based and big data services, and government officials face more web-based attacks related to terrorism, espionage or other areas of national security. The danger is growing exponentially as the world becomes more web-dependent. According to one research group, cyberattack incidents reported by federal agencies have grown nearly 800 percent in just the past six years.<sup>1</sup>

Leon Panetta, then U.S. Secretary of Defense, warned in a 2012 speech that the United States could face a “cyber-Pearl Harbor . . . An aggressor nation or extremist group could use these kinds of cyber tools to gain control of critical switches. They could derail passenger trains, or even more dangerous, derail passenger trains loaded with lethal chemicals. They could contaminate the water supply in major cities, or shut down the power grid across large parts of the country.”<sup>2</sup>

### Cybercrime costs the United States \$338 billion a year.

– *Robin (Montana) Williams, branch chief of cybersecurity-education awareness at the Department of Homeland Security, as quoted in the Chronicle of Higher Education September 2013*

In the private sector, PricewaterhouseCoopers has found that 93 percent of organizations experienced some form of cybersecurity breach in the previous year.

Industry analysts have estimated that cybercrime “costs more than \$10 trillion to society, with billions of dollars being stolen from small, medium, and large-sized enterprises and identities of millions compromised.”<sup>3</sup> It’s also estimated that cyber-crime is worth \$400 billion annually.<sup>4</sup>

Still, it’s difficult to understand the full cost of cybercrime due to its ripple effects. Stolen intellectual property, theft of technology data, costs in cybertheft prevention, lost productivity—these cyber-crime side

effects compound the impact of directly measurable dollar losses. Estimates of annual losses range from “a few billion dollars to hundreds of billions.” U.S. Rep. Mike Rogers (R-Alabama), a member of both the House Armed Services and Homeland Security committees, claims that hackers from China alone may cost the U.S. as much as \$2 trillion.<sup>5</sup>

The complexity is increasing not only because more people are connected to the Internet, but also because hackers have developed “backdoor” ways to attack more complex systems. “Attackers deterred by a large company’s defenses often choose to breach the lesser defenses of a small business that has a business relationship with the attacker’s ultimate target, using the smaller company to leapfrog into the larger one,” according to a 2013 Symantec report.<sup>6</sup>

Like a game of Whac-A-Mole, the ingenuity of cyber hackers and the lucrative temptations that drive their creativity cannot be defeated by one-time tech solutions. The game evolves with every new device, program or app. There is even now a black market for attack toolkits, some starting at just \$15.<sup>7</sup>

Meanwhile, not all security threats are intentional, nor do all data breaches come from outside. Employee carelessness poses cybersecurity problems of its own.<sup>8</sup> Clearly, education and behavioral changes are crucial in our efforts to keep data safe.

However, as ominous as this world of cyber-threats is, it opens up a huge workforce and research opportunity for the state that takes the lead in creating solutions. Florida should be that leading state.

### The National picture

Across the country, elected officials on both sides of the aisle have taken note of the significance of cybersecurity. Following the 9/11 attacks, the administration of former President George W. Bush was among the first to recognize the importance of cybersecurity as an issue of national security, and the emphasis has continued and investment strengthened under the current administration and Congress. The federal Comprehensive National Cybersecurity Initiative (CNCI) called cybersecurity “one of the most serious economic and security challenges we face as a nation.”<sup>9</sup>

In much the same way that Florida has greatly benefited from being a hub of 20th and early 21st century military activity and spending, the state must adapt to ensure it remains the center of 21st century cyber- and high-tech-warfare and federal defense investment. Our nation will inevitably invest trillions in its national cyber-defense over the next 25 years. Should that investment be made in Florida, or should those trillions of dollars in investment and human capital be ceded to other states who choose to invest their limited state funds in becoming America’s leader in cybersecurity? Two of the CNCI’s initiatives directly acknowledge the need to expand the effort beyond the federal government, paving the way for Florida to stake its claim in this growing field through an investment like the FCC:

#### *Initiative #8: Expand cyber education*

*While billions of dollars are being spent on new technologies to secure the U.S. Government in cyberspace, it is the people with the right knowledge, skills and abilities to implement those technologies who will determine success. However there are not enough cybersecurity experts within the Federal Government or private sector to implement the CNCI, nor is there an adequately established Federal cybersecurity career field. Existing cybersecurity training and personnel development programs, while good, are limited in focus and lack unity of effort. In order to effectively ensure our continued technical advantage and future cybersecurity, we must develop a technologically-skilled and cyber-savvy workforce and an effective pipeline of future employees. It will take a national strategy, similar to the effort to upgrade science and mathematics education in the 1950’s, to meet this challenge.*

#### *Initiative #9: Define and develop enduring “leap-ahead” technology, strategies, and programs*

*One goal of the CNCI is to develop technologies that provide increases in cybersecurity by orders of magnitude above current systems and which can be deployed within 5 to 10 years. This initiative seeks to develop strategies and programs to enhance the component of the government R&D portfolio that pursues high-risk/high-payoff solutions to critical cybersecurity problems. The Federal Government has begun to outline Grand Challenges for the research community to help solve these difficult problems that require ‘out of the box’ thinking. In dealing with the private sector, the government is identifying and communicating common needs that should drive mutual investment in key research areas.<sup>10</sup>*

The Cybersecurity Enhancement Act of 2010 (HR 4061), which passed with unusually strong bipartisan support, authorized “hundreds of millions of dollars for cybersecurity research and education.” This appropriation included funding for the National Science Foundation “to increase the size and skills of the cybersecurity workforce” and aimed to increase “research and development, standards development and coordination, and public outreach” in cybersecurity.

U.S. Chief Information Officer Steven VanRoekel said more than \$13 billion has been recommended for cybersecurity. The Pentagon said in its spending plan that “Defense initiatives include creating teams of cybersecurity specialists to carry out defensive and offensive operations and constructing a new joint programs center for U.S. Cyber Command.” Moreover, Pentagon spending on cybersecurity is forecasted to jump from \$3.9 billion to \$4.7 billion in fiscal year 2014.<sup>12</sup>



The importance of establishing the FCC is summed up by Symantec's Francis deSouza: "We should see a building of the education foundation that will support the U.S. as a world leader in information security. . . . And we should see more focused research in a collaborative effort between the public and private sectors."

### Workforce development

As Floridians and statewide organizations conduct more of their day-to-day business online, transmitting or storing confidential or sensitive information electronically, the need for network and information security has increased exponentially. Today, professionals with experience in cybersecurity are among the most sought after employees in the state.

Over the past two years, the number of jobs requiring a Certified Information Systems Security Professional (CISSP) certification has jumped from 19,000 to more than 29,000.

– *Computerworld magazine March 2013*

How sought after? In the last five years, the number of job postings for all jobs grew by 6 percent. Postings for technology jobs grew by almost 20 percent. Postings for cybersecurity-related jobs grew by more than 70 percent, according to a Computerworld report.<sup>14</sup> According to the federal CNCI, "There are 30,000 specialists needed today, but only about 2,000 have necessary skills." Industry analysts estimate the market for cybersecurity services could exceed \$120 billion globally by 2017.

According to the U.S. Department of Labor (Career One Stop, [www.careerinfonet.org](http://www.careerinfonet.org)) demand for Information Security Analysts in Florida will increase 19 percent between 2010 and 2020, serving the fourth-largest statewide market need behind only California, Virginia, and Texas.

Simply look to local help-wanted ads. In just one year, according to one workforce analysis in Tampa Bay, job postings from IT companies like IBM, Lockheed Martin and JPMorgan Chase increased from 734 positions to 1,230 (a 68 percent annual increase).<sup>15</sup> The report noted that Hillsborough and Pinellas counties expect an average growth rate for IT jobs of 15.8 percent through 2019, higher than the expected 13.6 percent rise of all employment in the same period. The report singles out cybersecurity as a rapidly expanding field.<sup>16</sup>

Moreover, growth in high-expertise jobs has a "multiplier" effect that benefits local economies. That same report notes that IT jobs as a whole accounted for nearly 56,000 jobs in Hillsborough/Pinellas in 2012, with a "labor income" contribution to the area's economy of \$4.7 billion annually and a multiplier effect of an additional 88,000 jobs. "Expressed in terms of a multiplier, for every job in IT, another 1.58 jobs will be gained in the region," the report indicates.

Not only are cybersecurity jobs in incredibly high demand, they are also very high paying. The 2012 median salary for Information Security Analysts in Florida was \$74,200 (rising to \$117,800 at the 90th percentile). High demand and high salaries are replicated for those in related occupations in Florida: Network and Computer Systems Administrators (\$72,600/\$113,800); Computer Systems Analysts (\$83,800/\$128,200); Computer and Information Systems Managers (\$120,500/\$187,200); Computer Network Support Specialists (\$50,500/\$90,700); and, Computer Occupations, All Other (\$73,900/\$103,700).

Specifically, Payscale.com lists the annual salary range for graduates with a bachelor's degree in cybersecurity at \$54,000 to \$82,000, depending on occupation, while a master's degree in cybersecurity yields an annual salary range of \$53,249 to \$98,477. Perhaps more importantly, Payscale.com reports that graduates with selected professional certifications in cybersecurity—one of the immediate and most prioritized return-on-investment strategies of the FCC—realize significant supplements to annual salary:

Certified Information Systems Security Professional (CISSP)	\$109,464 to \$154,178 <sup>17</sup>
Certified Ethical Hacker (CEH)	\$100,000
SANS/CIAC Certified Forensic Analyst	\$85,000
Microsoft Certified Professional	\$70,000
CompTIA Security+	\$69,919
Cisco Certified Network Associate (CCNA)	\$67,407

### Military veterans

According to a 2013 report by online job-search engine Monster.com, the number of U.S. military veterans rejoining the civilian population in each of the next four years will be substantial: 300,000. The hardest hit veterans in the current unemployment figures belong to the age range of 20-24, at 19.1 percent as of April 2013, compared to a national average of non-veterans in that age group of 6.9 percent.<sup>18</sup>

Military veterans are uniquely qualified for the cybersecurity field because of their training, and often, their security clearances.<sup>19</sup> The FCC's programs will provide skills that will not only capitalize on veterans' strengths but will also provide nearly immediate access to the kinds of jobs that will enable them to remain in the state and contribute toward its economic growth.

The FCC will conduct an extensive outreach and support program aimed specifically at recruiting and training military veterans for these cyber jobs.

### USF and Tampa Bay

The University of South Florida is a top-tier global research university dedicated to student success. It is home to the USF Institute for Secure and Innovative Computing (40.1540), which has been preparing graduates to meet cybersecurity workforce needs for many years—with still booming demand. The institution is located in Tampa Bay, one of the largest and fastest-growing metropolitan areas in the U.S, with a population of more than 4.3 million people. It's at the western end of the I-4 High-Tech Corridor and near MacDill Air Force Base. Home to both U.S. Central Command (CENTCOM) and U.S. Special Operations Command (SOCOM), the region is a hotbed for national defense operations as well as for healthcare, technology and financial services.

USF has been designated as one of the top four veteran-friendly universities in the nation. With the number of enrolled veterans growing each year, 10,000 active duty service men and women working at MacDill Air Force Base (excluding CENTCOM and SOCOM), and 1,200 retiring from the base annually and seeking to reintegrate into the civilian workforce, the supply of prospective cybersecurity students and employees with the requisite security clearance represents a significant pool of talent that will be attractive to new businesses looking to relocate to Florida.

USF also has a highly successful track record in drawing research funding (\$413 million in FY 2013) and is ranked 10th in the world among universities granted U.S. patents.<sup>20</sup> In addition, USF—the founder of, and home to, the National Academy of Inventors—is enhancing its researchers' impact and visibility.

USF has demonstrated a commitment to interdisciplinary collaboration. Because cybersecurity touches nearly every area of information use and every facet of life—from national security and politics to business and personal privacy—this field is among the most interdisciplinary of any. There are substantial and useful intersections in cyber-research with policy, law, compliance, psychology, criminology and forensics. Locating the FCC at USF will enable the center to tap into an existing, robust group of well-credentialed research and teaching faculty in a wide range of disciplines.

“Not a day goes by that you don't hear about the latest data breach, identity theft or other malicious cyber-attacks. It's becoming more prevalent, impacting individuals, as well as businesses of all sizes. . . USF has a proven track-record of working on classified cybersecurity projects, and engaging with the Department of Defense, as well as an outstanding faculty with the knowledge base and research background to offer bachelor's and master's degrees in cybersecurity along with certificates and certifications.”

– *Bob Dutkowsky, CEO of Tech Data Corporation, Florida's second-largest Fortune 500 headquartered company*

combined industry workforce of just under two million people.<sup>22</sup> The Partnership estimates that 45 percent of the current population is in the prime employment years of 18 to 54,<sup>23</sup> a strong workforce pipeline in need of the high-paying jobs that IT positions provide.

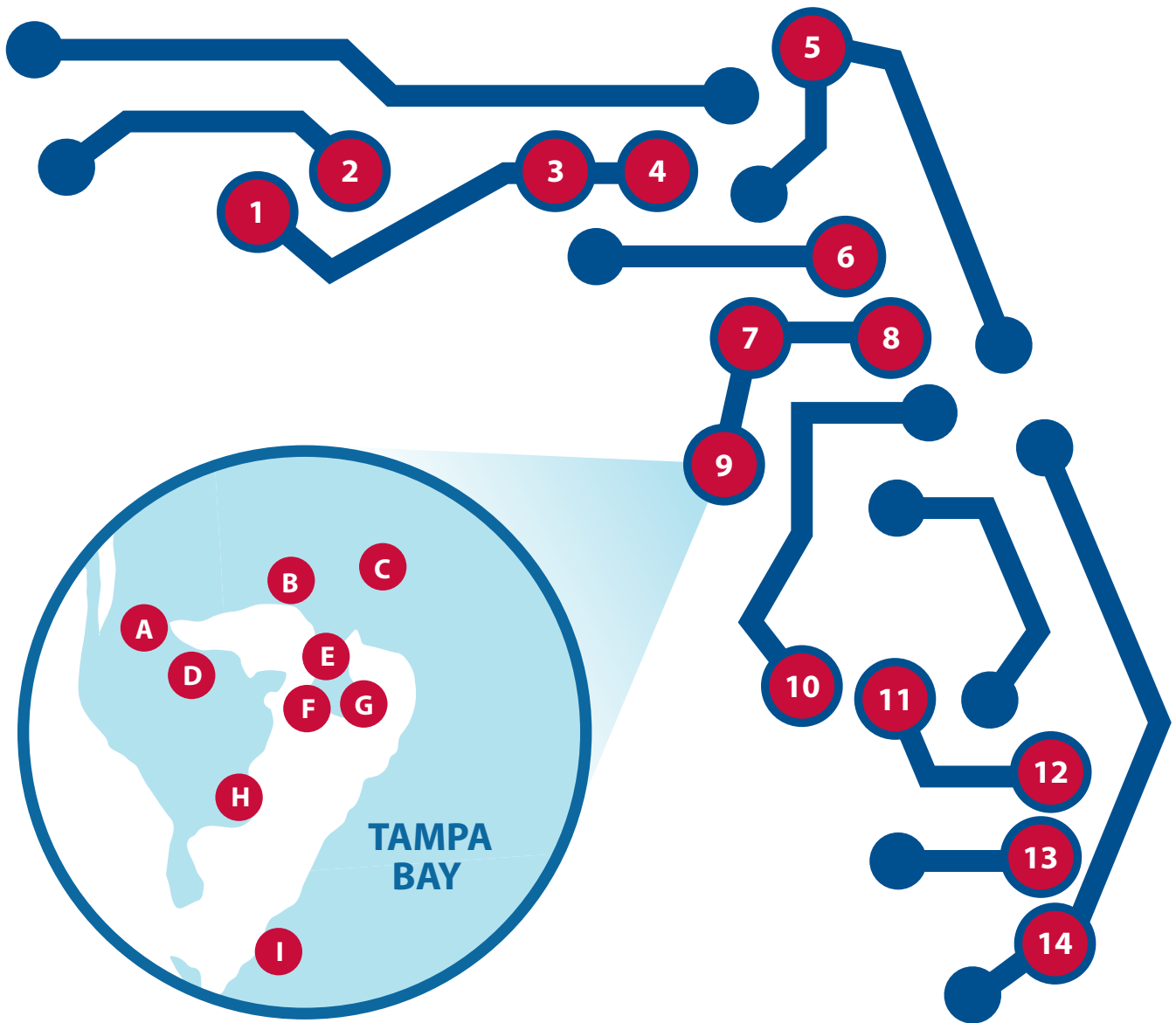
Tampa Bay is home to several major health care employers, such as the James A. Haley Veterans' Administration Hospital, All Children's Hospital, Tampa General Hospital, and Moffitt Cancer Center, and has four top employers on the Fortune 500 list<sup>24</sup>: World Fuel Services, Publix Supermarkets, Tech Data and Jabil Circuit. Many of these businesses and employers will increasingly need help keeping data and financial records secure as potential cyberattacks become more complex and difficult to fend off.

With an appropriate level of investment by the state and repurposing of some existing USF resources, USF could undertake a bold expansion of existing degree and certificate programs (in business, engineering and the iSchool) along with the design and delivery of new marketable tracks/certificates to enhance career opportunities for high-enrollment degree programs, including criminology (cybercrime) and psychology (cyberbehavior). In addition, USF could radically increase the number of professional certifications awarded to both USF graduates and current employees in partnership with the private sector.

USF also has strong private-sector support. The Tampa Bay Partnership, an eight-county<sup>21</sup> coalition led by local CEOs to promote regional economic development, is among many active professional groups nurturing the financial and industrial base of the area around USF. The region is home to 26,000 retail establishments; 27,000 finance, insurance, and real estate offices; 110,000 service providers; 16,000 construction companies; 5,600 manufacturing concerns; 7,000 wholesale trade offices; and 3,000 government establishments—with a

USF has a history of collaboration not only with the business community, but across the State University System. For example, the Florida Institute of Oceanography (FIO), which is housed at USF, has been continually lauded as one of Florida's best examples of partnership and cooperation. FIO's mission—to provide a diverse and collaborative statewide research and education forum, to leverage intellectual resources within the State University System, to strengthen networks and work together to benefit the general public and policymakers—closely mirrors the FCC's goals. It is USF's hope that its sister institutions in the State University System will see great benefit from the resources, knowledge and connections the FCC will provide and opt into the collaboration provided by the FCC, much like the shared experiences and successes of the FIO.

This is a prime time for collaboration in the State University System, as further evidenced by another system initiative, the Sunshine State Education and Research Computing Alliance (SSERCA). This joint effort among USF, the University of Florida, Florida State University, the University of Central Florida, Florida International University and the private University of Miami, aims to build a statewide infrastructure to support collaborative research in the world of big data—another technological world that would benefit from a strong cybersecurity knowledge base. These kinds of partnerships are good uses of state resources.



## TAMPA BAY

- A Tech Data
- B Tampa International Airport
- C University of South Florida
- D Jabil Circuits
- E MacDill Air Force Base
- F U.S. Special Operations Command
- G U.S. Central Command
- H USF St. Petersburg
- I USF Sarasota-Manatee

## AROUND THE STATE

- 1 University of West Florida
- 2 Eglin Air Force Base
- 3 Florida A&M University
- 4 Florida State University
- 5 University of North Florida
- 6 University of Florida
- 7 Florida Polytechnic University
- 8 University of Central Florida
- 9 University of South Florida/Tampa Bay
- 10 New College of Florida
- 11 Florida Gulf Coast University
- 12 Florida Atlantic University
- 13 Florida International University
- 14 United States Southern Command



## Vision

The Florida Center for Cybersecurity at USF will be a national model in cybersecurity, cyber-intelligence and digital forensics to create a safe and secure information infrastructure for business and national security.

## Mission

Guided by the goals the Legislature and Governor enumerated in the proviso language that commissioned this report, the FCC will pursue a bold vision and university-led mission to establish Florida as the nation's leader in cybersecurity in the following ways:

- Position Florida as the national leader in cybersecurity and its related workforce through education, community engagement and innovative, interdisciplinary research;
- Create thousands of new high-paying jobs in the state's cybersecurity industry;
- Serve as a statewide facilitator for cybersecurity education—providing degrees, certificates and training while contributing to Board of Governors priorities and encouraging students in non-IT majors to obtain industry-recognized cybersecurity specializations to enhance employability and wages upon earning their desired degrees;
- Enhance Florida's cybersecurity workforce, including reintegrating military veterans by utilizing their specialized skills and training;
- Act as a cybersecurity clearinghouse for statewide business and higher education communities—sharing knowledge, resources and training opportunities to help mitigate cybersecurity threats, and optimizing investment to eliminate unnecessary duplication;
- Attract new financial, healthcare, transportation, utility, and defense entities to Florida.

### **Position Florida as the national leader in cybersecurity and its related workforce**

Florida can become the leading state in education, research and job production in cybersecurity. To do so, the FCC must dramatically increase the number of cybersecurity degree and certificate graduates and become nationally known for cutting-edge research and global connections. It will also achieve this goal by pursuing an aggressive agenda to encourage non-IT students to seek industry-recognized certifications in cyber professions and specialties that increase employability and wage earning potential within their desired fields of study.

The FCC will provide Floridians with a central location and e-portal to coordinate cybersecurity education and training, research and statewide outreach. It will serve students, parents and employers through an online cybersecurity platform by identifying career pathways; existing programs offered in K-12, state colleges, state and private universities; and available professional certifications. It will also offer employers a cyber-marketplace to post vacancies, identify qualified employees and provide curriculum feedback to ensure Florida's institutions are teaching the skills they need in future employees.

In addition, the FCC will work with external partners to obtain data or research sponsorships, foster interdisciplinary collaboration among researchers, and recruit postdoctoral students to enhance research productivity. It will serve as a valued resource for the entire State University System and for the state's independent higher education institutions, leveraging, promoting and branding Florida's many strengths to claim a place of national prominence.

### **Create new jobs in Florida's cybersecurity industry**

Education and outreach to Florida businesses and citizens will support job creation for thousands of highly paid cybersecurity specialists—particularly as awareness of threats increases and as a well-trained workforce grows to meet needs. In addition, the center itself, along with employment generated by increased research funding, will boost the state's workforce.

USF awards more than 10,000 degrees each year, a quarter of which are in STEM fields. The projected addition to workforce development in cybersecurity, as estimated by USF, includes increasing the number of new professional cybersecurity certifications to be awarded annually (550, each with earning potentials of approximately \$100,000) by USF Innovative Education through online and face-to-face courses, beginning in spring of 2014. (See Appendix A for curriculum details.)

### **Educate students to excel in Florida's cybersecurity professions**

The FCC will ensure students have a speedy and productive pathway to a high-paying career through high-quality education, shaped around the rapidly changing needs of business and industry. Beginning in fall 2014, USF will offer a multidisciplinary master's degree in Cybersecurity with four degree concentrations: Cyber Fundamentals (CF), Cyber Intelligence (CI), Cybercrime (CC), and Information Assurance (IA). (For more specifics and courses, see Appendix A.)

USF's program will be interdisciplinary at its core, making it easy to conduct advanced cybersecurity research. Additionally, students enrolled in programs across the university can benefit from a cybersecurity specialization through certificates offered through the FCC. For example, a criminology student may pursue a specialization in cyber-crime; a psychology student may delve into the behavioral aspect of cyber-criminal profiling—thus graduating with the FCC's assistance with an industry-recognized, highly-employable certification as a cyber-professional within their major of choice.

A nationally recognized website that ranks education programs found that while the number of students graduating with degrees in cybersecurity-related programs tripled nationally between 2006 and 2010 (from about 1,200 in 2006 to close to 3,600 in 2010), the number of Florida graduates from similar programs remained stagnant—at the same very low level of just over 60 in 2010.<sup>25</sup> The initial rates of degree completion goals in the FCC's plans would increase Florida's figure by 17 percent in the first year, and by 33 percent including certificate completions.

### **Enhance the capabilities of Florida's existing cybersecurity workforce**

Continuing education for retooling and retraining the cybersecurity workforce will be essential given the rapidly changing nature of the field. The FCC will offer specialized training and certifications to existing cybersecurity workers, ensuring that Florida's workforce remains on the cutting-edge. Reintegrating military veterans into this field will be mutually beneficial, as the state's cybersecurity workforce will benefit from their unique skills, training and clearance.

### **Work with the business community statewide to identify and remedy cybersecurity vulnerabilities**

The FCC will act as a collaborative cybersecurity repository for statewide business and higher education communities—coordinating existing resources, sharing knowledge, offering professional compliance and risk-assessment services and helping to mitigate cybersecurity threats. The FCC will also offer consumer and corporate education programs. As one example, the FCC plans to offer "Cybersecurity for CEOs" training sessions, providing the business community with a clearer understanding of cybersecurity threats and defenses—an idea generated directly from state business leaders who provided feedback for the FCC's direction.



## Attract financial services, healthcare, defense industry and other companies to relocate to or start up within the state

The FCC will work closely with Enterprise Florida/Workforce Florida to respond to the needs of existing companies, those that are new to Florida and those that are considering locating to Florida. Having a ready supply of highly trained security specialists will attract cybersecurity companies to Florida, in addition to retaining companies who may be thinking of leaving the state due to insufficient talent. Additionally, the research performed at the center and resulting commercialization will entice industries to take advantage of Florida’s expertise. The patents, licenses, software and hardware that will inevitably be discovered and developed through this research will lead to “home-grown” Florida start-up companies that can lead the industry.

## Board of Governors’ Priorities

The FCC’s mission is grounded in education and workforce development, applied research and innovation and statewide engagement. They are guided by the Board of Governors’ goals for the State University System, identified in the System’s 2012-2025 Strategic Plan:<sup>26</sup>

STATE UNIVERSITY SYSTEM GOALS	EXCELLENCE	PRODUCTIVITY	STRATEGIC PRIORITIES FOR A KNOWLEDGE ECONOMY
TEACHING & LEARNING	STRENGTHEN QUALITY & REPUTATION OF ACADEMIC PROGRAMS AND UNIVERSITIES	INCREASE DEGREE PRODUCTIVITY AND PROGRAM EFFICIENCY	INCREASE THE NUMBER OF DEGREES AWARDED IN STEM AND OTHER AREAS OF STRATEGIC EMPHASIS
SCHOLARSHIP, RESEARCH & INNOVATION	STRENGTHEN QUALITY & REPUTATION OF SCHOLARSHIP, RESEARCH AND INNOVATION	INCREASE RESEARCH AND COMMERCIALIZATION ACTIVITY	INCREASE COLLABORATION AND EXTERNAL SUPPORT FOR RESEARCH ACTIVITY
COMMUNITY & BUSINESS ENGAGEMENT	STRENGTHEN QUALITY & RECOGNITION OF COMMITMENT TO COMMUNITY AND BUSINESS ENGAGEMENT	INCREASE LEVELS OF COMMUNITY AND BUSINESS ENGAGEMENT	INCREASE COMMUNITY AND BUSINESS WORKFORCE

(p. 13 of the Board of Governors Strategic Plan)

## Teaching and Learning

In its 2012-2025 Strategic Plan, one of the three pressing needs identified by the Board of Governors is “high skilled, high demand graduates for the state’s workforce.” The FCC will produce thousands of degrees in a particularly high-demand STEM area, a Board of Governors Area of Strategic Emphasis, and through collaboration with other universities and external partners, will maximize productivity and efficiency.

Importantly, the FCC will also help align higher education with the state’s critical workforce needs. According to the Board of Governors’ Access and Attainment Commission’s gap analysis, the top occupations in which there is a projected annual under-supply, exceeding 2,000 projected positions, are in the STEM field. Specifically, this critical gap exists in computer occupations, including computer systems analysts, computer programmers and computer network architects—all clearly aligned with cybersecurity.

## Scholarship, Research and Innovation

USF has a long and successful record of securing federal and industry funding to support university-based applied and basic research on behalf of the defense, health and business sectors. With the requisite clearances in place, top secret and classified research continues at USF. As host to the FCC, USF will track and, to the extent necessary, coordinate statewide research activities related to cybersecurity by bringing the combined assets of the state’s research community (including

universities and groups like Draper and SRI) together to strengthen Florida's competitive position and perhaps more importantly brand Florida as a state cohesively attaining national cybersecurity preeminence.

Federal and private levels of investment in Cybersecurity R&D are expected to continue to grow for years to come. The FCC effort will include building statewide collaborations around any Florida organization – public or private – that is willing to partner. Some prime candidates to begin the statewide collaborative effort include the Institute of Secure and Innovative Computing (USF), the Center for Security and Assurance in Information Technology (FSU), and the Center for Cryptology and Information Technology (FAU).

Future FCC facilities, including a sensitive compartmented information facility (SCIF) used to analyze and help protect classified information, can serve as a shared resource for the State University System. This facility is essential when performing sensitive, high-security-clearance research, as with many projects now funded via federal grants through the National Security Administration, National Science Foundation, National Institutes of Health, and Department of Defense. Such a facility built at USF, which already has the highest level of clearance, represents the first phase of capital needs envisioned to provide for shared-use by Florida's research community in much the same way as the Magnet Lab at FSU and the research vessels assigned to the Florida Institute of Oceanography.

### **Community and Business Engagement**

Conferences will bring together researchers and students from a range of institutions and think-tanks to counter threats of cybercrime. Internships through the center will provide students with real-world, hands-on experiences and help students begin shaping their professional networks. The FCC will work with school boards and teachers in grades 5-12 to raise students' understanding of security risks in social media and online activities.

USF is already developing strong ties to statewide and national organizations to advance Florida's cybersecurity reputation, including Workforce Florida, the Florida Department of Law Enforcement, Enterprise Florida, the Florida I-4 High-Tech Corridor Council, local and state chambers of commerce and economic development councils, research firms such as Draper and SRI International, Department of Defense commands, the Maryland Cybersecurity Center, the National Cyber Partnership, and NSA Centers of Academic Excellence.

The National Cyber Partnership (NCP), based in Tampa Bay with USF as a founding partner, is a not-for-profit organization with the following objectives:

- Provide information and various resources to cyber-related industries, educational institutions and government, including the military, and the general public,
- Develop a deep understanding of issues involving both public and private sector benefits from cybersecurity enterprises, R&D, education, training and other related activities, and
- Obtain bi-partisan federal, state and local support for the purposes and goals of NCP.

USF has signed a Memorandum of Understanding with NCP with the intent to enter into a strategic partnership. The partnership is expected to help the FCC achieve national recognition and extend its reach to the entire nation.

USF has also entered into agreements with other private cybersecurity service providers based in Florida, including Crystal Clear Technologies, a company specializing in the development of cyber-secure facilities like the SCIF described above; and the International Information Systems Security Certification Consortium, Inc. (or ISC<sup>2</sup>), the provider of the gold-standard in cybersecurity industry certifications, the Certified Information Systems Security Professional certification (CISSP). In the past two years alone, the number of jobs requiring the CISSP jumped from about 19,000 to more than 29,000, according to Computerworld.

## Proposed budget summary

Meaningful and robust achievement of the FCC's goals, as identified by the 2013 Legislature and supported by Gov. Rick Scott, and branding Florida as "the Cyber State," ready and willing to partner with defense and private sector organizations, will require investment in both operating and capital resources.

Trillions of dollars in private sector and national defense funds will be spent on cybersecurity initiatives in the next quarter-century. A small investment of Florida taxpayer funds will help draw those investment dollars to Florida, making for a good state investment, much the same way that this state's economic future was shaped tremendously by the investments locating MacDill AFB, Eglin AFB, NAS Pensacola, NAS Jacksonville, and other major military installations in Florida in the last half-century.

The proposed budget positions Florida as a national leader in the cybersecurity field. Given the high stakes, the fierce competition from other states, and limited state resources, this conservative budget is intended to provide the largest return on investment, brand Florida long-term as the state for cyber business, and make concrete and immediate job gains in the field.

## Operating

Recurring operations of the FCC and associated programs will be funded in the following ways:

- (1)** Reinvestment of recurring USF resources resulting from termination and/or suspension of low-demand, non-strategic degree programs. During 2013, USF terminated 17 degree programs and placed a further 10 programs on inactive status. Further terminations/suspensions are expected in 2014. The (re)allocation of faculty and staff resources to cybersecurity-related programs in business, engineering, information technology and the iSchool is expected to amount to approximately \$2.5 million in repurposed resources following multi-year teachout and program closures.
- (2)** As host university, USF will provide institutional operating support for the FCC, including, but not limited to: Auditing and Compliance, Business & Finance, Facility Planning & Design, Human Resources, Information Technology, Legal Services, Patents and Licensing, Payroll, Purchasing, Safety and Security, and Sponsored Programs/IRB. The value of cost-sharing to the FCC is to be determined.
- (3)** A state investment in the Florida Center for Cybersecurity could be most efficiently accomplished in three targeted phases.
  - Phase I: \$7.1 million to establish the FCC at USF, which includes recruiting a nationally-recognized leader and technical support team with the requisite clearance. Attracting world-class talent to Florida (including national and international award winners and members of the National Academy of Sciences and National Academy of Engineering) will be essential for: (a) expanding existing and delivering new online degree, certificate, and professional certification programs, in partnership with Florida businesses to rapidly accelerate workforce development; (b) building a coordinated statewide cybersecurity network; (c) coordinating and capitalizing on university-based talent pool to successfully compete for federal and industry funding for cybersecurity research; and (d) promoting cybersecurity education and consumer protection programs for Floridians and Florida companies through public information and workshops.
  - Phase II: \$5 million to expand and accelerate capacity for education and training of the high-skilled, high-paid cybersecurity workforce through increasing access to affordable degree, certificate, and professional certification programs; extend the seed/matching-grant program for Florida's universities and research entities to yield strategic returns on investment through growing federal and industry R&D expenditures, patents and licensing revenues, startup companies, etc.

■ Phase III: \$4 million to create satellite nodes of the Florida Cybersecurity Network in selected markets—similar to Florida’s Small Business Development Network—in partnership with State University System institutions to ensure that the growing needs of cybersecurity education and training, research, and consulting outreach for Florida companies are met. This investment would also support state-wide initiatives and not-for-profit organizations that will foster cybersecurity initiatives in Florida and expand Florida’s cyber brand across the nation and the world.

(4) Business memberships and contracts associated with corporate access to cybersecurity information, workforce development, consulting, risk assessment and mitigation, business continuity and disaster recovery will reach \$2 million or more annually.

*Total USF and corporate contribution to operating funding: \$4.5 million-plus*

*Total recurring operating funding request from the state: \$16.1 million*

### Capital

Capital needs will be phased-in over time. The highest and most immediate priority is the construction of a sensitive compartmented information facility, or SCIF, that will support classified/top secret research work for the defense, business and industry sectors. Most importantly, it will provide access for faculty and students, with clearance, from across the state to secure research and training facilities, a prerequisite for competitive federal research funding. The first phase, projected (by Crystal Clear Technologies, Inc., based in St. Petersburg, Florida) at 10,000 GSF and \$10 million, will be essential to assuring Florida’s research competitiveness with other states.

While existing classroom and office space can be re-purposed in the short-term to support significantly increased instructional/learning needs, and while recognizing that a growing portion of the curriculum will be delivered online, the eventual need for secure active learning laboratories/classrooms, auditorium and office space, along with secure data storage, increase the new space needs to approximately 40,000 GSF (including the SCIF) of State University System-shared space at a total cost of \$30.3 million.

*Total non-recurring capital funding request from the state: \$30.3 M (phased-in) +PO&M*

Much like the Florida Institute of Oceanography, USF will serve as the host institution of the Florida Center for Cybersecurity. The USF Board of Trustees will provide fiscal and management oversight. The specific purpose, bylaws, membership (full, partners, affiliates, associates etc.), goals, performance metrics and operating procedures will be established at the point of creation with input from all FCC partners.

The FCC will be most closely guided by its Higher Education Advisory Council and Community Advisory Board.

### Higher Education Advisory Council

The FCC Higher Education Advisory Council includes representatives nominated by each institution of the State University System to help shape the FCC's work plan. The Advisory Council includes representatives of the Independent Colleges and Universities of Florida (ICUF), the Florida College System, and independent research groups in Florida (e.g. Draper, SRI).

Chair	TBD, Executive Director, FCC
FAMU	Deidre W. Evans, Associate Professor Computer and Information Sciences
FAU	Spyros Magliveras, Professor, Mathematical Sciences
FGCU	Robert Totterdale, Professor, Information Systems
FIU	Geoff Smith, Associate Professor, Computing and Information Sciences
FPU	Rick Maxey, Director, Government Relations
FSU	Mike Russo, Director, Information Security and Privacy
NCF	Ryan Noble, Chief Information Officer
UCF	Ross Hinkle, Vice Provost
UF	Elias Eldayrie, Vice President and Chief Information Officer
UNF	O. Patrick Kreidl, Associate Professor, Electrical Engineering
USF	Randy Borum, Professor, School of Information
UWF	Pam Northrup, Associate Vice Provost for Academic Innovation
ICUF	TBD
FCS	TBD
Research	TBD
Ex Officio	Sri Sridharan, Managing Director, USF Cybersecurity Initiative

Minutes of the organization's first meeting are included in Appendix F of this report.

### Community Advisory Board

Representing a balance of counsel from senior leadership in business and industry, and the academy, the FCC Community Advisory Board will provide strategic direction for the Center.

Chair	Provost & Executive Vice President, USF (host university), or designee
Community	Banking & Finance (Florida)
Community	Business/Technology (Florida)
Community	Defense (Florida-based)
Community	Healthcare (Florida)
Community	Transportation & Utilities (Florida)
Community	(National)
Academic	(Florida)
Academic	(National)
Academic	(National)
Ex-Officio	Executive Director, FCC



Florida can and should seize the opportunity to become the nation's cyber state. It is an endeavor that will enhance the state's workforce and economy, spur community and business engagement, prepare students and returning veterans for high-demand and high-paying jobs, and attract new companies to Florida.

An investment in the Florida Center for Cybersecurity will produce wide-reaching benefits, both in the short-term and for generations to come.





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- <sup>13</sup> Heckert, p. 8.
- <sup>14</sup> Vijayan, Jaikumar, "Demand for IT Security Experts Outstrips Supply," *Computerworld*, March 7, 2013. [http://www.computerworld.com/s/article/print/9237394/Demand\\_for\\_IT\\_security\\_experts](http://www.computerworld.com/s/article/print/9237394/Demand_for_IT_security_experts)
- <sup>15</sup> *Tampa Bay Information Technology Workforce Analysis: Hillsborough & Pinellas Findings*, October 2012. <http://workforcetampa.com/files/public/Tampa%20Bay%20IT%20Workforce%20Analysis/FINALREPORTwithAppendix.pdf>
- <sup>16</sup> "Hillsborough-Pinellas job Growth rates by Year," *Tampa Bay Information Technology Workforce Analysis: Hillsborough & Pinellas Findings*, October 2012, p. 70.
- <sup>17</sup> Salary depends on job title: Information Security Analyst/Manager/Officer, Security Consultant, and IT Director.
- <sup>18</sup> *Veterans Employment: New Insights, Innovations, and Programs That are Making a Difference*. Proceedings of the NAWDP Annual Conference, May 21, 2013. *Monster.com*. <http://www.nawdp.org/Content/NavigationMenu/WorkforceDevelopment/AnnualConference2/VetEmp.pdf>. The *Monster.com* report shows a different figure for nonveteran overall US employment in April 2013 (6.9%) than the BLS's general US figure of 7.5%; regardless, the bottom line is that veterans could use some means of boosting their chances of successfully transitioning to the civilian employment world.
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<sup>20</sup> "Points of Pride," USF. <http://www.usf.edu/about-usf/points-of-pride.aspx>

<sup>21</sup> The eight counties in the TBP are Hillsborough, Pinellas, Manatee, Pasco, Citrus, Hernando, Polk, and Sarasota; the area includes major metropolitan areas of Tampa and St. Petersburg, along with Clearwater, Bradenton, Sarasota, Venice, Winter Haven, and Lakeland.

<sup>22</sup> Nielsen 2013 estimates, from Tampa Bay Partnership. <http://www.tampabay.us/demographics.aspx>

<sup>23</sup> "Demographics," Tampa Bay Partnership. <http://www.tampabay.us/demographics.aspx>

<sup>24</sup> "Fortune 500." [http://money.cnn.com/magazines/fortune/fortune500/2013/full\\_list/](http://money.cnn.com/magazines/fortune/fortune500/2013/full_list/)

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### Appendix A: Curriculum plan

The interdisciplinary master's degree and certificate programs offer four degree concentrations: Cyber Fundamentals (CF), Cyber Intelligence (CI), Cybercrime (CC), and Information Assurance (IA). The 30-credit program for the master's degree includes four core courses required for all concentrations, plus individualized courses per concentration:

#### Core courses

##### **CNT 5004 Data Communications /Network**

This course describes the components of IT infrastructures and their interactions. Specific topics include Physical layer & data link layer/ Ethernet, Network layer/ IP & Transport layer/ TCP, Application layer & support services, Routing & subnetting, WAN technologies, Wireless & phone networks, and Network security and managerial issues. The exchange of information between computer applications is called Business Data Communications (DataComm). Datacomm technologies provide the underlying plumbing that enables computer applications to access resources on remote computers. The primary goal of this course is to answer the question "How does the IT infrastructure work?" A big part of it is, "How do computers talk to each other?"

Specific topics include:

Physical layer & data link layer/ Ethernet  
Network layer/ IP & Transport layer/ TCP  
Application layer & support services  
Routing & subnetting  
WAN technologies  
Wireless & phone networks  
Network security & managerial issues

##### **CIS 5362 Cryptography**

This course covers Cryptography context (design criteria, generic attacks), Block ciphers, Hash functions, Message authentication codes, Secure channel, Key negotiation, Prime numbers, Diffie-Hellman, RSA, Key negotiation, Key management (Kerberos), PKI, and Storing secrets.

For this class, the syllabus is likely to be built around the following content (based on the TOC in the Schneier Cryptography Engineering book):  
Cryptography context (design criteria, generic attacks)

- Block ciphers
- Hash functions
- Message authentication codes
- Secure channel
- Key negotiation
- Prime numbers
- Diffie-Hellman
- RSA
- Key negotiation
- Key management (Kerberos)
- PKI
- Storing secrets

##### **ISM 6328 Basics of Information Security and Risk Management**

The course will include class presentations and extensive hands-on projects on implementing the common IT controls such as access control lists (ACLs), firewalls, network scanning, STIG (Security Technical Implementation Guidelines), identifying software errors and documenting some key IT General Controls. Required reports will help students improve their writing and documentation skills.

A good class combines teaching a trade and thinking about the trade. This class has an approximately 40-60 balance between skills acquisition and conceptual understanding.

Specifically, the course objectives are to:

- introduce the importance of information security and related business concerns
- make students aware of the major categories of information security threats
- make students aware of the common information security controls

- enable students to implement the basic information security controls
- introduce students to the important legal provisions regarding information security
- make students aware of the methodological implications for information security arising from these legal provisions
- provide students with an understanding of the standard methodologies for complying with legal requirements for IT general controls
- provide a basic understanding of IT risk management in organizations

### **ISM 6930 Decision Processes for Business Continuity and Disaster Recovery**

This course covers topics such as disaster recovery and business continuity following extreme events. The course will also present methods for decision making in such scenarios, with an emphasis on risk assessment and management. The course will also discuss the guidelines of the U.S. Department of Commerce, National Institute of Standards and Technology (NIST)'s Computer Security Incident Handling Guide.

Course contents will include:

- NIST incident handling process
- Incident response team
- Communication management with stakeholders during incidents
- Compliance with legal requirements

### **CF concentration**

EEL 6764 Computer Architecture

CIS 6930 (special topics) Computer Networks, Fundamental principles and analysis

CIS 6930 (special topics) Security & Privacy

### **CI concentration**

LIS 5937 Visual Information Analytics

ENC 6261 Analytic Communication

CCJ 6074 Advanced Intelligence Analytic Methods

INR 5365 Core Concepts in Intelligence

DSC 6600 Cyber intelligence

LIS 6758 Information Strategy & Decision Making

### **CC concentration**

CJE 6688 Cybercrime and Criminal Justice

CJE 6623 Digital Evidence Recognition

CJE 6624 Introduction to Digital Evidence

CJE 6625 Network Forensic Criminal

CJE 6626 Digital Forensic Criminal Investigations

### **IA concentration**

ISM 6145 Seminar on Software Testing

ISM 6125 Software Architecture

ISM 6124 Advanced Systems Analysis and Design

ISM 6316 Project Management

ISM 6218 Advanced Database Administration

### **The FCC will draw from several of USF's colleges and centers, as well as area experts:**

#### **Arts and Sciences**

Relational Communication  
Organizational Communication  
Economics  
Geosciences  
Psychology  
iSchool

#### **Behavioral and Community Sciences**

Communication Sciences and Disorders  
Criminology  
Louis de la Parte Florida Mental Health Inst.

#### **Business**

Information Systems / Decision Sciences  
National and Competitive Intelligence

#### **Education**

Educational Leadership and Policy Studies  
Educational Measurement and Research  
Psychological and Social Foundations

#### **Engineering**

Chemical and Biomedical Engineering  
Civil and Environmental Engineering  
Computer Science and Engineering  
Industrial and Management Systems  
Information Technology

#### **Global Sustainability**

#### **Public Health**

Environmental and Occupational Health  
Epidemiology and Biostatistics  
Global Health  
Health Policy and Management

#### **Office of Research and Innovation**

#### **Center for Urban Transportation**



### Appendix B: Workforce output projections

USF's projected addition to workforce development in cybersecurity, based upon full funding, includes increasing the number of new professional cybersecurity certifications to be awarded annually (550, each with earning potentials of approximately \$100,000) by USF Innovative Education through online and face-to-face courses, beginning in spring of 2014.

■ Increasing the number of new professional cybersecurity certifications to be awarded annually (550, each with earning potentials of approximately \$100,000) by USF Innovative Education through online and face-to-face courses, beginning in spring of 2014:

- +100 Certified Information Systems Security Professional (CISSP)
- +50 Systems Security Certification Practitioner (SSCP)
- +50 Certified Authorization Professional (CAP)
- +50 Certified Secure Software Lifecycle Professional (CSSLP)
- +50 Information Systems Security Architecture Professional (CISSP-ISSAP)
- +50 Information Systems Security Engineering Professional (CISSP-ISSEP)
- +50 Information Systems Security Management Professional (CISSP-ISSMP)
- +50 CompTIA Security
- +50 CompTIA Offering – CASP
- +50 Cisco Certified Network Associate (CCNA) Security

■ Increasing the number of new academic certificates/concentrations to be delivered online and face-to-face and to be awarded by USF annually in cybersecurity-related fields, beginning in 2014-15:

- +475 undergraduate certificates/concentrations
- +270 graduate certificates/concentrations

**USF's proposed new certificate programs:**

Computer Security, Cyberbehavior, Cyberbullying, Cybercrime, Cybersecurity, Cybersecurity Compliance and Risk Management, Cybersecurity in Counseling & Higher Education, Electronic Medical Records Security, Encryption & Information Security, Information Assurance for Healthcare, Information Assurance for Financial Services, Information Assurance for Energy & Utilities, Medical Device Security.

■ Increasing the number of projected additional degrees to be awarded by USF (by 2017-18) in cybersecurity-related fields over the number of degrees awarded in 2011-12:

- +867 baccalaureate degrees
- +215 graduate degrees
- +50 doctoral degrees

## Appendix B: Workforce Output Projections

### USF Interdisciplinary

Master of Science degree in *Cybersecurity* (a new, state-of-the-art program to be implemented in fall of 2014)

Master's (online):	CIP Code	2014-15 (proj)	2017-18
	43.0303	120	300 (+100%)

#### New :

Graduate Certificate in *Cybersecurity* with concentrations in *Cyber Fundamentals*, *Cyber Intelligence*, *Cybercrime* and *Information Assurance*:

50 annually

### College of Engineering

(accredited by ABET)

*Computer Science & Engineering, Engineering Management, Industrial & Manufacturing Engineering, and Information Technology.*

Baccalaureate:	CIP Codes	2011-12	2017-18
	11.0101/11.1013/11.0401/14.0901/ 14.3501	292	336 (+15%)

Master's:	CIP Codes	2011-12	2017-18
	11.0501/14.0901/14.3501/14.0501/ 13.3502	155	194 (+25%)

Doctoral:	CIP Codes	2011-12	2017-18
	14.0901/14.3051/14.0501	16	24 (+50%)

#### New:

Baccalaureate Certificate/Concentration in *Computer Security*:

50 annually

Graduate Certificate/Concentration in *Computer Security*:

25 annually

### College of Business

(accredited by AACSB)

*Accounting, Business Economics, Entrepreneurship in Applied Technologies, Finance, Management Information Systems, Management, and Marketing.*

Baccalaureate:	CIP Codes	2011-12	2017-18
	52.0101/52.0201/52.0301/52.0601/ 52.0801/52.1201/52.1401	1,787	2,055 (+15%)

Master's:	CIP Codes	2011-12	2017-18
	52.0101/52.0201/52.0301/52.0701/ 52.0801/52.1201/52.1401	339	424 (+25%)

Doctoral:	CIP Codes	2011-12	2017-18
	52.0201	6	12 (+100%)

#### New:

Baccalaureate Certificate/Concentrations in *Information Assurance for Healthcare*; *Information Assurance for Financial Services*; and *Information Assurance for Energy & Utilities* :

150 annually

Graduate Certificate/Concentration in *Cybersecurity Compliance and Risk Management*:

50 annually

## Appendix B: Workforce Output Projections

### USF Health

*Bioinformatics, Biotechnology, Health Informatics, and Medical Technology.*

Baccalaureate:	CIP Codes	2011-12	2017-18
	51.1005	10	50 (+400%)
Master's:	CIP Codes	2011-12	2017-18
	51.2706 (new)/26.1103/26.1201	17	51 (+200%)
<b>New:</b>			
	Graduate Certificate in <i>Medical Device Security</i> :		10 annually
	Graduate Certificate in <i>Electronic Medical Records Security</i> :		10 annually

### College of Arts & Sciences

*Library/Information Studies (Cyberintelligence, Strategic Intelligence, Visual Analytics & Communication), Health Information Technology, Mathematics, and Psychology.*

Baccalaureate:	CIP Codes	2011-12	2017-18
	27.0101/42.0101/11.0103 (new)	1,125	1,294 (+15%)
Master's:	CIP Codes	2011-12	2017-18
	25.0101/27.0101/42.0101/11.0403 (new)	146	183 (+25%)
Doctoral:	CIP Codes	2011-12	2017-18
	27.0101/42.0101	23	46 (+100%)

#### **New:**

Baccalaureate Certificate/Concentration in <i>Cyberbehavior</i> (Industrial & Organizational Psychology):			100 annually
Baccalaureate Certificate/Concentration in <i>Encryption and Information Security</i> (Mathematics & Statistics)			50 annually
Graduate Certificate/Concentration in <i>Cyberbehavior</i> (Industrial & Organizational Psychology):			25 annually
Graduate Certificate/Concentration in <i>Encryption and Information Security</i> (Mathematics & Statistics)			25 annually

### College of Behavioral & Community Sciences

*Criminology, and Criminal Justice Administration.*

Baccalaureate:	CIP Codes	2011-12	2017-18
	45.0401	461	507 (+10%)
Master's:	CIP Codes	2011-12	2017-18
	45.0401/43.0103	40	60 (+50%)
Doctoral:	CIP Codes	2011-12	2017-18
	45.0401	5	10 (+100%)

#### **New:**

Baccalaureate Certificate/Concentration in <i>Cybercrime</i> :			100 annually
Graduate Certificate/Concentration in <i>Cybercrime</i> :			25 annually

### College of Education

(Accredited by NCATE)

#### **New:**

Baccalaureate Certificate/Concentration in <i>Cyberbullying</i> :			25 annually
Graduate Certificate/Concentration in <i>Cyberbullying</i> :			25 annually
Graduate Certificate/Concentration in <i>Cybersecurity in</i>			

## Appendix C: Existing Cybersecurity Education Efforts

### Existing Cybersecurity Education Efforts: Florida Universities

School	Bachelor's	Master's	CS Center/Institute
Embry Riddle University	Cyber Intelligence and Security, Software Engineering with Cybersecurity Emphasis, Bachelor of Science in Technical Management Information Security,	-	Department of Global Security and Intelligence Studies (Daytona, FL)
Florida Atlantic University	-	Information Technology & Management	Center for Cryptology and Information Security
Florida Institute of Technology	-	Information Technology--Cybersecurity	-
Florida International University	-	Management Information Systems, Information Technology, Telecommunications and Networking, Computer Science	-
Florida State University	-	Computer Criminology, Computer Network and System Administration, Computer Science	Center for Security & Assurance in Information Technology
Keiser University	Cyber Forensics/Information Security	Information Security	-
Nova Southeastern University	Computer Information Systems, Computer Science, Information Technology	Information Security, Computer Information Systems, Computer Science, Information Technology, Management Information Systems	Secure and Robust Distributed Systems Laboratory
Rasmussen College	Cyber Security	-	-
University of Central Florida	-	Digital Forensics	-
University of Florida	Computer Science/Engineering	Computer Science/Engineering	-

## Appendix C: Existing Cybersecurity Education Efforts

Research Areas	Scholarships/Grants	Certifications/Minors	NSA Designation	Corporate/Governmental Partnerships
Emphasis is placed on effective communications, quantitative skills, global awareness, social responsibility, ethical and legal grounding, information technology, critical thinking skills, teamwork, computer and network functional skills, broad cyber industry familiarity, and a commitment to lifelong learning.	-	Security and Intelligence Minor, The Security and Intelligence Certificate of Completion, Undergraduate Certificate in Information Assurance	-	FAA, NASA, NIKSUN, IEEE
Cryptology, Cyber Crime, Quantum and Post-quantum Cryptology, Secure Systems, Social Perspectives of Information Security	Funding provided by the National Security Agency and the Department of Homeland Security	Information Security Minor and Certificate (offered in the College of Business)	CAE/R	National Security Agency, Department of Homeland Security
Computer and information security, cryptography, application and operating system security	-	Graduate Certificate in Information Assurance and Cybersecurity (online)	-	-
Cybersecurity test technology program, developing technology to prevent cyberattacks	DoD recently provided funding for cyberspace research	-	-	Department of Defense's Test Resource Management Center
Secure Software, Locking, Intrusion Detection Systems, Honeynets, Computer Forensics, RFID, Securing Cyber-Physical Systems, Security and Privacy in Database and Data Management, Network Security	Scholarship funding offered to graduate students through the National Science Foundation and the Department of Homeland Security	NSTISSI-4011, National Training Standard for Information Systems Security (INFOSEC) Professionals, and CNSSI-4014, Information Assurance Training Standard for Information Systems Security Officers (ISSO)	CAE/IAE, CAE/R	National Security Agency, Department of Homeland Security, National Science Foundation
-	-	-	-	-
Information assurance research, support of security, reliability, availability, and performance of computer and information systems in distributed environments, study of enterprise, grid, wireless, ad-hoc and ubiquitous systems	-	Information Assurance/Security Minor, Graduate Certificate in Information Security Management, Graduate Certificate in Information System Security	CAE/IAE	National Security Agency, Department of Homeland Security
-	-	CompTIA® A+ Essentials, CompTIA® A+ Practical Application, CompTIA® Linux+ Powered by LPI, CompTIA® Network+, CompTIA® Security+, Microsoft® Exchange Server, Microsoft® Windows Workstation, Windows® Applications Development with Microsoft® .NET Framework, Windows® Server Active Directory, Windows® Server Network Infrastructure, CIW® Javascript Specialist, Interconnecting Cisco® Networking Devices	-	-
-	-	Graduate Certificate in Computer Forensics	-	-
-	-	-	-	-

### Existing Cybersecurity Education Efforts: National Universities

School	Bachelor's	Master's	CS Center/Institute
Carnegie Mellon University (They have a four-pronged Cybersecurity Strategic Initiative focusing on Research, Outreach, Speakers, and Partnership. Education offered through their CyLab)	-	Information Security Technology and Management, Information Technology, Information Networking, Information Technology-Privacy Engineering, Information Security Policy and Management, Information Technology and Information Security, Executive Masters in Information Assurance, Information Technology and Mobility, Information Technology and Software Management	CyLab, Software Engineering Institute, CERT Program (workshops and training focused on improving network security, responding to and analyzing security incidents, and creating and managing computer security incident response teams)
Embry Riddle University	Cyber Intelligence and Security, Software Engineering with Cybersecurity Emphasis, Bachelor of Science in Technical Management Information Security,	-	Department of Global Security and Intelligence Studies (Daytona, FL)
George Mason University	Information Technology with concentration in Information Security and Network Administration	Information Security, Information Security and Assurance, Computer Engineering with concentration in Network and Systems Security, Management of Secure Information Systems	Center for Secure Information Systems
George Washington University	Computer Science	Cybersecurity, Computer Science, Professional Studies in Security and Safety Leadership (with a focus in Strategic Cybersecurity Enforcement), Cybersecurity in Computer Science, Executive MBA in Cybersecurity, Master of Laws in National Security Law	Cyber Security Policy and Research Institute
Iowa State University	Computer Engineering with specialization in Information Assurance	Information Assurance, Engineering in Information Assurance	Information Assurance Center, Power Infrastructure Cybersecurity Laboratory
Massachusetts Institute of Technology	Electrical Engineering and Computer Science	Electrical Engineering and Computer Science	Lincoln Laboratory
Mississippi State University	Computer Science, Software Engineering, Computer Engineering	Computer Science	Center for Computer Security and Research

## Appendix C: Existing Cybersecurity Education Efforts

Research Areas	Scholarships/Grants	Certifications/Minors	NSA Designation	Corporate/Governmental Partnerships
Trustworthy computing platforms and devices, next-generation secure and available networks, mobility, security of cyber-physical systems, secure home computing, survivable distributed systems and outsourced services, privacy protection, threat analysis and modeling, software security, cryptography, usable privacy and security, threat prediction and response, business risk analysis and economic implications	Scholarship funding offered to graduate students through the National Science Foundation and the Department of Homeland Security. US Department of Defense funds the Software Engineering Institute and the CERT Program.	-	CAE/IAE, CAE/R	Raytheon, Honeywell, Facebook, General Motors, Lockheed Martin, Northrop Grumman, InterDigital, Alcatel-Lucent, Core Security Technologies
Emphasis is placed on effective communications, quantitative skills, global awareness, social responsibility, ethical and legal grounding, information technology, critical thinking skills, teamwork, computer and network functional skills, broad cyber industry familiarity, and a commitment to lifelong learning.	-	Security and Intelligence Minor, The Security and Intelligence Certificate of Completion, Undergraduate Certificate in Information Assurance	-	FAA, NASA, NIKSUN, IEEE
Network attack modeling, analysis, and visualization, virtualization for security, protection against malicious code, cyber situational awareness, secure composable systems, privacy in location-based applications, automated intrusion recovery, secure data centers	Information Assurance Scholarship Program funded by the US Department of Defense	Applied Cyber Security Graduate Certificates	CAE/IAE, CAE/R	NSA, National Science Foundation, Air Force Research Laboratory, Air Force Office of Scientific Research, National Institute of Standards and Technology, DCS Corp, Intelligence Advanced Research Projects Activity
Computer network security and information assurance, computer system and network privacy, electronic commerce security, security mechanisms related to intellectual property, e-government security, internet regulatory issues, computer ethics and social impact of technology, information assurance and computer security education and workforce development	Scholarships and grants are funded by the Defense Department, the Department of Homeland Security, and the National Science Foundation (administered over \$8 million in grants since 2002)	Computer Security and Information Assurance Graduate Certificate	CAE/IAE, CAE/R	National Security Agency, Department of Homeland Security, Department of Defense, National Science Foundation
Forensics, intrusion detection, network modeling, wireless communications, information/cyber warfare, artificial intelligence and data mining, foreign policy, identity theft, cryptography. Cyber-physical systems framework for risk modeling and mitigation of cyber-attacks on the power grid that accounts for dynamics of the physical system, as well as the operational aspects of the cyber-based control network.	National Science Foundation funds Iowa State's Scholarship for Service program	Graduate Certificate in Information Assurance	CAE/IAE, CAE/R	National Security Agency, National Science Foundation
Development of prototype components and systems for computer network security	Federally funded (it is a Department of Defense Research and Development Laboratory)	Short Programs Professional Education on Applied Cyber Security, Short Programs Professional Education on Cryptography and Computer Security	-	Maryland Cybersecurity Center, Department of Defense
Artificial Intelligence, Computer Crime and Forensics, Cryptography and Information Security	Scholarships funded through the Department of Defense and the National Science Foundation	Information Assurance Professional Certificate (INFOSEC Professional)	CAE/IAE, CAE/R	National Science Foundation, Army Research Laboratory, Cisco, Dexisive Inc

## Appendix C: Existing Cybersecurity Education Efforts

School	Bachelor's	Master's	CS Center/Institute
Pennsylvania State University	Security and Risk Analysis-Information and Cyber Security (online)	Information Sciences and Technology	Penn State Cyber Security Lab
Syracuse University	-	Cybersecurity Law and Policy Course	Institute for National Security and Counterterrorism
University of Maryland-College Park	Computer Science with a Cybersecurity specialization	Computer Science/Electrical and Computer Engineering, Engineering in Cybersecurity	Maryland Cybersecurity Center
University of Maryland-University College	Cybersecurity, Computer Networks and Security	Cybersecurity, Cybersecurity Policy, Digital Forensics and Cyber Investigation, Information Technology and Information Assurance	-
University of Southern California	-	Computer Science with Specialization in Computer Security, Cyber Security	Center for Computer Systems Security
University of Texas-San Antonio	Infrastructure Assurance, Computer Science with Computer and Information Security concentration	Information Technology (also available with Information Assurance Concentration), MBA Information Assurance concentration, MBA Information Systems concentration, Computer Science with Computer and Information Security concentration	Center for Infrastructure Assurance and Security (which offers cyber security events, training classes, exercises, and competitions), Institute for Cyber Security (conducts basic and applied research in partnership with academia, government and industry), Center for Education and Research in Information and Infrastructure Security (conducts high impact research in information assurance and security and educates the cybersecurity workforce needed now and in the future. The center's research objective is to offer leading edge solutions that will help to solve cybersecurity problems of national scope and importance)
University of Washington	-	Cybersecurity and Leadership (Online), Cyber Security Engineering, Information Management, Information Assurance	Center for Information Assurance and Cybersecurity



## Appendix C: Existing Cybersecurity Education Efforts

Research Areas	Scholarships/Grants	Certifications/Minors	NSA Designation	Corporate/Governmental Partnerships
Malware analysis, systems security in cloud computing, holistic security of smartphone systems, secure lean software, self-protecting data centers, computer-aided human centric cyber situation awareness, resilient and self-healing software systems and networks, malware and software security, wireless network security, understanding and assuring information privacy; identity management, access control, trust computing, enterprise “health care” models, on-the-fly “surgery” techniques, cyber security situational awareness information security economics, policies and security management, and social implications of security.	Professors have been awarded grants by the National Science Foundation to continue their research	Post-baccalaureate Certificate in Information Systems Security (online)	CAE/IAE, CAE/R	National Security Agency, National Science Foundation, Cisco, HP, Department of Homeland Security, Air Force Research Laboratory, Department of Defense
Law, National Security & Counterterrorism, Security Governance, New Frontiers in Science, Cyber, & Technology, Homeland Security	-	Certificate of Advanced Studies in Systems Assurance, Certificate of Advanced Studies in Security Studies	CAE/IAE, CAE/R	US Department of Homeland Security, Department of Defense, Booz Allen Hamilton, RAND Corporation, Dyn-Corp International, National Science Foundation
Wireless and network security, secure software, cyber supply chain security, privacy in social networks, cybersecurity policy, cryptography, attacker behavioral analysis, health care IT, multimedia forensics, the economics of cybersecurity	Grants funded by the National Science Foundation	Graduate Certificate in Engineering in Cybersecurity, Graduate Certificate in Professional Studies in Cybersecurity Leadership	CAE/R	Booz Allen Hamilton, Northrop Grumman, Sourcefire, Lockheed Martin, SAIC, Lincoln Laboratory, Google
-	UMUC hosts an annual gala to raise funds for Cybersecurity student scholarships. Attendants include a broad range of industry leaders and members of the Maryland Commission on Cybersecurity Innovation and Excellence.	Cybersecurity Policy, Cybersecurity Technology, Foundations of Cybersecurity, Homeland Security Management, Information Assurance, Minor in Cybersecurity	CAE/IAE	NSA, Department of Homeland Security, Booz Allen Hamilton, AT&T, Cisco, Dell, Northrop Grumman, Microsoft, Lockheed Martin, Google, SAIC, & more.
Technologies supporting confidentiality, integrity, resiliency, privacy, intrusion detection and response, and survivability of critical infrastructure	-	Minor in Applied Computer Security, Specialization in Cyber Security, Specialization in Digital Forensics	CAE/R	US Department of Homeland Security, National Security Agency
Digital forensics, information security management and strategy, applied network and information systems security, and the economics and psychology of information security, botnet analysis and defense, trustworthy cloud computing, secure information sharing, social computing security, infrastructure assurance, assured data provenance, privacy policies and enforcement.	The ICS was established through a grant provided by the Texas Emerging Technology Fund. Research is also funded by the NSF and the Department of Homeland Security.	Minor in Digital Forensics, Minor in Infrastructure Assurance and Forensics	CAE/IAE	National Security Agency, National Science Foundation, Department of Homeland Security, Texas Emerging Technology Fund, Cisco, The University of Texas System, Symantec, Dell, BAE Systems
Wireless network infrastructure, Internet security, and commercial/industrial applications, systems engineering in information assurance, developing strategies to recruit, hire and retain cybersecurity employees, next generation honeypots	Part of the Scholarship for Service funded by the National Science Foundation	Information Systems Security Certificate, Information Security and Risk Management Certificate, Network Engineering Certificate, Digital Forensics Certificate	CAE/IAE, CAE/R	Microsoft, Boeing, Accuvant, Department of Homeland Security, NSA

### Appendix C: Existing cybersecurity education efforts

### Appendix D: Common Definitions in Cybersecurity

**Account Harvesting** – collecting or “harvesting” of all the authentic account names on a system

**Accessibility** – the degree to which a computer or information system is available

**Advanced Windows Security** – system Administration practices that ensure security of Windows operating systems, including permissions, networking, file sharing, and more

**Anonymous** – a loosely affiliated collective of “hacktivists,” typically motivated socially and politically, who engage in cyberattacks against corporate and government targets through web site disruptions and defacements, often resulting in the theft and release of sensitive or secured documents or personal information

**Application** – software that performs programmed functions for a user. Applications can support word processing, spreadsheet development, graphic creation, presentation creation and database tasks

**Backbone** – the backbone is the “skeleton” of the Internet; it is a high-speed fiber optic network of main lines that interconnect around the world at various places or Network Access Points (NAPs)

**Backdoor** – a backdoor can be created by the exploitation of a vulnerability, such as a programming error or malware, and allows access into a device without proper authentication

**Bandwidth** – the capacity of a communication channel to pass data during a certain period of time

**Biometrics** – access controlled by physical characteristics

**Bit** – the smallest unit measure of information storage, a term derived from “binary digit”

**Black Hat (Hacker)** – A hacker with malicious intent who accesses computer networks without proper authority, legally or otherwise; slang for computer criminal

**Blacklisting** – blocking of harmful websites, often done by parents or employees with the aid of software programs that block with specified or selected criteria

**Blended Threat** – combined cyberattack methods that are used to increase damage during a computer network attack

**Botnet** – a controlled network of a large number of computers infected with Trojan horse viruses by cybercriminals often used to implement a denial of service attack

**Botmaster(s)** – a person or group of people in control of a botnet and whose location is usually difficult to determine

**Browser** – used to view online content, a browser is a software program that can retrieve and display information and

store cookies

**Buffer Overflow** – overloading of a temporary data storage area so data overflows into adjacent buffers and corrupts them

**BYOD (Bring Your Own Device)** – acronym used to describe a policy that allows personal mobile devices within range of a wireless network, usually a corporate or private network, and that allows those users access

**Cache** – high-speed storage mechanism for memory or disks; pronounced “cash”

**Cryptography** – science and practice of securing with algorithms, particularly for third-party communications

**Ciphertext** – encrypted form of a message being transferred

**Client** – a machine that uses and requests service from another system machine such as a “server”

**Computer Emergency Response Team (CERT)** – organization that provides incident response services to cyberattack victims and provides information about known vulnerabilities and threats as well as ways to stay safe online

**Confidentiality** – ensuring that information or data on a system is not accessed by unauthorized users

**Cookie** – data exchanged between an HTTP server and browser that is then stored on a client for later server retrieval

**Denial of Service (DoS)** – prevention of authorized access or halting of system operations or system functions

**Digital Forensics** – branch of forensic science including the recovery and investigation of digital media, often legal evidence, found in digital devices and digital records

**Distributed denial of service (DDoS)** – multiple systems, such as a botnet, for which operation and system functions have been halted

**Domain Hijacking** – an attacker blocks access to the DNS server and replaces information to gain access and take over that domain

**Domain Name System (DNS)** – the way domain names on the Internet are translated into Internet Protocol addresses; the named form of an Internet address

**Doxing** – an urban term used to describe searching for personally identifiable information by using online documents

**Firewall** – a software or hardware component that prevents unauthorized access to or modification of a system

**Flooding** – providing more information than a system can handle to ultimately cause failure of that system

**Grey Hat (Hacker)** – hacker operating without malicious intent but is prepared to operate against legal or ethical boundaries

**Hacking** – accessing computer networks, legally or otherwise; heavily modify the software or hardware of one’s own computer system; slang for computer crime

**Hactivism** – hacking in the name of social or political protest or to facilitate change for a cause

**Hardening** – identifying and fixing system vulnerabilities

**Honey Pot** – a “trap” to detect and thwart a potential cyberattack on a system before exploitation occurs

**Identity Management** – practices involving the management of identification of individuals and verifying data to grant access with proper permissions

**Integrity** – assuring that information is accurate and complete

**Internet Protocol** – method used to send data from one computer to another over the Internet

**Intrusion Detection System (IDS)** – security management system that gathers and analyzes information on computers or on a network

**MAC Address** – numerical address that identifies each network device

**Malware** – software containing malicious code that is usually intended to gain unauthorized access to a computer or system

**Man-in-the-Browser** – Trojan horse that intercepts and manipulates electronic information over a supposedly secure link

**Man-in-the-Middle Attack** – similar to the Man-in-the-Browser, but the hacker creates a diversion on the legitimate page that enables him/her to make changes in real time to the information entered by the unsuspecting user

**Mobile and Wireless Security** – system administration practices that ensure security of mobile and wireless devices, including the cloud, WLAN, and WIFI, and includes encryption methods, authentication, access permissions, and protection

**Open source** – free licensing and distribution of certain software and applications to promote universal access

**Password Cracking** – attempt to guess passwords, sometimes with the aid of a cracking program

**Password Sniffing** – passive wiretapping to gain access to a password on a network

**Patch** – software update by a vendor intended to fix a known vulnerability

**Penetration Testing and Vulnerability Assessment** – testing of the external perimeter of a network to determine

cyberattacks that could be caused by threats and the exploitation of vulnerabilities

**Phishing** – attempt to trick an e-mail recipient into disclosing sensitive information by posing as a trusted source

**Root** – the name of the administrator account on a Linux system

**Session Hijacking (Sidejacking)** – taking over or duplicating an established session

**Sniffing** – another name for passive wiretapping

**Social Engineering** – using social techniques, such as lying, blackmailing or impersonating, to trick another person with the ultimate goal of gaining otherwise unauthorized access to an information system

**Spoofing** –pretending to be an authorized user to gain access to a system

**Steganography** –hiding a message or data within a file or program

**Threat** – potential for violation of security, often by exploitation of a vulnerability

**Trojan horse** – non-self-replicating malware that gains privileged access to the operating system then exploits the computer and allows unauthorized access to the target computer through a backdoor – all while appearing to perform a non-malicious function

**Virus** – a hidden, self-replicating program usually containing malicious code that cannot run by itself

**Vulnerability** – part of a system, device, computer, or network that could be exploited by a threat to execute a cyberattack

**White Hat (Hacker)** – penetration tester responsible for the security of a system

**Worm** – a program containing malicious code that can replicate over a network and run by itself

**Zombie** – a compromised computer that will be later used, unbeknown to the owner, to execute an attack

### Appendix E: Selected faculty biographies

#### College of Business



**Manish Agrawal, Ph. D.**

Associate Professor

Research Interests: Software quality, offshoring and outsourcing, e-commerce, extreme event response, social media analytics, decision fusion

Manish Agrawal teaches courses in business data communications, computer networks, information systems, the development of web applications and information. An associate professor in the Information Systems Decision Sciences Department, Agrawal was the recipient of USF's university-wide award recognizing teaching excellence in 2006. An expert in the areas of software quality, offshoring and outsourcing, and e-commerce, his research interests include extreme event response, social media analytics, decision fusion, software quality. An avid researcher, his work has been published in numerous academic journals, including Management Science, INFORMS Journal on Computing, Journal of Management Information Systems, IEEE Transactions on Software Engineering, Decision Support Systems and the Journal of Organizational Computing and Electronic Commerce. His research and teaching have been funded by the US National Science Foundation, the US Department of Justice, the Indo-US Science and Technology Forum and Sun Microsystems.



**Walter Andrusyszyn**

Adjunct Professor

Research Interests: Law and diplomacy, intelligence analysis

Walter Andrusyszyn, an adjunct professor, teaches international business courses at the undergraduate level in the College of Business. Andrusyszyn, who began teaching at the University of South Florida in 2007, has an extensive background in both business and government. Temporarily returning to government in 2009, he served as the deputy permanent representative to the North Atlantic Treaty Organization or NATO and shared responsibility in preparing U.S. President Barack Obama's first visit to Europe. He has also served on the White House's National Security Council and held various positions with the Department of State. Andrusyszyn has private sector experience as a manager for a large American company that began operations in Europe in 2003.



**Kaushal Chari, MBA, Ph. D.**

Associate Dean and Professor

Professor Kaushal Chari serves as chair of the Information Systems & Decision Sciences Department of the College of Business. He currently teaches a course in distributed systems and participates in numerous university committees and research efforts. Chari's research program covers three broad areas: software engineering, business intelligence and distributed systems. He is interested in applying quantitative as well as intelligent techniques to address problems related to IT systems, software development and business process management. Chari's work has been published in a variety of academic journals, including Management Science, Information Systems Research, INFORMS Journal on Computing, and IEEE Transactions on Software Engineering. Chari served as the associate editor of MIS for Interfaces journal from 2002-2010, and as the vice chair of the INFORMS

## Appendix E: Selected faculty biographies

Information Systems Society from 2007 – 2009.



**Michael Fountain, MBA, Ph. D.**

Director

Michael Fountain holds three faculty appointments at USF, serving as the John & Beverley Grant Endowed Chair in Entrepreneurship, a professor in the College of Engineering, and a professor in the Department of Psychiatry & Behavioral Medicine. He currently serves as founding director of USF's Center for Entrepreneurship and the director for university-wide interdisciplinary entrepreneurship educational programs. Fountain is an expert in creating, financing, and growing biotechnological, medical device, and life science companies. He has founded or cofounded seven new ventures (three later publicly traded companies) and patented and commercialized numerous innovative medical and diagnostic products (including sustained release anti-cancer drugs, genetically engineered diagnostic products for autoimmune diseases, microencapsulated dermatologic products and vaccine products for prevention of human and animal infectious disease). He was a pioneer in the development and application of the use of phospholipids in micro- and nano-particle technologies for drug encapsulation. Fountain has been instrumental in the development and deploying of entrepreneurial programs on an international level. He has served as an Entrepreneur-in-Residence with the Ewing Marion Kauffman Foundation overseeing strategy, venture capital and private equity, and life sciences entrepreneurship.



**Balaji Padmanabhan, Ph. D.**

Chair, Information Systems Decision Sciences  
Associate Professor

Balaji Padmanabhan is the Anderson Professor of Global Management and an associate professor in the Information Systems Decision Sciences Department. He has created and taught undergraduate, MBA/MS, and doctoral courses in areas related to business/data analytics, computational thinking, and electronic commerce. Padmanabhan's research addresses data analytics for business applications, algorithms for online news recommender systems, management of data analytics in firms, fraud detection in healthcare, analytics in examining service quality and customer churn, behavioral profiling, and pattern discovery. His work has been published in both computer science and information systems journals and conferences including Management Science, Information Systems Research, MIS Quarterly, and INFORMS Journal on Computing. Padmanabhan's professional service includes work as associate editor and program committee member of several academic journals and conferences. He has published his research in leading outlets in business and computer science. He also works with several firms on technical, strategic and educational issues related to business and data analytics.

### College of Engineering



**David Armitage**

Former Director, Division of Information Technology, College of Engineering, Lakeland, FL

David Armitage is the former Director, Division of Information Technology, College of Engineering, Lakeland, FL, where he was responsible for overall coordination of activities of division, including course scheduling, credentialing faculty for courses, faculty evaluation and program development. Responsible for coordinating the integration of the unit and its academic programs, current and proposed, into the College of Engineering. His research interests include the use of technology and advanced pedagogies to improve computing knowledge transfer to undergraduates, experimental application of electroencephalography to computing education, and



Robotics applications.

**José L. Zayas-Castro, MBA, Ph. D.**

Professor and Associate Dean for Research

Dr. José L. Zayas-Castro is Professor and Associate Dean for Research, College of Engineering at the University of South Florida (USF) in Tampa. For nine and half years he was Chairperson of the Department of Industrial & Management Systems Engineering at the USF. Dr. Zayas-Castro has a B.S. in IE from UPRM and M.S. in Management & Industrial Engineering, MBA, and Ph.D. from Rensselaer Polytechnic Institute. His interests relate to statistical process control, applied modeling, systems integration, business and R & D strategy, innovation and entrepreneurship, cost analysis, technology transfer, assessment, healthcare systems and healthcare delivery, and innovation in engineering education. Dr. Zayas-Castro recent research has emphasized the re- design of processes and products, re-engineering the service sector, particularly healthcare, and the integration of research and engineering education. Examples are: reengineering and modeling healthcare operational systems in healthcare systems, e.g., hospitals and clinics, healthcare decision making in outpatient and inpatient processes, re-engineering of Graduate Medical Education, decision tools for the classification and diagnostic of prostate cancer, product and process developments in medical devices and bio-medical businesses, and the extension and adaptation of the Learning Factory using small scale technology. Dr. Zayas-Castro participates in various advisory and review committees in the National Science Foundation, and has been associated to more than \$9 million in external funding. Dr. Zayas-Castro has more than 40 publications and over 60 presentations.



**Lawrence Hall, Ph. D.**

Professor and Department Chair

Research Interests: Distributed machine learning, data mining, pattern recognition and integrating AI into image processing, fuzzy logic in pattern recognition, AI and learning

Lawrence Hall is a Professor and Chair of Computer Science and Engineering at University of South Florida. He received his Ph.D. in Computer Science from the Florida State University in 1986 and a B.S. in Applied Mathematics from the Florida Institute of Technology in 1980. He has received funding from the National Science Foundation. He co-edited the 2001 Joint North American Fuzzy Information Processing Society (NAFIPS), IFSA conference proceedings. He was the co-program chair of NAFIPS 2004. He received the IEEE SMC Society Outstanding Contribution Award in 2000. He received an Outstanding Research Achievement Award from the University of South Florida in 2004 and is a past president of NAFIPS. He is currently the president-elect of the SMC Society and the editor-in-chief of the IEEE Transactions on Systems, Man and Cybernetics, Part B. Also, he is associate editor for IEEE Transactions on Fuzzy Systems, International Journal of Intelligent Data Analysis, and International Journal of Approximate Reasoning, and is a Fellow of IEEE.



**Rangachar Kasturi, Ph. D.**

Douglas W. Hood Professor

Research Interests: Computer Vision, Pattern Recognition, Biometrics, Video Information Processing  
Dr. Kasturi is the Douglas W. Hood Professor of Computer Science and Engineering at the University of South Florida. He received his Ph.D. degree from Texas Tech University in 1982. He was a Professor of Computer Science and Engineering and Electrical Engineering at the Pennsylvania State University during 1982-2003. Dr. Kasturi served as the President of the International Association for Pattern Recognition (IAPR) during 2002-04 and as the President of the IEEE Computer Society during 2008. He is a Fellow of the IEEE and a Fellow of IAPR. He was a Fulbright scholar during 1999.





**Jay Ligatti, Ph. D.**

Associate Professor

Research Interests: Software security and programming languages, software monitoring, language-based security and reliability, security automata, type systems

Jay Ligatti received a Ph.D. in Computer Science from Princeton University (2006) and a B.S. in Computer Science and B.M. in Music Composition from the University of South Carolina (2001). Dr. Ligatti's current research projects include: Theory and practice of security-policy composition, theory and practice of monitoring software at runtime, principled definition and analysis of code injections, and proving the completeness of subtyping relations. Dr. Ligatti teaches Foundations of Software Security, Programming Languages, Advanced Programming Languages, Compilers, and Operating Systems.

### College of Arts and Sciences



**Jim Andrews, Ph. D.**

Director

Research Interests: Interdisciplinary health informatics

Jim Andrews is the Director of the University of South Florida, School of Information, as well as Interim Director of the School of Mass Communications. He works with the faculty from both schools to develop new synergies that will lead to innovative research and education in a dynamic and shifting media and information landscape. His research falls broadly within the interdisciplinary field of health informatics. Specifically, he has interests in clinical research informatics, as well as health-related information behaviors, particularly in the context of cancer genetics. He works collaboratively with researchers from USF Health, within SI and SMC, and also across the county and internationally.



**Randy Borum, Ph. D.**

Professor

Research Interests: Behavior-based protocols for threat assessment, anti-terrorism training, protective intelligence, psychology of terrorism, performance under stress

Dr. Randy Borum is a Professor and Coordinator of Strategy and Information Analysis in the School of Information at the University of South Florida. He holds a joint appointment the College of Public Health and has previously served on the faculty of the College of Behavioral and Community Sciences. He regularly teaches and consults with law enforcement agencies, the Intelligence Community, and DoD, and has authored/ co-authored more than 140 professional publications. Dr. Borum has been an instructor with the BJA State & Local Anti-Terrorism Training (SLATT) Program since 1999, and worked as a Senior Consultant to the U.S. Secret Service for more than

a decade helping to develop, refine and study behavior-based protocols for threat assessment and protective intelligence. He has previously served as a sworn police officer, Forensic Coordinator for a regional state psychiatric facility, and as full-time faculty at He has taught at the FBI Academy, FLETC; JFK Special Warfare Center and School (Ft. Bragg); Joint Special Operations University; CIA; and the US Army Intelligence Center and School (Ft. Huachuca). He was Principal Investigator on the "Psychology of Terrorism" initiative for an agency in the US Intelligence Community. He serves as an advisor to the FBI's Behavioral Analysis Unit-1 (Threat Assessment & National Security), the National Center for the Analysis of Violent Crime (NCAVC), the FLETC Behavioral Science Division, and is listed on the United Nations' Roster of Experts in Terrorism. Dr. Borum is a Past-President of the American Academy of Forensic Psychology, and currently serves as Senior Editor of the Journal of Strategic Security, and on the editorial boards of the American Intelligence Journal; Behavioral Sciences & the Law and Red Team Journal (online).

## Appendix E: Selected faculty biographies



### **Chuck Connor, Ph. D.**

Associate Dean for Research and Professor

Research Interests: Volcanic risk models, high resolution magnetic survey techniques and mapping

In volcanology, Connor's research has focused on development of volcanic hazard and risk models. Research involves high resolution magnetic surveys and techniques, inversion of magnetic data. Recent geophysics projects have been in Armenia, Nicaragua, the western US, and Japan. To support this research Connor has various geophysical instruments (TEM, slingram EM, Cs-vapor magnetometer, differential GPS, carbon dioxide flux meter), data loggers, and a beowulf cluster for parallel programming involved in heavy lifting numerical problems and stochastic simulations. Funding comes from the US National Science Foundation, the US Geological Survey, and WorldBank.



### **Eric Eisenberg, Ph. D.**

Professor and Dean

Research Interests: Organizational and health communication, strategic uses of communication

Eisenberg leads the largest college at USF, home to 24 academic departments, 22 centers and institutes, more than 15,000 students, 600 faculty and 180 staff. Eisenberg is a nationally recognized scholar in the strategic use of communication to promote positive organizational change. He has published extensively in national and international scholarly journals and is a widely sought-after consultant. Eisenberg was appointed to a five-year term as dean of the USF College of Arts and Sciences in March 2010. As interim dean from 2008-2010, he guided the college through a complex process of restructuring that led to the establishment of the School of Humanities, School of Social Sciences, and School of Natural Sciences and Mathematics, as well as steering the efforts to integrate new academic units into the college. He supported the recruitment of outstanding new faculty from the United States and abroad, strengthened the college's leadership and cultivated a greater sense of scholarly community across the college.



### **David Jacobson, Ph. D.**

Professor

Research Interests: Immigration and citizenship, human rights, women's status in global conflict, sustainability

Jacobson's research focuses on areas related to immigration and citizenship, international institutions and law, human rights, and women's status in global conflict. His work concerns sustainability in two areas: the sustainability of communities in the context of social change and the implications of climate change for human institutions.

## Appendix E: Selected faculty biographies



### **Michael Brannick, Ph.D.**

Professor, Psychology

Research Interests: Industrial and organizational psychology

Michael Brannick is a professor and former chair of the department of Psychology. He received his Ph.D. from Bowling Green State University in 1986. His research interests include Industrial and organizational psychology, Research Methods and Statistics, and Team Performance (effectiveness and measurement). He teaches undergraduate as well as graduate level courses. His undergraduate courses include: Industrial psychology, applied psychology, Fairness in selecting employees, research methods, and tests and measures. His graduate courses include: Correlation & regression, Decision making, Job analysis, Meta-analysis, Psychometrics, Teams & teamwork, and Univariate statistics (ANOVA & Regression). He is a Member of the American Psychological Association, the American Psychological Society, and the Society for Research Synthesis Methodology, as well as a fellow of the Society for Industrial and Organizational Psychology.



### **Toru Shimizu, Ph.D.**

Chair and Professor, Psychology

Research Interests: Visual information processing, comparative neuroscience, cognitive neuroscience

Shimizu received his M.S. and Ph. D. degrees in psychology from the University of Maryland and was a post-doctoral neuroscientist at the University of California, San Diego. He has been a visiting professor at Keio University in Japan and helped to facilitate a collaborative research agreement between the psychology departments of Keio and USF. Shimizu's research is focused on visual information processing, animal cognition, comparative neuroscience, and evolution of the brain. He leads the Comparative Cognition and Neuroscience laboratory at USF. Shimizu teaches Comparative Psychology, Psychology of Learning, Physiological Psychology, Methods in Neurosciences, and Neuroscience Seminar.



### **Paul Spector, Ph.D.**

Area Director, Industrial/Organizational Program

Paul E. Spector is a distinguished university professor of industrial/organizational (I/O) psychology and I/O doctoral program director at the University of South Florida. He is also director of the NIOSH funded Sunshine Education and Research Center's Occupational Health Psychology program. He is the Associate Editor for Point/Counterpoint for Journal of Organizational Behavior, and Associate Editor for Work & Stress, and is on the editorial board of Journal of Applied Psychology. His research is in the areas of occupational stress and workplace violence. Spector received his Ph.D. in Industrial/Organizational Psychology at the University of South Florida in 1975. He is interested in how organizational factors, work-nonwork interface, and personal characteristics interact to affect employee health, safety, and well-being. All of this fits into the newly emerging interdisciplinary field of occupational health psychology. He studies counterproductive work behavior, interpersonal conflict, job attitudes, job stress, work-family conflict, and workplace violence. He also studies how personality affects each of these areas.



### **Stephen Stark, Ph.D.**

Associate Professor and Graduate Program Director

Research Interests: Psychometrics, computer adaptive testing, multivariate statistics

Dr. Stark's research focuses on the development and application of psychometric methods to practical problems in industrial organizational and educational settings. He has worked with university faculty and practitioners to develop and improve tests measuring constructs, such as job performance, personality, and cognitive ability. He has published papers on computer adaptive testing, differential item and test functioning (measurement bias), and issues related to faking in personality assessment. He teaches psychometrics, multivariate statistics, industrial organizational psychology, and introduction to social psychology.

### Office of Research and Innovation



**Sudeep Sarkar, Ph. D.**

Associate Vice President for Research and Innovation  
Professor, Computer Science and Engineering

Research Interests: Perceptual organization using pattern theory, cloud computing, image analysis

Sarkar received the B.Tech. degree in Electrical Engineering from the Indian Institute of Technology, Kanpur, in 1988. He received the M.S. and Ph.D. degrees in Electrical Engineering, on a University Presidential Fellowship, from The Ohio State University, Columbus, in 1990 and 1993, respectively. He has co-authored one book and co-edited another book on perceptual organization. He is the recipient of the National Science Foundation CAREER award in 1994, the USF Teaching Incentive Program Award for Undergraduate Teaching Excellence in 1997, the Outstanding Undergraduate Teaching Award in 1998, and the Theodore and Venette Askounes-Ashford Distinguished Scholar Award in 2004. He served on the editorial boards for the IEEE Transactions on Pattern Analysis and Machine Intelligence (1999-2003) and Pattern Analysis and Applications Journal during (2000-2001). He is currently serving on the editorial board of the Pattern Recognition Journal and the IEEE Transactions on Systems, Man, and Cybernetics.



**Paul R. Sanberg, Ph.D., D.Sc.**

Senior Vice President for Research & Innovation  
President, USF Research Foundation  
Distinguished University Professor

Research Interests: Technology and innovation, cell therapeutics for degenerative diseases

Sanberg is a member of the Board of Scientific Counselors for the National Institute of Drug Abuse at the National Institutes of Health, and has served on numerous scientific advisory boards for health-related foundations and companies. He has significant industry experience with biotech companies involved in cell therapy for degenerative disorders and biopharmaceutical development. He is the Editor-in-chief of Technology and Innovation, and serves on editorial boards for more than 30 scientific journals. Dr. Sanberg is the President of the National Academy of Inventors and has also served as president of a number of professional societies including the American Society for Neural Transplantation and Repair, the Cell Transplant Society, and the International Behavioral Neuroscience Society. He is the author of more than 600 scientific articles, including thirteen books, with over 20,000 scientific citations (Google scholar). As an inventor on approximately 100 health-related U.S. and foreign patents, his early work was pioneering in understanding why brain cells die in neurological disorders and in drug abuse research. Sanberg's work has been instrumental in translating new pharmaceutical and cellular therapeutics to clinical trials for Tourette syndrome, depression, stroke, Huntington's disease and Parkinson's disease. He is a Fellow of the AAAS, a Charter Fellow of the National Academy of Inventors, and serves on the evaluation committee of the National Medal of Technology and Innovation.



**Lt. General Martin Steele**

Director of Office of Military Partnerships  
Associate Vice President for Veterans Research

Lieutenant General Martin R. Steele, US Marine Corps (retired), is the associate vice president for veterans research. General Steele, who joined USF in 2009, has been executive director of Military Partnerships and co-chair of USF's Veterans Reintegration & Resilience Initiative, a major goal of which is the formation of a nationally recognized research center aimed at the rehabilitation and successful reintegration of veterans. General Steele enlisted in the Marine Corps in 1965 and rose from private to three-star general with a tenure as the longest serving chief operating officer in the history of the Marine Corps. He culminated his military career as the deputy chief of staff for plans, policies, and operations at Headquarters, US Marine Corps in Washington, DC. Upon his retirement from

## Appendix E: Selected faculty biographies

active duty, General Steele served as president and CEO of the Intrepid Sea-Air-Space Museum, the largest naval museum in the world. A decorated combat veteran with over 34 years of service, he is a recognized expert in the integration of all elements of national power (diplomatic, economic, informational, and military) with strategic military war plans and has served as an executive strategic planner/policy director in multiple theaters across Asia. His extraordinary career was chronicled as one of three principals in the award winning military biography *Boys of '67* by Charles Jones. As founder and chairman of Steele Partners, Inc., a strategic advisory and leadership consulting company, General Steele has led a philanthropic transition program assisting exiting Marines into private sector jobs throughout the country, at no cost to the Marine participants, the Marine Corps or to the companies that provide employment opportunities. He serves on several boards across the country, including Fisher House Foundation, Veterans Advantage, and the Marine Corps Scholarship Foundation. General Steele holds a bachelor's degree in history from the University of Arkansas, where he was recognized as a distinguished graduate of the Fulbright College of Arts and Sciences, and master's degrees from Central Michigan University, Salve Regina College, and the Naval War College.

### College of Behavioral and Community Sciences



**Max Bromley, Ed. D.**

Associate Professor

Research Interests: Law enforcement accreditation standards

Dr. Bromley is Associate Professor Emeritus in the Department of Criminology and Director of the Master of Arts in Criminal Justice Administration Program (designed specifically for criminal justice practitioners) at the University of South Florida. Prior to becoming a fulltime faculty member he served as the Associate Director of Public Safety at USF and worked in the criminal justice field for almost 25 years. He served on the statewide task force that established the first set of law enforcement accreditation standards for Florida. Dr. Bromley was also the Chairperson for USF's taskforce on campus security following the terrorist attack on September 11th. Bromley co-authored the textbook *Crime and Justice in America*, 6th edition. He also co-edited *Hospital and College Security Liability* and was

the senior co-author of *College Crime Prevention and Personal Safety Awareness*. In addition, he has written dozens of scholarly articles, book chapters and technical documents on a variety of campus crimes and campus policing issues. Dr. Bromley assisted the U.S. Bureau of Justice statistics in developing and implementing the first national survey of campus law enforcement agencies. More recently Dr. Bromley has also been involved in research on community policing. His articles have appeared in *Policing*, *Police Quarterly*, *Criminal Justice Policy Review*, and *Journal of Contemporary Criminal Justice*. Dr. Bromley also wrote *Department Self-Study: A Guide for Campus Law Enforcement Administrators*, which is used at over 1,000 institutions of higher education.



**Charles Dion, MA**

Director, Policy and Services Research Data Center

Research Interests: Statistical analysis of large administrative databases

Charles Dion, M.A. is the Director of the Policy and Services Research Data Center (PSRDC) in the Department of Mental Health Law and Policy at the Louis de la Parte Florida Mental Health Institute (FMHI), University of South Florida. He received both his Bachelor's and Master's degrees from the University of South Florida in Mathematics. His Master's degree has a concentration in Statistics. Following the completion of his Master's degree he went to work for Florida Medical Quality Assurance, Inc. (FMQAI), the Florida Medicare Quality Improvement Organization as a Data Analyst where he worked for fourteen years developing expertise in data mining and the statistical analysis of large administrative data bases, primarily Medicare claims data, and steadily increasing his level of responsibility. The positions he held were Data Analyst, Statistician, Lead Statistician, Director of Analytic Services, and Chief Analytic Officer.

## Appendix E: Selected faculty biographies



### **LeGrande Gardner , Ph. D.**

Instructor

Research Interests: Criminal intelligence, computer and digital media crime, digital forensics, antiterrorism, surveillance and counter-surveillance

LeGrande Gardner, Ph.D. is an Instructor in Criminology at the University of South Florida. He earned his doctorate in sociology with a criminology specialization from Virginia Polytechnic Institute and State University (1984). He received his B.S. (1979) and M.A. (1981) from Georgia Southern University. Prior to becoming a full time faculty member he served as a sworn law enforcement officer for over 25 years with experience in both federal and local agencies, including an appointment as a Special Agent with the Federal Bureau of Investigation (FBI). Dr. Gardner's law enforcement career included 17 years in managerial, administrative, and supervisory assignments to include criminal intelligence, computer crime and crimes involving digital media, Digital Forensics Laboratory, computer forensics, anti-terrorism, Homeland Security, organized crime, criminal gang interdiction and suppression, and surveillance and counter-surveillance operations. Additional experiences as a police supervisor included patrol operations, specialized street-level tactical operations, career criminals, surveillance operations, and an assignment on the Special Weapons And Tactics (S.W.A.T.) Team. In his last three years of active duty he was concurrently assigned as a Task Force Agent to the FBI's Cyber Crimes Unit. Dr. Gardner has over 28 years experience as an adjunct instructor and police trainer for numerous law enforcement agencies, government organizations, colleges and universities, and private contractors. In addition to his academic credentials, he received certification by the State of Florida Criminal Justice and Standards Training Commission as a police instructor, firearms instructor, defensive tactics instructor, and police/emergency vehicle driving instructor. He regularly taught in the regional police academy and served as an Instructor for police in-service training programs. Dr. Gardner's teaching interest and specialization is in the areas of cyber-crimes, technology-related crimes, digital forensics, and e-discovery. As an extension of his prior background in criminal intelligence investigations, his research interest is in the area of subcultural deviance and criminal behavior, more specifically 1%er bikers and organized criminal hacking groups.



### **Michael J. Leiber, Ph. D.**

Professor and Chair

Research Interests: Racial and ethnic issues in criminology

Michael J. Leiber, Ph.D., is a Professor in Criminology at the University of South Florida. He earned his doctorate in criminal justice from the State University of New York at Albany. His main research interests and publications lie in juvenile delinquency, juvenile justice, and race/ethnicity. Over the last twenty years, he has also worked with the Office of Juvenile Justice & Delinquency Prevention (OJJDP) as a consultant dealing with the overrepresentation of minority youth in the juvenile justice system. In 2008, he received the W.E.B. Du Bois award for significant contributions to the field of racial and ethnic issues in criminology from the Western Society of Criminology.



### **Paul Stiles, J.D., Ph.D.**

Associate Professor and Associate Chair

Paul G. Stiles, J.D., Ph.D., is an Associate Professor and Associate Chair in the Department of Mental Health Law & Policy at the Louis de la Parte Florida Mental Health Institute, University of South Florida (USF). He received his Ph.D. in Clinical Psychology from Hahnemann University and J.D. in Law from Villanova University Law School. Dr. Stiles' clinical experience includes providing psychological and neuropsychological services in both private and public psychiatric facilities as well as nursing homes. In addition to a substantive focus on geriatric mental health services and policy, his research has involved the compilation, integration, analysis and dissemination of relatively large administrative data sets (e.g. Medicaid/Medicare eligibility and claims files, national hospital surveys, state mental health service regulatory databases) and the application of findings to public mental health systems and the mental health of older persons. Dr. Stiles has also focused on research integrity and ethics and was principal investigator for an NIMH-funded project examining whether enhancements made to the form and process of information disclosure during informed consent procedures improve comprehension and understanding of the disclosures by mentally ill persons. Most recently he is involved in examining the impact of actual and perceived coercion on prisoners in research. He teaches courses on legal and ethical issues in aging, provides intensive workshops on research ethics, and formerly chaired the social-behavioral IRB for USF (which he still serves on) and currently chairs the USF Conflict of Interest Committee. Dr. Stiles was also the principal investigator on two NIH grants to develop and conduct an intense course on research ethics as well as a series of instructional modules on the ethical conduct of research. Finally, he currently is PI on an NIMH grant to implement an intense summer program to train undergraduates in research processes/ethics as well as facilitator for the MHLP post-doctoral fellowship program.

## Appendix E: Selected faculty biographies



**Julianne Serovich, Ph.D.**

Dean and Professor

Research Interests: Disclosure of HIV status, treatment for homeless youths

Serovich's research focuses on the relationship between HIV disclosure to family, friends, and sex partners and the effects of sharing such information both on reducing HIV transmission and building social support structures for those coping with the illness. She is the principal investigator (PI) of the Kiss & Tell Project for Men and the Kiss & Tell Project for Women as well as other major studies that have resulted in more than 60 book chapters and peer reviewed publications. Her work began more than two decades ago at Texas Tech University, where, after receiving her doctorate from the University of Georgia, she was named an assistant professor of marriage and family therapy in 1991. Also a graduate of Loyola College, Baltimore, she joined the OSU faculty in 1995 and was named the inaugural director of the CFT program. Since 1997, she has received grant funding in excess of \$9 million, mostly from the National Institutes of Mental Health (NIMH).

### Office of Information Technology



**Alex Campoe, B.S.**

Director of Information Security

Research Interests: Identity and access management, IT audits, risk management, security policies

Alex Campoe is USF's director of Information Security. He is a CISSP-certified Security professional with more than 15 years of experience dealing with a broad range of issues involving data security, from policy and governance, to detailed data forensics. Campoe's professional experience includes responsibilities for Identity and Access Management, IT audits, Risk Management, writing and implementation of security policies and awareness program. His technical hands on experience includes working with UNIX administration (Solaris, Linux), MySQL, PHP, Perl and

data forensics tools. Alex earned a BS in Electrical Engineering from the University of Texas at Arlington.



**Michael Pearce, CIO**

Vice President, Information Technology

Michael Pearce currently serves as the System Vice President, CIO for the University of South Florida System. Until recently, Mike served as the Chief Information Officer for Suffolk University in Boston Massachusetts. Prior to that he served as the Deputy Chief Information Officer for the University of Southern California, located in Los Angeles, and headed the technical component of the Information Services Division for the University. He has held numerous other managerial positions in Accounting, Finance, and Information Systems for a variety of organizations ranging in size from small venture capital start-up firms to large multi-billion dollar conglomerates. In previous roles, Mike has held both technical and administrative roles of increasing responsibility such as the Vice President of Information Technology for Bausch & Lomb, Vice President and Chief Information Officer for Chiron Vision, and as Corporate Controller of Beckman Instruments. During his 25 year history, Mike has led a number of global projects, system implementations, and reengineering initiatives for a variety of companies. He spearheaded the worldwide-shared services initiatives that resulted in a Shared Service Data Center in Geneva, Switzerland, and Fullerton, California. Mike currently holds a master's degree in Finance and a bachelor's degree in accounting with significant experience in Information Systems Management. He serves on numerous customer, industry, and technology advisory boards throughout the nation.

### College of Education



**Ilene R. Berson, Ph. D., NCSP**

Professor

Ilene R. Berson, Ph.D., NCSP is a Professor of Early Childhood in the Department of Childhood Education and Literacy Studies at the University of South Florida. She also serves as the coordinator of the USF Early Childhood doctoral program with an emphasis on social justice and child advocacy. Dr. Berson has extensive experience working with children ages birth to eight, and she is a nationally certified and state licensed school psychologist. Her research focuses on prevention and intervention services for young children at imminent risk for behavioral and mental health challenges associated with child maltreatment and other traumatic events. She leads collaborative reform initiatives, forging linkages between early childhood, child welfare, and health care systems, as well as international studies on the engagement of young children with digital technologies. Dr. Berson has extensively published books, chapters, and journal articles and has presented her research worldwide.

She has been the principal investigator on funded grants totaling over \$2.5 million. Dr. Berson embodies the characteristics of an engaged scholar who works closely in reciprocal relationships with practitioners and policymakers to develop innovative solutions for emerging and long term issues to promote young children's well being.



**Dr. Michael J. Berson**

Professor

Research Interests: Integration of technology into education

Dr. Michael J. Berson is a Professor of Social Science Education at the University of South Florida and a Senior Fellow in The Florida Joint Center for Citizenship. Within the USF College of Education, he has served as founding director of the iteach technology and teacher education program. Dr. Berson instructs courses in Social Science Methodology, receiving international recognition for integrating emerging technologies into instruction and modeling dynamic and fluid pedagogy. He has received the USF Outstanding Undergraduate Teaching Award and was twice chosen as the USF nominee for the United States Professor of the Year Program sponsored by CASE and The Carnegie Foundation for the Advancement of Teaching. He also was honored with the National Council

Council for the Social Studies International Relations Award for his research in global child advocacy. Dr. Berson has served as an advisor on the integration of technology into education to numerous companies and organizations. He was elected Chair of the College and University Faculty Assembly of the National Council for the Social Studies, Vice President of the Society for Information Technology & Teacher Education, a Member of the Board of Directors for the Social Science Education Consortium, and a Member of the Advisory Board for the International Society for the Social Studies. Dr. Berson has extensively published books, chapters, and journal articles and presented his research worldwide. He was named the Association of Educational Publishers Distinguished Achievement Award Winner in the Learned Article category. He has been the principal investigator, co-principal investigator, or primary partner on funded grants totaling over \$6 million. Dr. Berson conducts research in the areas of global child advocacy and technology in social studies education.

### Center for Urban Transportation Research



**Jason Bittner, MPA**

Director

Research Interests: Freight and intermodal transportation, infrastructure asset management

Jason Bittner was appointed in January 2012 as the 3rd Director of the Center for Urban Transportation Research (CUTR) at the University of South Florida. Mr. Bittner previously was Deputy Director of the National Center for Freight and Infrastructure Research and Education (CFIRE) at the University of Wisconsin–Madison. He had served as Principal Investigator or Co-Principal Investigator on over \$1.8 million in sponsored research in maintenance quality assurance, freight transportation and mobility concerns since 2008 and has published numerous articles



## Appendix E: Selected faculty biographies

in the Transportation Research Record and other journals. He helped establish the Mid-America Freight Coalition, a ten-state partnership advancing freight planning and operations in the Midwest region and has over 14 years of experience working with multistate coalitions and regional entities on transportation topics. Mr. Bittner is a member of the TRB Committee on Transportation Asset Management and co-chair of the TRB Committee on Conduct of Research. He is also a member of the Executive Committee for the American Society for Public Administration, Section on Transportation Policy Analysis. Previous to his work at CFIRE, Mr. Bittner was an Assistant Municipal Manager in Ohio, where he was responsible for public works and economic development. He also interned on the staff of US Senator Howard Metzenbaum. Bittner taught Political Science at Edgewood College and held a Lecturer's appointment in Transportation Management and Policy at the University of Wisconsin. He holds a Master's degree from the La Follette School of Public Affairs at the University of Wisconsin and a Bachelor's degree in Political Science and Public Administration from the American University in Washington, D.C.

### Operations and additional research



#### **Michael Hill**

Colonel, 92nd Mission Support Group Commander at Fairchild Air Force Base

Colonel Michael S. Hill is the 92nd Mission Support Group Commander at Fairchild Air Force Base, Washington. He leads the installation and mission support activities including security, civil engineering, force support contracting, communications, and logistics readiness. Additionally, he is responsible to support the 92nd Air Refueling Wing's Air Expeditionary Force contribution through personnel and equipment readiness. A native of Illinois, Colonel Hill received his Bachelor of Science degree in Computer Science from Northern Illinois University. He received his commission from the Air Force Reserve Officer Training Corps program at the Illinois Institute of Technology in Chicago. He has served as Director of Communications (J6), Joint Special Operations Task Force Two, C4 Requirements Manager, Executive officer, Aide-de-Camp to the AFSOC Commander, and as a Presidential Communications Officer at the White House Communications Agency. He also served as Commander of the 42nd Communications Squadron, Chief, Intelligence Systems Branch, Directorate of Intelligence, Headquarters

Air Combat Command, and as the Commander, 1st Joint Communications Squadron, Joint Communications Support Element (JCSE) a joint airborne communications unit that provided communications support for Operations IRAQI and ENDURING FREEDOM.



#### **John W. Long**

Senior Vice President and Chief Operating Officer,  
University of South Florida

John W. Long is a veteran U.S. Air Force officer who most recently ran the day-to-day support activities at Andrews Air Force Base, including flight line infrastructure support for Air Force One. Long is a University of South Florida alumnus with a bachelor's of arts in business management. The COO role focuses on human capital/resources, services and infrastructure, safety and security, and business operations that impact a cross section of faculty and employees.



#### **John Burger**

Chief, Cyber Security; Colonel, USCENTCOM

Colonel John Burger is the chief of Cyber Division at U.S. CENTCOM

Colonel John Burger is Chief of the Joint Cyber Center at United States Central Command responsible for the planning, integration and execution of cyberspace operations in the USCENTCOM AOR. He leads a staff of 115 military, civilians and contractors to assure the CDRs freedom of maneuver in cyberspace and deny the same to our adversaries. He designs and implements information assurance programs to secure cyber key terrain, and develops defensive cyberspace plans to "see, block, and maneuver" defensive forces against threats to friendly networks. Working with our Allies and Partners, he develops Cyber Security Cooperation plans to enable our partners to protect themselves in cyberspace. He integrates cyberspace force application with the air, land, and maritime domains in support of OPLANS. Interacts daily with the Joint Staff, USCYBERCOM, the Intelligence Community, and the Interagency. Principle advisor to the CENTCOM CDR on all cyberspace matters.

## Higher Education Advisory Council

### Establishing the Florida Center for Cybersecurity

#### Meeting Minutes

November 7, 2013 (3:30 to 4:30 p.m.)  
Conference Call

#### **Participants:**

Spyros Magliveras – Florida Atlantic University,  
Ross Hinkle – University of Central Florida  
Rick Maxey – Florida Polytechnic  
Ryan Noble – New College of Florida  
Pam Northrup – University of West Florida

Rob Totterdale – Florida Gulf Coast University  
Mike Russo – Florida State University  
Diedre Evans – Florida A&M University  
Ralph Wilcox – University of South Florida  
Moez Limayem – University of South Florida  
Sri Sridharan – University of South Florida

#### **1. Introduction/Announcement**

Ralph Wilcox (Provost of the Host University): Highlighted the Legislature's Proviso language and the action plan to deliver a report authored by the Board of Governor's (BOG) that should result in the establishment of the Florida Center for Cybersecurity (FCC).

The proviso states that the FCC should:

- Foster job growth
- Focus on educating K-12 and university students
- Enhance the current capabilities of the workforce
- Position Florida as a leading state in Cybersecurity
- Work with businesses in FL to promote Cybersecurity
- Perform applied research associated with educational needs
- And more.....

**At this point, participants were asked to identify needs and challenges associated with creating a collaborative effort in successfully establishing the FCC**

#### **2. Discussion on needs and challenges**

##### Ryan Noble

- Leveraging a collaborative effort would benefit the college to enable students to become workforce ready in Cybersecurity and be competitive in the job market

- While the college educates employees about the need and importance of Cybersecurity, it is equally important to educate those in K-12 as well

### Spyros Magliveras

- Established a CAE in IA in 2003 (NSA recognition)
- Focus on cryptography, IS, Healthcare compliance & Security policies
- *Question:* How will universities collaborate?
- *Moez Limayem's response:* See the center as an entity to leverage the synergy of different Florida institutions to train students and tackle research projects for securing grants. If the funding from legislature is secured, then seed money will be given to the center for these collaborative efforts
- *Ralph Wilcox added:* The center will leverage the amazing breadth of expertise across the state; collaboration across departments will be interdisciplinary, and this collaboration will extend across universities in all of Florida.

### Ross Hinkle

- University of Central Florida has a broad, global perspective when it comes to Cybersecurity, focusing on energy, food, and supply chain security in their program
- Would like to see: boundaries around Cybersecurity more clearly defined
- UCF has programs in Digital Forensics, which are also broad and culturally global

### Rob Totterdale

- Established a class in security "early on"
- Teaching and extending the CS program in Forensics
- Excited to leverage the FCC opportunity and collaborate

### Diedre Evans

- CAE in IA – with 100 to 150 students; with certifications from the NSA and Department of Homeland Security
- Educating high school and middle school teachers about the importance of Cybersecurity
- Impact on workforce

### Pam Northrup (Karen speaking)

- How will the center match workforce needs with student needs?
- Need to tune student skills to make them "workforce ready"
- Define the boundaries of Cybersecurity as noted by Ross Hinkle above

### Rick Maxey

- Excited about collaboration

- Currently teaching students on this subject
- Currently working closely with Cybersecurity industries
- Working closely with faculty involved with industry-driven research

### Mike Russo

- The CSO and CPO for Florida State University; 11 years prior, was the state CIO
- Unemployment rate in Cybersecurity professions is zero; in DC, the unemployment rate in Cybersecurity professions is -7%
- Running a program for K-12 and state colleges
- What does Cybersecurity look like? Strategy must be aligned with laws
- The program needs a model that is different, with functional areas translated into a curriculum
- How will the center meet SANS security controls?
- Florida is behind nationally in Cybersecurity
- *Sri Sridharan's response:* There is more demand than supply in Florida. The center will be located in close proximity to McDill Air Force Base and will therefore, leverage relationship with CENTCOM and SOCOM.

### **3. Other thoughts/ Closing Remarks/ Summarization**

#### Rob Totterdale

- We need a skills (capabilities) inventory for what exists across Florida
- Collaborate by having a central repository for input and information

#### Spyros Magliveras

- Suggested possible face to face meeting at USF soon to better understand these issues

#### Mike Russo

- Proviso language – legislature wants to understand the strategy for teaching people to fill jobs needed; tie this into the "laws" of FL
- Align to put in place the educational component
- Deadline – December?

#### Ralph Wilcox

- Points to consider: proviso language, driving force to position Florida as a leader in Cybersecurity; Cybersecurity – needs to be clearly defined; educating students is a priority; collaboration with businesses and industry leaders; educate, train, and foster economic development; attract businesses to relocate or startup in the state – all a high priority to Governor Scott and Legislative leadership.
- Defense contracts need to be a focus as well
- This should quickly develop into a Nationwide effort

- Focus on sectors like defense, healthcare, finance, utilities, transportation, and government
- Copy of the report will be distributed to this group as soon as possible
- Follow-up call in 7-10 days
- The scope and ambition of the initiative is more of a question than whether or not there will be legislative support
- BOG and USF engaged in a collaborative effort to build the report; the final draft will likely be out the following week

Sri Sridharan added:

- Keeping students, companies and jobs in Florida as they seek training and education in Cybersecurity

**Action Plans:**

- a. Schedule a follow-up call soon
- b. Distribute the BOG report to this group
- c. Schedule a face to face meeting with this group ASAP

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FLORIDA BANKERS ASSOCIATION

ALEX SANCHEZ  
PRESIDENT & CEO

November 15, 2013

The Honorable Rick Scott  
Governor, State of Florida  
The Capitol  
Plaza Level  
Tallahassee, FL 32399

Dear Governor Scott:

I would like to add my support to the creation of a Florida Center for Cybersecurity (FCC) to be hosted at the University of South Florida (USF). President Genshaft has made this a priority for the university and the FCC would be a tremendous win-win for our state and USF and would also have a positive impact on one of Florida's major private employers, the banking industry. Maintaining and developing the appropriate technologies to protect our customers' information and privacy is a top priority for Florida bankers.

The FCC at USF would further enhance economic development by using one of our major urban universities to develop cybersecurity practices and measures to place Florida in a leadership position. In addition:

- Cybersecurity (CS) is crucial in protecting the banking industry;
- There is a pressing need to hire talents in CS but, unfortunately, there not enough graduates in Florida to satisfy this high demand;
- There are several pockets of CS expertise in some Florida universities but there is a need for a FCC to make Florida a leading state in CS. Such a center will also attract many other companies who are hungry for CS talent to Florida;
- USF is well poised to host the FCC because of its current strong CS foundations, unique inter-disciplinary approach to CS and its location.

1001 THOMASVILLE ROAD • SUITE 201 • P.O. BOX 1360 • TALLAHASSEE, FL 32302-1360  
TELEPHONE 850-224-2265 • FAX 850-224-2423

The Honorable Rick Scott  
November 15, 2013  
Page 2

In a recent article in *American Banker*, Adrienne Haden, an assistant director of banking supervision and regulation at the Federal Reserve Bank, stated:

"One impact of the DDoS attacks against U.S. financial institutions has been to increase awareness of the potential for well-organized or coordinated attacks with the intent of disruption of operations, possibly through destruction of access to business information," said Haden.

The creation of the FCC at a Florida university like USF would position Florida as a national leader in cybersecurity and its related high-skilled workforce through education, community engagement and innovative, interdisciplinary research.

Please feel free to call me if I can be of further assistance or if you would like to discuss this matter further. Thank you.

Sincerely,



Alex Sanchez  
President and CEO  
Florida Bankers Association



3600 Citigroup Center  
A3/09  
Tampa, FL 33610



November 22, 2013

Office of Governor Rick Scott  
State of Florida  
The Capitol  
400 S. Monroe St.  
Tallahassee, FL 32399-0001

Dear Governor Scott:

As a global financial institution with approximately 200 million customer accounts, Citi has the security of our customers' information and our operations at the forefront of our attention at all times. We have a focused information security strategy and dedicated resources to execute it. We continuously monitor and analyze threats and look for opportunities to further strengthen our controls. We work closely with a variety of suppliers to ensure we have access to top-notch security technology and can adapt to the changing internet landscape.

Regionally here in Tampa Bay, we have a longstanding community partnership and collaboration with the University of South Florida and its various Colleges, spanning our mutual interests and histories over the past thirty years; it is a very strong, diverse and resourceful relationship. Over the past several years in particular we have interacted with the University to identify highly skilled, well trained talent to fill highly technical roles that also require financial expertise. More recently we have engaged in discussions, recruitment and curriculum development in related subject areas of accounting, finance, information technology and cybersecurity. We believe the University's development of the Florida Center for Cybersecurity (FCC) will positively impact the country's preparedness to face growing threats to public and private business operations.

Citi, along with our peers and colleagues throughout the State, will benefit greatly from having the Center for Cybersecurity squarely focused within our marketplace. We encourage your administration's serious consideration of the USF administration's request for the support and funding of this timely, leadership capability in Florida.

Sincerely and cordially,

A handwritten signature in black ink that reads "Gregg Morton".

Gregg Morton  
President, Citi Tampa





Allen Brinkman  
Chairman, President & CEO

SunTrust Bank  
401 E. Jackson Street  
20th Floor  
Tampa, FL 33602  
Tel 813.224.2505  
allen.brinkman@suntrust.com

November 18, 2013

Office of Governor Rick Scott  
State of Florida  
The Capitol  
400 S. Monroe Street  
Tallahassee, FL 32399-0001

Dear Governor Scott,

Our national and economic security depends on the reliable functioning of this nation's critical infrastructure, especially in an interconnected, data-driven world. We rely on the Internet and other computer networks to run systems that help light our homes, provide fuel for our cars, and ensure that our water is safe to drink. Each day, trillions of dollars of electronic transactions flow across the payment networks and settlement systems that touch nearly every corner of our financial system and help keep track of funds in business and consumer accounts.

However, the cyber threat to critical infrastructure is growing. It represents one of the most serious challenges that the United States must confront. Because the majority of our critical infrastructure is owned and operated by private companies, facing this threat requires government and industry to work together to strengthen our digital defenses.

Safeguarding critical infrastructure is fundamental to preserving the stability of our financial system. The dependence of the global financial system on a rapid and accurately functioning technological infrastructure cannot be overstated. At the same time, cybersecurity threats pose significant financial, compliance, and reputational risks that can reverberate throughout the financial system.

In recognition of the crucial role that technological infrastructure plays in the operation of financial markets and the economy as a whole, financial institutions and market utilities are subject to regulation and examination standards relating to network and systems integrity. More broadly, the same logic applies to critical infrastructure organizations in other industries.

The Florida Center for Cybersecurity will help put Florida on the map in this critical area. It will not only help to meet the educational needs and workforce demands of companies in the state, but it will provide a resource for companies across the country and across the world – like SunTrust. I am asking for your support in joining SunTrust and the many other Florida companies that support this center so that Florida can truly be a leader in this strategically vital arena.

Regards,

A handwritten signature in blue ink, appearing to read "Allen Brinkman".

Allen R. Brinkman



November 11, 2013

Governor Rick Scott  
State of Florida  
The Capitol  
400 S. Monroe St.  
Tallahassee, FL 32399-0001

Dear Governor Scott,

As a proud member of the Fortune 200, with our worldwide headquarters based here in Florida, Jabil is blessed to serve 150 of the most recognized product companies across the globe. At \$18B in revenue, with 40+ manufacturing centers, reaching 30+ countries, we offer a wide range of manufacturing, design, and supply chain services. Our efforts touch a variety of end markets, such as, Aerospace and Defense, Healthcare, Industrial, Clean Tech, Consumer goods, Automotive, Wearable computing, Mobile Devices, Data storage, Packaging, Wireless infrastructure, and Enterprise hardware.

As you might imagine, we handle significant amounts of customer data. Securing this information is of paramount importance. The inability to offer that assurance to our customers would pose a serious threat to our long and celebrated success.

As such, it is my honor to offer support and endorsement of the Florida Center for Cyber security, which promises to be a tremendous state asset and a national model of excellence. The FCC will ensure that companies like Jabil have the cyber security resources they need, as well as produce the kind of talented graduates that we would like to employ here in Florida. I look forward to exploring innovative ideas and opportunities with the FCC.

I am eager to see the FCC and all the good work it is capable of come to fruition. Please join me in support.

Thank you,

A handwritten signature in black ink, appearing to read "Mark Mondello", is positioned above the printed name.

Mark Mondello  
Chief Executive Officer

10560 DR. MARTIN  
LUTHER KING, JR. ST N.  
ST. PETERSBURG,  
FLORIDA 33716  
+ 727.577-9749  
+ 727.579-8529  
WWW.JABIL.COM



**Robert M. Dutkowsky**  
Chief Executive Officer

November 11, 2013

Office of Governor Rick Scott  
State of Florida  
The Capitol  
400 South Monroe Street  
Tallahassee, FL 32399-0001

Dear Governor Scott,

At Tech Data, one of our highest priorities is protecting our data and network infrastructure so that we can best serve our customers. In the past several years, with the expansion of mobile devices, cloud-based services and other web-dependent activities, this critical activity has become significantly more challenging. Cybersecurity is now one of our most urgent and important needs.

Being a home-grown Florida business that has expanded into the state's second-largest Fortune 500 company, Tech Data wants to hire more talented Florida graduates with cybersecurity training to help us fortify our defenses. However, we are not finding enough graduates with the necessary skills. There are fragmented efforts in cybersecurity education and services scattered across the state, but Florida has no central cybersecurity power-base and no reliable pipeline of skilled cybersecurity professionals. As a result, we've instead had to recruit employees and contract with companies from outside of Florida which is expensive and time-consuming. In short, we are spending time and money on a service that should be part of Florida's economic development.

Creating a Florida Center for Cybersecurity would greatly benefit a company like Tech Data and, many other Florida businesses across a spectrum of industries throughout the state. It would help us expand as we better utilize energy that we have been using on patchwork cybersecurity efforts. It would afford us the opportunity to place Florida students in high-tech internships that would lead to high-paying jobs. I am confident this solution would help lure other large companies, who are also seeking cybersecurity talent, to migrate their business to Florida.

The University of South Florida, with its strong cybersecurity knowledge-base, interdisciplinary approach, and location near business and defense entities in Tampa Bay, is well-positioned to host this revolutionary workforce driver.

I kindly urge you to support and invest in this important initiative, for the betterment of all of Florida.

Respectfully,  
  
Robert Dutkowsky, CEO

Tech Data Corporation • 5350 Tech Data Drive • Clearwater, FL 33760 USA • Telephone: 727-532-8001 • Fax: 727-532-8019  
Email: bob.dutkowsky@techdata.com • www.techdata.com

### RAYMOND JAMES®

November 14, 2013

Office of Governor Rick Scott  
State of Florida  
The Capitol  
400 S. Monroe St.  
Tallahassee, FL 32399-0001

Dear Governor Scott,

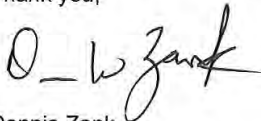
I want to kindly ask for your support of a critical endeavor in the state of Florida, the Florida Center for Cybersecurity. For Raymond James, one of the state's largest financial institutions, there is nothing more important than ensuring the security of our customers' data and our assets. We are convinced that a statewide Cybersecurity hub would provide a vital asset not only for our company, but for companies across the nation and the world. Florida can, and should, seize this opportunity to become a leader in this field.

Serving approximately 2.5 million accounts in more than 3,000 locations throughout the U.S., Canada and across the world, Raymond James is deeply involved in today's fast moving and ever changing global economy. We are familiar with the real dangers of cyber-threats, and we are constantly on the lookout for new solutions and talented Cybersecurity experts. This is a need that will only continue to grow as our world moves more and more online.

A Florida Center for Cybersecurity would ensure that companies like Raymond James have the Cybersecurity resources they need, as well as produce the kind of talented graduates that we would like to employ. USF's status as a top 50 research university, positions it well to provide advanced research on Cybersecurity topics. Over 10% of our associates working in Information Security roles today are USF graduates and we benefit from USF's ability to produce strong performers. We fully expect that by adding degrees in Cybersecurity it would further enhance that in the future.

I look forward to exploring opportunities with the FCC, and I know my fellow business leaders will feel the same way.

Thank you,



Dennis Zank  
Chief Operating Officer  
Raymond James Financial

cc: Dean Moez Limayem, University of South Florida, College of Business

**DENNIS W. ZANK**  
Chief Operating Officer  
Raymond James Financial, Inc.

880 Carillon Parkway // St. Petersburg, FL 33716  
D 727.567.4007 // T 800.248.8863 // F 727.567.8312 // raymondjames.com



Robert L. McCann, Jr.  
Executive Vice President

November 13, 2013

Office of Governor Rick Scott  
State of Florida  
The Capitol  
400 S. Monroe St.  
Tallahassee, FL 32399-0001

Dear Governor Scott,

For more than ninety years Nielsen has been measuring consumer behavior as a means to enable manufacturers, broadcasters, retailers and others to build their businesses and compete more effectively. Today, Nielsen serves a broad cross section of different industries that span more than one hundred countries around the world and the Nielsen Global Technology & Innovation Center in Tampa Bay (where Nielsen employs more than 2,000 professionals) is a vital resource used by Nielsen to serve this varied client portfolio.

At the very heart of the Nielsen business model is the consumer and the need for consumer privacy. Indeed, Nielsen makes extraordinary efforts all across the world to protect both the foundation of our databases (consumer measurements) and the proprietary insights we provide to clients. The Company would essentially be unable to properly do its job if it could not provide these important data protections and hence that is why cybersecurity is important to Nielsen. It is why Nielsen would certainly be very supportive of efforts to establish a cybersecurity hub in Florida.

The Florida Center for Cybersecurity will help put Florida on the map in this critical area. It will not only help to meet the educational needs and workforce demands of companies in the state, but it will provide a resource for companies across the country and across the world – like Nielsen.

I hope you will join Nielsen and the many other Florida companies that support this center so that Florida can truly be a leader in this strategically vital arena.

Thank you,

A handwritten signature in blue ink that reads "Robert L. McCann".

Robert L. McCann  
Executive Vice President

The Nielsen Company  
601 Brooker Creek Blvd., Oldsmar, FL 34677  
tel @13 308 5544 fax @13 308 0053  
www.nielsen.com

TAMPA ELECTRIC  
PEOPLES GAS SYSTEM

GORDON L. GILLETTE  
PRESIDENT

November 14, 2013

Rick Scott  
Governor  
State of Florida  
Tallahassee, FL

Dear Governor Scott:

I am writing in support of the creation of the Florida Center for Cybersecurity (FCC) at the University of South Florida. As the President of Tampa Electric Company and as past Chairman of the Board at the Florida Reliability Coordinating Council (FRCC), I am very focused on the pressing need to hire talented individuals with cybersecurity knowledge and to further cybersecurity research and knowledge. The FRCC is one of 8 member regions of the North American Electric Reliability Council (NERC), which is responsible for the reliability of the electricity grid for our entire continent. NERC is responsible for issuing and maintaining cyber and other security standards and the FRCC is responsible for implementing them in peninsular Florida. There are 58 electric utilities in Florida and all are working to comply with ever-changing cybersecurity standards, so the need for such a Center is substantial for our industry alone.

There are several pockets of cybersecurity expertise in other Florida universities, but I feel that the University of South Florida (USF) is the best qualified to host the FCC due to its current strong cybersecurity foundations, unique inter-disciplinary approach to cybersecurity and its central location. To illustrate the location related advantages, the FRCC, Tampa Electric, Duke Energy -Florida and Seminole Electric Cooperative, some of Florida's larger electric companies, are all headquartered in the Tampa Bay area. It is on the basis of the foregoing that I whole-heartedly support the creation of the Florida Center for Cybersecurity at USF.

Sincerely,



GLG:tdw

P.O. BOX 111 TAMPA, FL 33601-0111  
813-228-4492 FAX 813-228-4290  
GLGILLETTE@TEDOENERGY.COM

1 Nov 2013

Governor Rick Scott  
Capitol  
Tallahassee, FL

Dear Governor Scott:

I manage two classified IBM research, development, test & evaluation facilities in the Tampa/St Pete area supporting our military COCOMs. At IBM, one of our highest priorities is ensuring the complete protection of associated data and network infrastructures to best maintain the integrity of our customers and partners. With the expansion of mobile devices, cloud-based services and other web-dependent activities, providing protection of data has become significantly more challenging. Ensuring effective cybersecurity is now one of our most urgent and important needs.

As a global technology leader, IBM supports the development and hiring of talented graduates around the world, and, with our presence in Florida, we look to support increased opportunities to work with cybersecurity students and professionals within the state to help fortify defenses for us, our customers and our nation.

A major issue noted is the limited availability of educated and experienced cybersecurity resources nationwide. And I've noticed that although there are fragmented efforts in cybersecurity education and services scattered across the state, Florida has no central cybersecurity power-base and no reliable pipeline of skilled cybersecurity professionals. We continue to do business, out of state, partnering to provide cybersecurity services on what could be increased economy for the state *if* the proper base were present.

A Florida Center for Cybersecurity would be a game-changer. It could serve to meet the vital needs of Florida companies across a spectrum of industries. And, just as Florida is known as the military combatant command powerhouse in the US, this move would help establish Florida as a cybersecurity leader for the nation, luring additional talent, companies and opportunities to Florida.

The University of South Florida, with its strong cybersecurity knowledge-base, interdisciplinary approach, and location near major business and defense entities in Tampa Bay, is well-positioned to host this revolutionary workforce driver.

I look forward to your strong and timely support in this important initiative, for the betterment of all of Florida.

Respectfully,

*Tony Smith*

Tony Smith, PMP, CISSP  
St. Petersburg Site Location Executive  
IBM Global Business Services  
[tony.smith@us.ibm.com](mailto:tony.smith@us.ibm.com)







9800 Fredericksburg Road  
San Antonio, Texas 78288

November 19, 2013

Office of Governor Rick Scott  
State of Florida  
The Capitol  
400 S. Monroe St.  
Tallahassee, FL 32399-0001

Dear Governor Scott,

For more than nine decades, USAA has protected its members from a wide variety of physical and information security threats. With the rise of cyberspace crime, USAA and other private sector companies continue to remain vigilant in this area. We are seeking your assistance in establishing the Florida Center for Cybersecurity, a proposed collaboration between governmental and private entities to ensure optimal protection of our customers and the citizens of your state from cyber security threats.

It is important for us to work together to share and receive the latest procedures and best practices for guarding against known and emerging security threats. The Florida Center for Cybersecurity will be a conduit for early security threat warnings and a catalyst for receiving timely notification and authoritative information designed to help protect critical systems and assets from physical and cyber threats. The Center will also help meet the educational needs and workforce demands of companies and public services in the state, and be a model for private / public cooperation to detect and prevent cyber security crime.

I hope you will join USAA and the many other Florida companies that support this Center so that Florida can truly be a leader in this strategically vital security arena.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert Hoyland".

Robert Hoyland  
Vice President, Financial Foundations  
United Services Automobile Association



November 6, 2013

Governor Rick Scott  
State of Florida  
The Capitol  
400 S. Monroe St.  
Tallahassee, FL 32399-0001

Dear Gov. Scott:

On behalf of the Florida High Tech Corridor Council (FHTCC) and its economic development, workforce, higher education and industry partners, I am proud to support the Florida Center for Cybersecurity at the University of South Florida (USF).

This proposed program has the potential to greatly enhance Florida's future economy by cultivating a high tech, high-wage workforce in the rapidly growing field of cybersecurity. As a specialized STEM field, cybersecurity is a critical component of both financial business and national defense, two sectors that are heavily concentrated in Tampa Bay.

The University of South Florida has a proven track record of leadership in advanced research, interdisciplinary collaboration and community partnership—all key ingredients in supporting the development of a cybersecurity Center of Excellence that will drive the creation of new jobs, attraction of new companies and cultivation of highly skilled talent. USF's partnerships in the Tampa Bay region will foster connections among many of Florida's largest companies, as well as several of the nation's most important national defense bases.

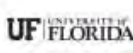
Charged with growing high tech industry and innovation through partnerships that support research, marketing, workforce and entrepreneurship, FHTCC is supportive of projects that will meet industry needs now and in the future. On behalf of the Council, I am proud to ask for your commitment to growing our great state's innovation-based economy through this initiative.

Best regards,

A handwritten signature in black ink that reads 'Randy Berridge'.

Randy Berridge  
President

A regional economic development initiative of:



1055 AAA Drive  
Suite 140  
Heathrow, FL 32746  
PH. 407.708.4630  
FX. 407.708.4635  
[www.FloridaHighTech.com](http://www.FloridaHighTech.com)



November 5, 2013

The Honorable Rick Scott  
Governor, State of Florida  
The Capitol  
400 S. Monroe Street  
Tallahassee FL 32399

Re: Letter of Support for the Florida Center for Cybersecurity

Dear Governor Scott:

I am writing this letter to express my support for the establishment of an investment into the Florida Cybersecurity Center of Excellence (FCC) to be set up at University of South Florida.

Cybersecurity is a serious issue today and it affects all businesses, citizens, Government and national security. Data protection is of vital importance to a healthy economy. Financial services industry, Healthcare, Energy, Utilities industries are especially vulnerable, not to mention the Department of Defense.

The FCC will be of monumental value to all businesses and the Government, built on a public private partnership. After reviewing the vision, mission and goals of the center, we lend our support, without any hesitation, to this effort and intend to work closely with the center.

The FCC will help with workforce development (create jobs, and high paying jobs), provide expert consulting services and will aid in the growth of Florida's economy.

The FCC will be a complimentary effort to assisting Draper's ongoing work in cyber forensics, identity management, mobile software, and secure data links here in Florida.

We strongly urge investment in this center and emphasize that time is of the essence.

Thank You:

A handwritten signature in black ink, appearing to read "Shankar Sundaram".

Shankar Sundaram  
Center Director, Draper Laboratory

**DRAPER BIODESIGN CENTER AT USF**  
3802 SPECTRUM BLVD | SUITE 201 | TAMPA | FLORIDA | 33612-9220  
P: 813.465.5400 | F: 813.465.5401 | W: WWW.DRAPER.COM



November 5, 2013

The Honorable Rick Scott  
Governor, State of Florida  
The Capitol  
400 S. Monroe Street  
Tallahassee, FL 32399

Dear Governor Scott:

USF Research and Innovation is very pleased to write this letter in support of the establishment and investment into the Florida Cybersecurity Center of Excellence to be housed at the University of South Florida. The proposed Cybersecurity Center of Excellence at USF will position the State of Florida as the national leader in cybersecurity, create new high-paying jobs, serve as the statewide facilitator of cybersecurity education, act as a "one stop-shop" cybersecurity clearing house for the statewide business and higher education communities, and attract new financial, healthcare, transportation, utility, and defense entities to Florida. The Cybersecurity Center will also provide an avenue for collaboration for the numerous experts on this topic throughout the state.

Along with USF's solid foundation in the cybersecurity arena and its ideal location to security experts at MacDill Air Force Base, the University of South Florida is one of the nation's top 73 public research very high universities and one of 40 public research universities nationwide with very high research activity that is designated as community engaged by the Carnegie Foundation for the Advancement of Teaching. The dedication of USF researchers, students, and staff has contributed to the phenomenal growth in research that USF has experienced over the past 27 years. In FY1986, the University received \$22.3 million in external funding for research projects. In FY1995, research awards had reached over \$100 million and in FY2013, USF generated over \$413.6 million in sponsored research activity. According to the National Science Foundation (NSF), USF ranks 50<sup>th</sup> in the nation for total research expenditures among all U.S. universities, public and private, and is ranked 33<sup>rd</sup> in total research expenditures and 30<sup>th</sup> in federal research expenditures for public universities. In 1990, USF became a member of the Oak Ridge Associated Universities. A designation that allows USF to participate in research collaborations with national laboratories, federal agencies, other educational and governmental entities, and the private sector.

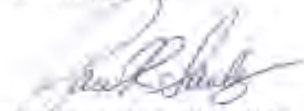
The Technology Transfer Office was established at USF in 1990 to facilitate the commercialization of university intellectual property, including patents and copyrights. As a result, USF ranked in the top 10 world-wide for granted U.S. patents among all universities in 2010 and 2011. In 2012, USF was in the top 15 for the number of startup companies and in the top 25 for the number of licenses and options,

USF RESEARCH & INNOVATION • OFFICE OF THE SENIOR VICE PRESIDENT  
University of South Florida • 3702 Spectrum Blvd., Suite 165 • Tampa, FL 33612-9449  
(813) 974-5570 • Fax: (813) 974-4962 • [www.research.usf.edu](http://www.research.usf.edu)

when compared to other U.S. universities in a survey by the Association of University Technology Managers. In recent years, USF founded and remains the home of the National Academy of Inventors (NAI), a non-profit member organization with over 2,000 individual inventor members and Fellows spanning more than 100 U.S. universities, and governmental and non-profit research institutions. The USF Chapter of the NAI has 270 USF faculty, staff, students, and alumni members, who collectively hold more than 1,400 U.S. patents.

As you can see, the University of South Florida is dedicated to the discovery of new knowledge, insights, and forms of expression through significant innovative research and other creative activity. Please accept this letter as an indication of the Office of Research and Innovation's commitment and strong desire to support this Center and all our faculty and their research endeavors.

Sincerely yours,



Paul R. Sanberg, Ph.D., D.Sc.  
Senior Vice President for Research & Innovation



7881 114th Avenue North  
Largo, FL 33773  
ph (727) 549-6067  
fx (727) 549-6070  
www.nfstc.org

November 19, 2013

The Honorable Rick Scott  
Office of the Governor  
State of Florida  
The Capitol  
400 S. Monroe Street  
Tallahassee, FL 32399-0001

Dear Governor Scott,

Since 1995, the National Forensic Science Technology Center (NFSTC) has been supporting law enforcement, criminal justice and military professionals through training and innovative programs. In that time, we have seen digital and cyber communications tools and technologies grow tremendously, both as an investigative tool and as a weapon for espionage, commercial and individual crime. As a result, the need for well-trained cybersecurity professionals has grown right along with it.

NFSTC is writing in support of establishing the Florida Center for Cybersecurity (FCC) and creating an educational and commercial hub in our state. This is a great opportunity to further build Florida's strengths in STEM education as well as workplace stability and attractiveness.

The Florida Center for Cybersecurity will help put Florida on the map in this critical area. It will not only help to meet the educational needs and workforce demands of companies in the state, but will provide a valuable resource across the country and around the world.

I hope you will join NFSTC and the many other Florida companies that support this initiative to establish Florida as a strategic leader in cybersecurity.

Warm regards,

Kevin Lothridge, CEO  
[Kevin.lothridge@nfstc.org](mailto:Kevin.lothridge@nfstc.org)

*NFSTC is a 501(c)3 not-for-profit corporation.*



November 4, 2013

Office of Governor Rick Scott  
State of Florida  
400 S. Monroe St.  
Tallahassee, FL 32399-0001

Dear Gov. Scott,

In today's modern world of mobile technology and constant connectivity, our businesses and in fact nearly all facets of modern life, increasingly rely on cybersecurity to ensure that information and assets are protected. Threats come from all directions.

This is not only a problem that affects transportation. From information to process credentials to access ports and airports to information collected on toll and expressways, the data security issues are more relevant today than ever before. Cybersecurity has quickly become one of the most serious issues our nation has ever faced. The country needs an infusion of highly skilled cybersecurity professionals. Florida can take the lead and we are well positioned to do so.

Now is the time for investing in a statewide center for cybersecurity. As the leader in this field, Florida will be the example for others states to follow. Ensuring that Florida is on the cutting-edge of this global industry will encourage job growth as our talent pool is enriched.

I wholeheartedly support the creation of the Florida Cybersecurity Center, to be housed at the University of South Florida, and I urge you to do so as well by investing in its future. It would be an investment that would deliver rich returns for all of Florida's businesses and residents.

Thank you.

A handwritten signature in blue ink, appearing to read "Jason Bittner".

Jason Bittner  
Director



University of South Florida • 4202 E. Fowler Avenue CUT100 • Tampa, FL 33620-5375  
(813) 974-3120 • FAX (813) 974-5168 • [www.cutr.usf.edu](http://www.cutr.usf.edu)



November 25, 2013

Governor Rick Scott  
State of Florida  
The Capitol  
400 S. Monroe St.  
Tallahassee, FL 32399-0001

Dear Governor Scott:

On behalf of the Tampa Bay Port Authority, I am proud to support the Florida Center for Cybersecurity at the University of South Florida (USF).

This proposed program has the potential to greatly enhance Florida's future economy by cultivating a high tech, high-wage workforce in the rapidly growing field of cybersecurity. As a specialized STEM field, cybersecurity is a critical component of the Transportation Industry.

The University of South Florida has a proven track record of leadership in higher education, applied research, interdisciplinary collaboration and community partnership. All of these are key ingredients which support the development of a Cybersecurity Center of Excellence.

The Center will drive the creation of new jobs, attract new companies and cultivate highly skilled talent. Furthermore, USF's partnerships in the Tampa Bay region will foster connections between some of Florida's largest companies and the transportation industry.

The Tampa Port Authority is supportive of this critical project and timely initiative. On behalf of the Port Authority, I am proud to ask for your commitment and support this initiative.

Best Regards,

A handwritten signature in blue ink that reads "P. Paul Anderson".

Paul Anderson, President & CEO





November 4, 2013

Gov. Rick Scott  
Capitol  
Tallahassee, FL

Dear Gov. Scott,

Thank you for your recent letter on Oct 4 congratulating me for Crystal Clear Technologies recent recognition as a nominee for Tampa Chamber of Commerce Small Business of the Year Award. In your letter you mentioned Florida's unemployment rate and a focus on creating jobs. As a Woman Owned Small Business based in St Petersburg, we struggle to hire talented graduates with cybersecurity training to help us fortify our defenses, largely because the supply is not currently available.

There are fragmented efforts in cybersecurity education and services scattered across the state, but Florida has no central cybersecurity power-base and no reliable pipeline of skilled cybersecurity professionals. Due to the demand of this skillset and lack of supply within Florida, we've instead had to contract with companies in Maryland, Texas, and Washington DC just to name a few. We've also struggled with filling positions for Govt related cyberdefense with United States Major Commands (USMAJCOM's) which we contract with.

Our highest priority at Crystal Clear Technologies is protecting the data and network infrastructure of our customers throughout the world. The expansion of mobile devices, cloud-based services and other web-dependent activities has made our efforts significantly more challenging. Cybersecurity is now one of our most urgent and important focal points.

A Florida Center for Cybersecurity would be a significant step forward for the state of Florida. It would meet the vital needs of Florida companies across a spectrum of industries. It would help us expand—as we better utilize energy that we have been using on patchwork cybersecurity efforts. I am confident it would help lure other large companies who are hungry for cybersecurity talent to Florida. The University of South Florida, with its strong cybersecurity knowledge-base, interdisciplinary approach, and location near business and defense entities in Tampa Bay, is well-positioned to host this revolutionary workforce driver.

---

5555 Central Ave. St. Petersburg, Florida 33710

Ph: 727.321.8888

Fx: 727.683.9360

November 4, 2013

I urge you to support and invest in this important endeavor, for the betterment of all of Florida.

Respectfully,



Crystal Culbertson  
Chief Executive Officer  
Crystal Clear Technologies, Inc.  
8(m) Woman Owned Small Business  
[www.crystalcleartec.com](http://www.crystalcleartec.com)

---

5555 Central Ave. St. Petersburg, Florida 33710

Ph: 727.321.8888

Fx: 727.683.9360



November 1, 2013

The Honorable Rick Scott  
Office of the Governor  
The Capitol  
400 S Monroe St  
Tallahassee, FL 32399-0001

Dear Governor Scott,

I am writing this letter to express my support for the establishment of and continued investment into the Florida Cybersecurity Center of Excellence (FCC) at University of South Florida. As you are aware, Cybersecurity is a serious issue in our nation as it affects all businesses, citizens, as well as federal, state and local governments. We have also found that other critical institutions such as financial services, Healthcare, Energy, and Utilities are especially vulnerable as well.

I strongly believe that the FCC will be of monumental value to all stakeholders in the Cybersecurity arena. The FCC will position Florida as a leader in Cybersecurity efforts as well as serve as the statewide facilitator of Cybersecurity education. Lastly, the FCC can assist in developing a Cybersecurity workforce, which will attract defense, financial, healthcare industries to our state and aid in the growth of Florida's economy.

After reviewing the vision, mission and goals of the center, Calhoun International lends its support, without any hesitation, to this effort. We also intend to work closely with the center to assist in its very important mission.

Thank you for your attention to this very critical issue.

Sincerely,

Roger Swinford  
President and CEO  
Calhoun International

**CALHOUN INTERNATIONAL**  
100 North Tampa St Suite 2330  
Tampa, FL 33602



20 November 2013

Office of Governor Rick Scott  
State Of Florida  
The Capitol  
400 S. Monroe Street  
Tallahassee, FL 32399

Dear Governor Scott,

I was excited and encouraged to hear about the potential plans to bring the Florida Center for Cyber Security to Tampa in partnership with the University of South Florida.

Vykin Corporation is a Florida resident, veteran owned small business, headquartered in Tampa, FL. We at Vykin provide Information Technology, Intelligence Analysis and Cyber Security solutions to US national agencies and combatant commands operating in seven states and eleven countries.

We know firsthand how important cyber security will be to the safety and economic security of the citizens of the great state of Florida and to the United States as a whole.

We believe Tampa, like no other place in Florida, provides a unique environment where outstanding higher education institutions are co-located with corporate cyber excellence and US Combatant Commands fighting the cyber security war every day.

I see an amazing opportunity to link Tampa based cyber small businesses such as Vykin, Celestar Corporation , AC4S and Crystal Clear Technologies with local universities to provide unique internship opportunities grounded in real world problem sets. I am certain my colleagues would join me in leading such initiatives and would commit corporate resources to ensure the FCSC gets off to the best possible start.

I am confident we have the all the pieces in place to develop the best cyber security specialists in the country and make Tampa synonymous with Cyber Security excellence. I ask that you give the creation of this center the full support of your office and help ensure it becomes a reality.

Best Regards,

A handwritten signature in black ink, appearing to read "Edward A. Bachl", is written over a horizontal line.

Edward A. Bachl  
CEO

400 N Ashley Drive, Suite 1440 • Tampa, FL • 33606  
Phone: (888) 809-0025 • Fax: (866) 535-7954  
[www.vykincorp.com](http://www.vykincorp.com)

20 November, 2013

Office of Governor Rick Scott  
State of Florida  
The Capitol  
400 S. Monroe Street  
Tallahassee, FL 32399-0001

Dear Governor Scott,

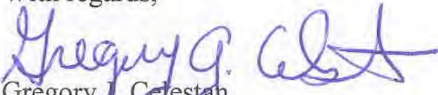
Celestar Corporation is a Service Disabled Veteran Owned Small Business headquartered in Tampa, FL that specializes in providing innovative and cost effective intelligence support to U.S. Government clients and Private Industry.

Our company began as a purely intelligence consulting and training enterprise at United States Central Command in 2004, but continues to grow as it proves itself to be a viable solution for many clients. Since 2004, Celestar Corporation has seen an expansion to other organizations; to include the Defense Intelligence Agency, U.S. State Department and the U.S. Army National Guard. Celestar currently has personnel serving in 10 states as well as overseas locations. Cybersecurity is very important to our business operations and is an essential component in providing services to our clients, which is why Celestar is very supportive of establishing a cybersecurity hub in Florida.

The USF Florida Center for Cybersecurity will help to attract other business and agencies which can benefit from the intellectual capital assembled at the campus. It will not only help to meet the educational needs and workforce demands of companies in Hillsborough County and the State of Florida, but will also provide a resource for companies across the country and around the world.

We urge you to support this center so that Florida can truly be a leader in this strategically vital arena.

With regards,

  
Gregory J. Celestan  
Chief Executive Officer



9501 EAST U.S HWY 92 / TAMPA, FLORIDA / 33610



**DIVERSIFIED INCORPORATED OF TAMPA BAY**  
12907 Hickorywood Lane  
Largo, FL 33774

November 4, 2013

Office of Governor Rick Scott  
State of Florida  
The Capitol  
400 S. Monroe St.  
Tallahassee, FL 32399-0001

Sir:

I am writing this letter to express my support for the establishment of and investment into the Florida Cybersecurity Center of Excellence (FCC) to be set up at University of South Florida.

Cybersecurity is a serious issue today and it affects all businesses, citizens, Government and national security. Data protection is of vital importance to a healthy economy. Financial services industry, Healthcare, Energy, Utilities industries are especially vulnerable, not to mention the Department of Defense.

The FCC will be of monumental value to all businesses and the Government, built on a public private partnership. After reviewing the vision, mission and goals of the center, we lend our support, without any hesitation, to this effort and intend to work closely with the center.

The FCC will help with workforce development (create jobs, and high paying jobs), provide expert consulting services and will aid in the growth of Florida's economy.

We strongly urge investment in this center and emphasize that time is of the essence.

Thank You.

*Diane Zader*

Diane Zader  
President  
Diversified Incorporated of Tampa Bay

**Toll Free - 888-3DIV-INC**  
**888-334-8462**

**[www.div-inc.com](http://www.div-inc.com)**



Office of the President  
4202 E. Fowler Ave, CGS 401  
Tampa, FL 33620-4401

Dear President Genshaft,

Recently I became aware of the state of Florida's initiative to establish the Florida Center for Cyber security at the University of South Florida. As a former Director of DISA, and former Director of Command, Control, Communications, and Computers (J-6) for US CENTCOM, I know that creating a forward-thinking and proactive network of academic, business, and both public and public sector cyber security training programs, will be invaluable to those you serve. I could envision USF becoming the academic center for Cyber trends, research, and technology incubation, and a highly respected institution where industry, public, private, and the DoD, could come to test new capabilities and facilitate network sustainment through simulation and expert assistance. I note the success you have had creating a "Stem Camp" as a threshold experience for Floridian youth. Initiatives like yours, to raise the levels of interest for our future cyber work force, are truly inspirational and sorely needed.

The University of South Florida has the ability to create an important bridge between the owners and operators of critical and vulnerable infrastructure and those entities best positioned to develop a more secure cyber network.

I support and endorse the University of South Florida's Florida Center for Cyber security and look forward to hearing about the comprehensive cyber programs USF designs to keep America safe and nation's economy strong.

Sincerely

A handwritten signature in black ink, appearing to read "Al Edmonds", is written over a light blue horizontal line.

Al Edmonds  
LT/General, USAF (Retired)  
Chairman and CEO  
(Former Director, Defense Information Systems Agency-DISA)

2760 Eisenhower Avenue, Suite 202  
Alexandria, Virginia 22314

[www.edmondses.com](http://www.edmondses.com)

Office: (703) 778-7070

Fax: (703) 778-7060



**GOBU Consulting, LLC**  
BUSTING THROUGH BUREAUCRACY FOR BUSINESS

November 4, 2013

Office of Governor Rick Scott

State of Florida

The Capitol

400 S. Monroe St.

Tallahassee, FL 32399-0001

I am writing this letter to express my support for the establishment of and investment into the Florida Cybersecurity Center of Excellence (FCC) to be set up at University of South Florida.

Cybersecurity and data protection is vital importance to a healthy economy. Financial services industry, Healthcare, Energy, Utilities industries in particular the Department of Defense rely on data security to protect the American way of life. Unfortunately, current technologies are not adequate to maintain the security of that data and those who wish to do us harm are constantly creating new ways to access our data.

I spent 18 years in acquisition as a Contracting Officer, Program Manager and the Technical industrial Liaison Officer for the United States Special Operations Command. During my time there, I was amazed that the local academia did not take advantage of the opportunities the command offered in developing leading edge technologies. I believe that the FCC will help to change that environment to create an opportunity for greater interaction between USSOCOM and academia to help foster technologies that are beneficial to both the Government and Civilian sectors.

I strongly urge investment in the FCC and hope that the state of Florida will move quickly to support this endeavor.

Thank You.

Joseph R Daum, D.B.A

President

GoBU Consulting, LLC



**IRON CLAD**  
**TECHNOLOGY SERVICES**

11/1/2013

Office of Governor Rick Scott  
State of Florida  
The Capitol  
400 S. Monroe St.  
Tallahassee, FL 32399-0001

Sir,

I am writing this letter to express my support for the establishment of and investment in the Florida Cyber Security Center of Excellence (FCC) to be set up at University of South Florida.

Today's environment requires vigilance and expertise to thwart the continued attempts of cyber-attack on US Infrastructure targets belonging to private business and government agencies at all levels.

The FCC will be of monumental value to the aforementioned targets and it is our belief that the lessons learned from this sorely needed resource will provide huge dividends. After reviewing the vision, mission and goals of the center, we lend our support, without any hesitation, to this effort and intend to work closely with the center.

The FCC will help with workforce development (create jobs, and high paying jobs), provide expert consulting services and will aid in the growth of Florida's economy.

We strongly urge investment in this center and emphasize that time is of the essence.

Thank You.



Tony Land  
Executive Vice President  
Ironclad Technology Services LLC



November 2, 2013

TO: Office of Governor Rick Scott  
State of Florida  
The Capitol  
400 S. Monroe St.  
Tallahassee, FL 32399-0001

REFERENCE: USF Cybersecurity Center of Excellence

Dear Governor Scott,

I am writing this letter to express my support for the establishment of and investment into the Florida Cybersecurity Center of Excellence (FCC) to be set up at University of South Florida.

Cybersecurity is a serious issue today and it affects all businesses, citizens, Government and national security. Data protection is of vital importance to a healthy economy. Financial services industry, Healthcare, Energy, Utilities industries are especially vulnerable, not to mention the Department of Defense.

The FCC will be of monumental value to all businesses and the Government, built on a public private partnership. After reviewing the vision, mission and goals of the center, we lend our support, without any hesitation, to this effort and intend to work closely with the center.

The FCC will help with workforce development (create jobs, and high paying jobs), provide expert consulting services and will aid in the growth of Florida's economy. I strongly urge investment in this center and emphasize that time is of the essence.

Being a retired Army Sergeant Major after serving just over 20 years in Special Operations (the last 14 of which were in Delta Force), I can attest to the criticality of such an academic program. The future security of the United States will depend on our youth's ability to maintain and enhance Cybersecurity. I can think of no better place for a program such as this having three major commands; USSOCOM, USCENTCOM and USSOCCENT located within minutes from the USF campus.

Thank You.

Sincerely,

**Andrew S. Wilson**

Digitally signed by Andrew S. Wilson  
DN: cn=Andrew S. Wilson, o=NavELite, LLC, ou,  
email=andrew.wilson@navelite.com, c=US  
Date: 2013.11.02 02:33:05 -04'00'

Andrew Wilson President & CEO

[WWW.NAVELITE.COM](http://WWW.NAVELITE.COM) / (888) 928-8696

**WHEN SURVIVAL COUNTS**



November 2, 2013

TO: Office of Governor Rick Scott  
State of Florida  
The Capitol  
400 S. Monroe St.  
Tallahassee, FL 32399-0001

REFERENCE: USF Cybersecurity Center of Excellence

Dear Governor Scott,

I am writing this letter to express my support for the establishment of and investment into the Florida Cybersecurity Center of Excellence (FCC) to be set up at University of South Florida.

Cybersecurity is a serious issue today and it affects all businesses, citizens, Government and national security. Data protection is of vital importance to a healthy economy. Financial services industry, Healthcare, Energy, Utilities industries are especially vulnerable, not to mention the Department of Defense.

The FCC will be of monumental value to all businesses and the Government, built on a public private partnership. After reviewing the vision, mission and goals of the center, we lend our support, without any hesitation, to this effort and intend to work closely with the center.

The FCC will help with workforce development (create jobs, and high paying jobs), provide expert consulting services and will aid in the growth of Florida's economy. I strongly urge investment in this center and emphasize that time is of the essence.

Being a retired Army Sergeant Major after serving just over 20 years in Special Operations (the last 14 of which were in Delta Force), I can attest to the criticality of such an academic program. The future security of the United States will depend on our youth's ability to maintain and enhance Cybersecurity. I can think of no better place for a program such as this having three major commands; USSOCOM, USCENTCOM and USSOCENT located within minutes from the USF campus.

Thank You.

Sincerely,

**Andrew S. Wilson**

Digitally signed by Andrew S. Wilson  
DN: cn=Andrew S. Wilson, o=Quiet Professionals,  
LLC, ou, email=andy@quietprofessionalsllc.com  
c=US  
Date: 2013.11.02 02:31:45 -0400

Andrew Wilson President & CEO

*Superior Skills, Proven Performance*

WWW.QUIETPROFESSIONALSLLC.COM / 727-488-9926 / 36181 EAST LAKE ROAD, SUITE 220, PALM HARBOR, FL 34685



Quantum Technology Sciences, Inc.  
1980 North Atlantic Avenue, Suite 201  
Cocoa Beach, FL 32931  
Phone (321) 868-0288 / Fax (321) 868-0303

November 5, 2013

Office of Governor Rick Scott  
State of Florida  
The Capitol  
400 S. Monroe St.  
Tallahassee, FL 32399-0001

Dear Governor Scott:

I am writing this letter to express my support for the establishment of an investment into the Florida Cybersecurity Center of Excellence (FCC) to be set up at University of South Florida.

Cybersecurity is a serious issue today and it affects all businesses, citizens, Government and national security. Data protection is of vital importance to a healthy economy. Financial services industry, Healthcare, Energy, Utilities industries are especially vulnerable, not to mention the Department of Defense.

The FCC will be of monumental value to all businesses and the Government, built on a public private partnership. After reviewing the vision, mission and goals of the center, we lend our support, without any hesitation, to this effort and intend to work closely with the center.

The FCC will help with workforce development (create jobs, and high paying jobs), provide expert consulting services and will aid in the growth of Florida's economy.

We strongly urge investment in this center and emphasize that time is of the essence.

Thank You,

A handwritten signature in black ink, appearing to read "Freddie Garcia, Jr.", written in a cursive style.

Freddie "Chick" Garcia, Jr.  
CEO/Chairman of the Board  
Quantum Technology Sciences, Inc.



November 1, 2013

Dear Governor Scott:

I am writing this letter to express my support for the establishment of and investment into the Florida Cybersecurity Center of Excellence (FCC) to be set up at University of South Florida.

Cybersecurity is a serious issue today and it affects all businesses, citizens, Government and national security. Data protection is of vital importance to a healthy economy. Financial services industry, Healthcare, Energy, Utilities industries are especially vulnerable, not to mention the Department of Defense.

Creating the center in this critical market will make Florida a leader in this area, and will contribute to the ongoing growth of the IT workforce in our area.

The FCC will be of monumental value to all businesses and the Government, built on a public private partnership. After reviewing the vision, mission and goals of the center, I lend my support, without any hesitation, to this effort and intend to work closely with the center.

The FCC will help with workforce development (create jobs, and high paying jobs), provide expert consulting services and will aid in the growth of Florida's economy.

I strongly urge investment in this center and emphasize that time is of the essence.

A handwritten signature in cursive script that reads "Jenny W. Clark".

Jenny W. Clark

Director

Decosimo-Solvability, LLC

10721 Donbese Avenue

Tampa, FL 33615



7887 Bryan Dairy Road, Suite 220, Largo, FL 33777  
[www.tbinnovates.com](http://www.tbinnovates.com)

Main Office: 727-547-7340  
Fax Number: 727-547-7350

November 5, 2013

Office of Governor Rick Scott  
State of Florida  
The Capitol  
400 S. Monroe St.  
Tallahassee, FL 32399-0001

Dear Governor Scott:

I am writing this letter to express my support for the establishment of and investment into the Florida Cybersecurity Center of Excellence (FCC) to be set up at University of South Florida.

Cybersecurity is a serious issue today and it affects all businesses, citizens, Government and national security. Data protection is of vital importance to a healthy economy. Financial services industry, Healthcare, Energy, Utilities industries are especially vulnerable, not to mention the Department of Defense.

The FCC will be of monumental value to all businesses and the Government, built on a public private partnership. After reviewing the vision, mission and goals of the center, we lend our support, without any hesitation, to this effort and intend to work closely with the center.

The FCC will help with workforce development (create jobs, and high paying jobs), provide expert consulting services and will aid in the growth of Florida's economy.

We strongly urge investment in this center and emphasize that time is of the essence.

Thank You,

A handwritten signature in black ink, appearing to read "Tonya Elmore", is written over a faint, light-colored circular stamp or watermark.

Tonya Elmore, President & CEO

**Appendix C:**  
**Florida Department of Economic  
Opportunity**  
**Computer/Cybersecurity Job Titles**

**Computer/Cybersecurity job titles on top 50 lists produced by the Florida Department of Economic Opportunity**

<b>List</b>	<b>Job</b>
Top 50 Largest Bachelor's Degree Level Occupations	#11 – Software Developers, Applications #12 – Computer Systems Analysts #16 – Computer Network Architects #18 – Computer Programmers #30 – Software Developers, Systems Software #38 – Computer and Information Systems Managers #46 – Database Administrators
Top 50 Bachelor's Degree Level Occupations Gaining the Most New Jobs	#8 – Software Developers, Applications #16 – Computer Systems Analysts #17 – Computer Network Architects #18 – Network and Computer Systems Architects and Admins. #20 – Software Developers, Systems Software #36 – Database Administrators #38 – Computer Programmers #41 – Computer and Information Systems Managers
Top 50 Fastest Growing Bachelor's Degree Level Occupations	#5 – Database Administrators #7 – Software Developers, Systems Software #11 – Network and Computer Systems Architects and Admins. #13 – Software Developers, Applications #22 – Information Security Analysts #29 – Computer Network Architects #38 – Computer and Information Systems Managers
Top 50 Highest Paying Bachelor's Degree Level Occupations	#3 – Computer and Information Systems Managers #26 – Software Developers, Systems Software #32 – Computer Systems Analysts #39 – Information Security Analysts #40 – Software Developers, Applications



**Appendix D:**  
**Results of Monster.com Job Search**

<b>Results of Monster.com job search for “Cybersecurity Pensacola” and “Information Security Pensacola”.</b>				
<b>Employer</b>	<b>Position Title</b>	<b>Degree Required</b>	<b>Date Position was Posted</b>	<b>Certifications Mentioned in Posting That are Included in the PSC curriculum.</b>
Northrop Grumman Corporation	Linux Systems Engineer 3	Bachelors	10/19/2015	None listed in the posting
Universal Consulting Services, Inc.	Application/Sharepoint Developer	Unspecified	10/15/2015	A+ Network+ Security+
CSC	Red Hat Linux System Engineer	Bachelors	10/12/2015	None listed in the posting
Raytheon	Senior Network Technologist II	Master’s or Bachelors with experience	10/18/2015	CCNA Security+ CISSP*
Alion Science and Technology	Principal Information Assurance Analyst	Bachelors	10/6/2015	None listed in the posting
Criterion Systems	System Administrator, Principal	Bachelors	9/25/2015	Microsoft
CSC	Cyber Training Instructor	Bachelors	10/5/2015	CCNA Network+ Security+ CISSP*
Criterion Systems	System Administrator	Bachelors	9/27/15	Microsoft
Leidos	Protocol Analysis/CND Instructor	Bachelors	5/23/2015	Level II DODI 8570.01M which includes: Security+ CISSP*
United States Federal Government	Information Technology Specialist	Bachelors	6/24/2015	None listed in the posting
Escambia County	Information Technology Technician	Associate with experience or Bachelors	10/13/2015	CCNA Network+
Catapult Consultants LLC	System Administrator	Bachelors	10/6/2015	None listed in the posting
Criterion Systems	System Administrator	Bachelors	9/28/2015	DOD 8570.1-M at level I which includes A+ Network+ Security+ CISSP*

<b>Results of Monster.com job search for “Cybersecurity Pensacola” and “Information Security Pensacola”.</b>				
<b>Employer</b>	<b>Position Title</b>	<b>Degree Required</b>	<b>Date Position was Posted</b>	<b>Certifications Mentioned in Posting That are Included in the PSC curriculum.</b>
Criterion Systems	System Administrator, Principal	Bachelors	9/25/2015	DOD 8570.1-M at level I which includes A+ Network+ Security+ CISSP*
Leidos	Active Exploitation Instructor	Bachelors	5/24/2015	Level II DODI 8570.01M which includes: Security+ CISSP*
CSC	IT Security Specialist	Bachelors	9/14/2015	Possess security certifications, for example: CCNA CISSP*
Leidos	Sustainment Team Lead	Bachelors	7/18/2015	
CSC	Junior System Administrator	Bachelors	9/15/2015	Security+ CCNA
Realinterface	Linux System Engineer	Bachelors	8/19/2015	
Leidos	Core Infrastructure Team Lead	Bachelors	7/19/2015	
Criterion Systems	Technical Support Specialist	High School + 6 years of experience	9/28/2015	CCNA DOD 8570.1-M at level I which includes A+ Network+ Security+ CISSP*
CSC	Linux System Engineer	Bachelors	10/15/2015	
Jacobs technology	Cybersecurity Research Engineer 4	Bachelors	10/16/2015	DOD 8570.o1 IAT Level III which includes CISSP*
Sotera Defense Solutions	Information Assurance/ Security Specialist	Bachelors	7/9/2015	

<b>Results of Monster.com job search for “Cybersecurity Pensacola” and “Information Security Pensacola”.</b>				
<b>Employer</b>	<b>Position Title</b>	<b>Degree Required</b>	<b>Date Position was Posted</b>	<b>Certifications Mentioned in Posting That are Included in the PSC curriculum.</b>
Sotera Defense Solutions	Information Assurance/ Security Specialist-Journeyman	Bachelors	5/24/2015	
Hewlett-Packard Company	Information Assurance Technician	High School + 6 years of experience	8/5/2015	A+ Network+ Security+ CISSP*
TeleCommunication Systems	Information Technology Instructor	None listed	1/7/2015	DoD 8570 IAT-I and IAT - II Certifications including: A+ Network+ Security+ CISSP*

\* Any graduate from the proposed BAS in Cybersecurity will be qualified to test for the CISSP certification.

**Appendix E:**  
**Pensacola News Journal Editorial**  
**22 August 2013**

## EDITORIAL

# PSC expands majors

**W**e support the move by Pensacola State College to continue to add majors to its course offerings.

The college's board of trustees on Tuesday approved to add biomedical sciences, dental hygiene and cybersecurity majors that would mean a bachelor's degree. It's now up to the state Board of Education and the Florida Department of Education's Division of State Colleges to OK the majors, education reporter Erin Kourkounis wrote for Page 1A on Wednesday. We urge those two to approve the majors as well as three more – human resources management, law enforcement management and project management – the school would like to add.

PSC is to be commended for recognizing the local workforce needs the training and education to meet the future demand. They are a key player in matching up students, both traditional and nontraditional, with a curriculum that will allow them to find work upon graduation.

Gov. Rick Scott has long been an advocate of state colleges and universities preparing students for jobs, not degrees that have little practical use in the workplace. Scott also is urging state schools to craft majors that don't cost more than \$10,000, which reduces the burden on parents and the students who must take out loans for tuition and other expenses.

The PSC board's decision is the second this week that shows this area is buying into the importance of melding useful education and jobs. On Monday, Gulf Power Co. announced that the newly formed Northwest Florida Manufacturers Council will help companies develop a skilled workforce. PSC is a mem-

ber of the council, along with George Stone Technical Center/Escambia County School District Workforce Education, Locklin Tech/Santa Rosa County School District Workforce Education, the Greater Pensacola Chamber, the Santa Rosa Economic Development Office and others.

Gulf Power President and CEO Stan Connally, and Allen Bense, president of GAC Contractors of Panama City, serve as vice-chairmen of the organization, a news release announcing the council said.

"The availability of skilled technicians – everything from ... machinists to welders to chemical process operators – is vital to growing the region's manufacturing base," Connally said in the release. "This council will raise awareness of these high-skill, high-wage careers and will work with education partners throughout the region to grow training programs to prepare future workers for this industry."

Bense, a former speaker in the state House, said the council fills a longtime, local need. He said he hopes local manufacturers will be eager to join.

"We can make a lot more progress together than we can alone," Bense said in the release.

We hope manufacturers, businesses and educators see the value of the council and support it.

After all, the best way for the economy of Northwest Florida to improve is to match qualified people with good-paying jobs. At PSC, adding biomedical sciences and cybersecurity to the menu of options is the right course.

**Appendix F:**  
**Baccalaureate Leadership Team Meetings**

**Internal BAS and BS meetings regarding new degrees**

**Tue 9/6/2011 2:00pm Building 10**

**Fri 10/7/2011 3:00pm Building 10**

- **Baccalaureate Core Committee Meeting Agenda for 7 October 2011**

**Meeting**

The SACS Team's Site Visit

General comments

Recommendations and Lessons Learned

What's next?

On-going Projects

Course development

Program Development/Additions

Student Recruitment/Enrollments

Low enrollment-courses ... Electives ...? Required...?

Faculty Recruitment

Growing our own

Graduation

Other Items of Interest

**Wed 10/26/2011 3:00pm Building 10**

- A retrospective on our visit to the District Counselor Meeting
- Thoughts re: New Programs
- Status of the Challenge Coins
- Summer terms options in addition to our typical 2 6-week terms option
  - 8 - week?
  - 12- week?
- Distance Learning Cheating on Tests ... Issues and Answers
- AA/AS/AAS "requirement" for our BAS degree programs???
- Status of name change for Sandy's program
- Status of Orientation Initiative for Adjunct BAS/BSN Instructors
- Person/Place for BAS Counseling, etc. (Will take this on to VP Gilliam)
- A Strategy for Dealing with the SACS Rec

**Fri 11/4/2011 3:00pm Building 10**

**Thu 12/8/2011 3:00pm Building 10**

Discussion of student issues re VA benefits /online courses, length of term, availability of courses.

**Thu 1/12/2012 3:00pm Building 10**

SACS followup discussions.

**Thu 1/19/2012 3:00pm Building 10**

Setting out our Plan of Action and Milestones (POA&M) at tomorrow's meeting



**Thu 2/9/2012 2:00pm Building 10**

**Tue 2/14/2012 1:00pm Building 10**

**Thu 2/23/2012 2:00PM Building 10**

Coming Advisory Committee Meetings; BAS/BSN info hubs; and a few other items.

**Thu 3/1/2012 2:30pm Building 10**

Working Relationship with E-Learning Department Team; Faculty recruitment; Advisory Committee Agenda; BAS and BSN websites/hubs; Pensacola State College Day; Other items of interest.

**03/08/2012 12:00pm Building 10**

The main purpose of this special, lunch-hour meeting is to discuss issues regarding DL and hybrid course development. Bill Waters will be joining us in the discussion, which I am certain will be most productive.

**Thu 4/5/2012 3:00pm Building 10**

**Thu 4/26/2012 2:00pm Building 10**

While we may have a few other items to discuss, the focus will be on huddling up with Mary Ellen to work up ideas for what will work best on the revamped website for our Baccalaureate programs. I wish we could do this meeting this week or next, but budget hearings and other things are preventing us from doing so. So ... we will meet on **Thursday 26 April at 2:00** at the Business Department Conference Room. Your assignment is to be ready to offer Mary Ellen insight into your target audience/student population, any ideas that you may have for getting your/our message out, necessary info, spokespersons (for videos) etc. – students, staff, and/or faculty, and anything else you would like to see end up on the site. Feel free to bring actual stuff with you to pass on to her. She will then gather things up and prepare stuff for the MIS Team who will make sure it all gets into the new and vastly improved site.

**Thu 5/17/2012 3:30pm Building 10**

**Thu 6/21/2012 3:30pm Building 10**

As you can see, I have included MaryEllen as a copy to on this message and am asking her to attend. I am hoping that we will have made some significant progress in re: videos, etc. to discuss when we meet. (Please be sure to send any ideas for the website and for marketing the BAS/BSN programs to her.)

**Wed 7/11/2012 3:00pm Building 10**

Discussion of Capstone courses.

**Thu 7/19/2012 3:00pm Building 10**

**Thu 8/16/2012 3:00pm**                      **Building 10**

**Thu 8/30/2012 3:00am**                      **Building 10**

Concentration Enrollment Discussion.

**Thu 9/6/2012 2:30pm**                      **Building 10**

Discussion on the agenda for our next Advisory Committee meeting which will be on 17 October.

**Thu 9/27/2012 2:30pm**                      **Building 10**

As you know, we are closing in on several events of interest. One is the submission of our report to the State; another is our Advisory Committee Meeting that is set for 4:00 on October 17<sup>th</sup>; and still another is our Sigma Beta Delta induction ceremony scheduled for 5:30 on November 7<sup>th</sup>. Of course there is lots of other neat stuff going on like Sandy's huge progress in program development, course development, recruiting new faculty, increasing enrollments, and a bunch of other things in both the BAS and BSN programs.

**Thu 1/10/2013 12:30pm**                      **Dr. Wymer's office**

Re Health Sciences Degree

**Mon 1/14/2013 2:00PM**                      **Dr. Wymer's Office**

Re new degrees.

**Thu 1/31/2013 8:00AM**                      **Dr. Spicer's office**

Re new programs, with Dr. Wymer

**Thu 2/7/2013 1:00pm**                      **Dr. Wymer's Office**

Re new program development

**Tue 3/5/2013 11:00am**                      **Dr. Wymer's Office**

Logistics for new programs

**Thu 3/14/2013 11:00am**                      **Human Resources**

Sandra Hartley met with Tammy Henderson and Rhonda Likely to review HR concentration Curriculum. Suggestions to check for inclusion of ethics, evaluation, and policy/procedure development.

**Mon 3/18/2013 5:30pm**                      **Business conference Room**

Business Advisory Committee Re new concentrations and degrees; handed out employer surveys, requested email comments, suggestions.

**Thu 4/4/2013 8:00am President's Conference Room**

Meeting to review BAS and BS curricula. Hartley, Dr. Spicer, Dr. Wymer.

**Fri 4/26/2013 8:00am Board Room**

Review of new programs: Hartley, Dr. Spicer, Dan Busse.

**Wed 5/15/2013 2:00pm Dean's Office, Warrington Campus**

Discussion regarding BS in Dental Hygiene, curricula, course development; Hartley, Ruber, Duncan.

**Thu 5/23/2013 2:00pm District Conference Room**

Agenda to include:

- Preparations for the Annual report
  - Graduate survey results
  - Employer survey
- Alumni Affairs update
- SLO progress
- Scholarships
- New programs
- Alumni Affairs update-Patrice Whitten
- Preparations for the Annual report
  - Graduate survey results-Debbie Douma
  - Employer survey
- SLO progress
  - Need for standardization
  - Need for a common current version
  - Automation of data collection
  - Artifact library
- Scholarships
  - Chadbourne \$10,000
  - Hurricane Fund \$4,000
- New programs-Sandy Hartley
  - New BAS Concentrations
    - HR Management
    - Project Management
    - Law Enforcement Administration
  - New BS Programs
    - Dental Hygiene
    - Medical Sciences
    - Information Assurance
    - Early Childhood Education

**Mon 6/24/2013 10:00am Telephone Conference**

Hartley/Charlotte Peacock (BS Adv Committee); discussion of project management curricula.

**Tue 8/20/2013 10:00am President's Conference Room**

Hartley, Dr. Spicer, Dr. Meadows: interview re new programs with Pensacola News Journal.

**Tue 9/10/2013 1:00pm Dr. Kuhl's office**

Hartley, Kuhl, Rich: re internship courses for BAS concentrations.

**Thu 9/26/2013 8:00am Troy Stepherson's Office**

Hartley, Nichols, Stepherson: re social media info and surveys re new programs.

**Wed 10/16/2013 10:00am Dr. Wymer's Office**

Hartley, Wymer, Kuhl, Rich; re changes in curriculum regarding prerequisites.

**Mon 10/21/2013 8:30am Board Room**

Department Head meeting; discussion of new programs

**Tue 11/5/2013 2:00pm Board Room**

Baccalaureate Leadership Team Meeting.

**Thu 11/7/2013 10:00am Dr. Wymer's office**

Credit hours within Cybersecurity BS. Wymer, Hartley, Pratten.

**Mon 2/3/2014 9:00am Dr. Spicer's Office**

Review of draft copies of proposals for new programs. Hartley, Spicer.

**Tue 2/4/2014 7:30am Dean's Office, Warrington Campus**

Discussion of proposed budget, enrollment, performance plan for Dental Hygiene BS.

Hartley, Duncan, Ruber, Lambert.

**Tue 2/4/2014 10:00am Dr. Wymer's Office**

Discussion of proposed budgets, enrollment and performance plans. Hartley, Wymer.

**Tue 2/4/2014 1:30pm Danny Steele's Office**

Discussion of proposed budget, enrollment, performance plan for Cybersecurity BS. Hartley, Steele, Pratten, Forehand.

**Wed 1/21/15 2:30pm District Conference Room**

Lab Requirement for Baccalaureate Programs

- If was decided that no lab would be required

Curriculum Representation in Catalog

- Catalog pages from the new catalog were distributed
- BAS & BSN have been modified to make it easier to understand
- Grouped by the following:
  - General Education courses – 36 credits
  - Lower Level degree requirements – specific courses for OADM & GRPH, specific prefixes for HCMG & PS
  - Lower level coursework in any field – GRPH excluded
  - Required Course work – upper division Core courses
  - Required concentration course
  - Concentration electives
- BSN follows suit – corrected to remove the points system
- Note made to correct Public Safety – add Steve White’s name

Status of New Programs / Proposals / Brainstorming

Cyber Security – ready to go

- Will be housed in Applied Technology
- Moratorium due to be “lifted” in May 2015
- New Admin & Supervision concentrations are 2<sup>nd</sup> or 3<sup>rd</sup>
- Bio-med – may need to be redone
- Steve White looking at Public Management with 2 or 3 concentrations
- More discussion needed with Dr. Wymer & Dr. Ruber regarding Public Management degree

BAS Name Change

- Potential name change to Bachelor of Applied Sciences in Supervision & Management instead of Administration & Supervision
- Aligns closer to what other institutions are using

**Tue 6/16/15 2:00pm District Conference Room**

Status of New Programs / Proposals / Brainstorming

- Cyber Security – working on completing
- New concentrations maybe affected by new rule if passed and the application process would not require a new proposal
- Begin preparing proposal memo to separate Healthcare Management and Public Safety Management from BAS program. Once new Dean of Warrington campus is in place, present to Dean for approval.

BAS Name Change

- Looking to rename BAS program to Mazza Business and Management. Ms. Mazza is a potential scholarship donor to Foundation.
- Discussion about possible internships for Healthcare Management, would lie in emphasis electives

GPA

- Motion to have a C or better for all upper division course, not just core courses. This will need to be presented to Curriculum Council, next meeting is September

Advisory Committee

- Several members are rotating off this year.
- Need to replace members by end of year, 3 year term

**Appendix G:**  
**Curriculum Council Meeting Minutes and**  
**Recommendations**

**CURRICULUM COUNCIL MINUTES**  
**July 10, 2013**

**Present:** Ann Coon, Diane Evett, Donna Flynn, Richard Jernigan, Christine Prendergast, Brigitte Robinson, Marge Sowa, Matt Stanfill, Chris Turner, Mary Louise Winter, Elizabeth Yelverton

**Ex-Officio Members:** Debbie Douma, Karen Roshell, Bill Waters, Doug Wymer

**Visitors:** Dan Busse, Matt Drum, Debra Kuhl, Elena Moore, Carla Rich, Christa Ruber, Dan Steele, Marc Ward

**I. Welcome/  
Chairperson:** Liz Yelverton welcomed the members and guests.

**II. Approval of  
Minutes:** Marge Sowa moved for approval of the minutes of the May 1, 2013 Curriculum Council Committee meeting as distributed and Matt Stanfill seconded the motion, which was approved unanimously.

**III. New Business:**

**Request to Develop**

Course Number	Course Title	Justification
ARH1002 (DL)	Art For Non Majors	To provide more options for our student population. <b>Effective Date:</b> August 2014
EPI0001 (DL)	Classroom Management	To get the EPI program online per Dr. Spicer's request <b>Effective Date:</b> August 2013
EPI0002 (DL)	Instructional Strategies	To get the EPI program online per Dr. Spicer's request <b>Effective Date:</b> August 2013
EPI0003 (DL)	Technology	To get the EPI program online per Dr. Spicer's request <b>Effective Date:</b> August 2013
EPI0004 (DL)	Teaching and Learning Process	To get the EPI program online per Dr. Spicer's request <b>Effective Date:</b> August 2013
EPI0020 (DL)	Professional Foundations	To get the EPI program online per Dr. Spicer's request <b>Effective Date:</b> January 2014
EPI0030 (DL)	Diversity	To get the EPI program online per Dr. Spicer's request <b>Effective Date:</b> January 2014
EPI0940 (DL)	Field Experience	To get the EPI program online per Dr. Spicer's request <b>Effective Date:</b> January 2014
EPI0945 (DL)	Field Experience	To get the EPI program online per Dr. Spicer's request <b>Effective Date:</b> January 2014
ETD 2332 (DL)	Auto CAD Customization	This needs to be an online class due to scheduling issues, and the request from students for more online classes. This is a required class so it needs to be more available to students. <b>Effective Date:</b> August 2014
ETD 2550 (DL)	Civil 3D	This needs to be an online class due to scheduling issues, and the request from students for more online classes. This is a required class so it needs to be more available to students. <b>Effective Date:</b> August 2014
HSA 4383 (Hybrid)	Quality Management In Healthcare	HSA 4383 is now available to students in an online format. Many students prefer the hybrid format. <b>Effective Date:</b> August 2013
HSA 4502 (Hybrid)	Healthcare Risk Management	HSA 4502 (Healthcare Risk Management) is available to students in the online format; however, many students prefer the hybrid format. <b>Effective Date:</b> August 2013

MAN 3583 (Hybrid)	Project Development	Presently Project Development is available to BAS students in the on-line format. Many students do not want that format and can better work with the hybrid. <b>Effective Date:</b> August 2013
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**Motion:** Motion for approval made by Donna Flynn and seconded by Diane Evett. **Vote:** Yes, unanimous

**ALLIED HEALTH DEPARTMENT**

**Program Addition:**

Program	Designation	Rationale
Dental Hygiene	BS	This is for concept approval of a new Bachelor of Science degree in Dental Hygiene. This degree will consist of 60 credit hours beyond the associate degree. <b>Effective Date:</b> August 2014

**Motion:** Motion for approval made by Marge Sowa and seconded by Mary Louise Winter. **Vote:** Yes, unanimous

**BIOLOGICAL SCIENCES**

**Program Addition:**

Program	Designation	Rationale
Biomedical Sciences	BS	This is a request for concept approval for a new bachelor of science degree in Biomedical Sciences. This degree will consist of 60 credit hours beyond the associate degree and is designed to prepare students for graduate medical education. <b>Effective Date:</b> August 2014

**Motion:** Motion for approval made by Diane Evett and seconded by Matt Stanfill. **Vote:** Yes, unanimous

**Program Modification:**

Program	Designation	Rationale
Pre-Clinical Laboratory Sciences	MEDTC-AA	The state of Florida is adopting new edits for the 2013-2014 academic year recommending limits to AA, CT, and ATD programs to no greater than 60 hours. Currently the Pre-Clinical Laboratory Sciences (MEDTC-AA) has 61 Total Program Credits. If these limits were in place this academic year, MEDTC-AA would receive critical errors due to program length. The biology department has convened to discuss amending the Total Program Hours to be consistent with the new edits. MEDTC-AA provides the first two years of college education leading to transfer to a Florida school offering a baccalaureate degree in Medical Technology. The Department of Biology at Pensacola State College currently has a bridge with Program in Clinical Laboratory Sciences at the University of West Florida and the majority of our program graduates move seamlessly into Medical Technology at UWF where they receive their B.S. degree and board certification as a Clinical Laboratory Scientist. University of West Florida requires 27 hours of science prerequisites, including 3 credit hours of Human Physiology, PCB X301. According to the UWF program director of CLS, BSC X093 or BSC X094 are not equivalent courses; this common prerequisite is also mandatory at other CLS programs in state institutions such as University of South Florida and Florida Gulf Coast University. Graduates of PSC will have to take PCB X301 in their third year regardless of BSC X094 or BSC X904L completion. The Program Director of CLS has advised the Department of Biology at PSC that the elimination of BSC1094L will not significantly affect student performance in the CLS program. <b>Effective Date:</b> August 2014



**Motion:** Motion for approval made by Marge Sowa and seconded by Richard Jernigan. **Vote:** Yes, unanimous

**BUSINESS DEPARTMENT**

**Program Addition:**

<b>Program</b>	<b>Designation</b>	<b>Rationale</b>
Concentration in Law Enforcement Administration	BAS	This is a new concentration within the BAS in Administration & Supervision. The Law Enforcement Administration Concentration will require the development of 4 new courses for the BAS Degree. This is for program concept approval. <b>Effective Date:</b> May 2014
Human Resource Management Concentration	BAS	This is a new concentration to be offered within the BAS in Administration & Supervision. This concentration will require the development of four new courses for this degree. <b>Effective Date:</b> May2014
Project Management Concentration	BAS	This is a new concentration within the BAS in Administration & Supervision. Three courses will need to be developed for this degree. This is for program concept approval. <b>Effective Date:</b> May 2014

**Motion:** Motion for approval made by Donna Flynn and seconded by Christine Prendergast. **Vote:** Yes, unanimous

**Course Modification:**

<b>Course Number</b>	<b>Course Title</b>	<b>Modification</b>	<b>Justification</b>
CCJ2687	Victimology	<b>Prerequisites:</b> Current – CJE1600 Proposed - None	No prerequisites needed for this course. <b>Effective Date:</b> August 2013
FIN 3400	Financial Management	<b>Prerequisites:</b> Current – ACG3024, OR ACG2001, AND ACG3024, OR ACG2001, AND ACG2011, OR ACG2021 Proposed – ACG3024 OR FIN2001 OR ACG2021	Proposed prerequisites better fit for class.  <b>Effective Date:</b> August 2013

**Motion:** Motion for approval made by Chris Turner and seconded by Marge Sowa. **Vote:** Yes, unanimous

**EDUCATION DEPARTMENT**

**Program Addition:**

<b>Program</b>	<b>Designation</b>	<b>Rationale</b>
Early Childhood Education	BS	This is a request for concept approval of a new Bachelor of Science Degree in Early Childhood Education. This degree will consist of 60 credit hours beyond the associate degree. <b>Effective Date:</b> August 2014

**Motion:** Motion for approval made by Brigitte Robinson and seconded by Donna Flynn. **Vote:** Yes, unanimous

**INFORMATION TECHNOLOGY**

**Program Addition:**

<b>Program</b>	<b>Designation</b>	<b>Rationale</b>
Cybersecurity	BS	This is for program concept approval of a new Bachelor of Science in Cybersecurity. The program will consist of 60 credit hours of content beyond the associate degree. <b>Effective Date:</b> August 2014

**Motion:** Motion for approval made by Diane Evett and seconded by Matt Stanfill. **Vote:** Yes, unanimous

**PROFESSIONAL SERVICE CAREERS**

**Course Inactivation:**

<b>Course Number</b>	<b>Course Title</b>	<b>Justification</b>
COS0001	Intro to Cosmetology	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0020	Consumer Relations/Salon Mgmt	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0064	Trichology	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0080L	Design Clinic I	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0081L	Design Clinic II	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0082L	Design Clinic III	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0301	Haircutting	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0401	Hairstyling I	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0402	Hairstyling II	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0420	Advanced Hairstyling	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0500C	Barber-Styling I	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0510C	Barber-Styling II	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014

COS0520C	Barber-Styling III	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date: August 2014</b>
COS0530C	Barber-Styling IV	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date: August 2014</b>
COS0540C	Barber-Styling V	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date: August 2014</b>
COS0550C	Barber-Styling VI	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date: August 2014</b>
COS0551C	Barber-Styling VII	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date: August 2014</b>
COS0552C	Barber-Styling VIII	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date: August 2014</b>
COS0590	Professional Barber I	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date: August 2014</b>
COS0591	Professional Barber II	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date: August 2014</b>
COS0592	Professional Barber III	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date: August 2014</b>
COS0593	Professional Barber IV	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date: August 2014</b>
COS0594L	Professional Barber V	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date: August 2014</b>
COS0600	PermWaving/ChemRelaxing	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date: August 2014</b>
COS0642L	Chemical Reformation Clinic II	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date: August 2014</b>
COS0643L	Chemical Reformation Clinic III	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date: August 2014</b>
COS0700	Haircoloring	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date: August 2014</b>
COS0946	Barbering Co-op	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date: August 2014</b>
COS0963	State Board Preparation	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date: August 2014</b>
CSP0002	Specialty Services	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date: August 2014</b>

CSP0007L	Specialty Services Clinic II	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date: August 2014</b>
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**Motion:** Motion for approval made by Marge Sowa and seconded by Mary Louise Winter. **Vote:** Yes, unanimous

**IV. Approved to Offer (Information Only)**

Course Number	Course Title	Recommendation
MAN 4720 (Hybrid)	Strategic Management	Approved to offer (effective 20141)
RTE1000C (Hybrid)	Introduction to Radiologic Technology	Approved to offer (effective 20141)

**V. Old Business**

The Computer and Speech Competency graduation requirements were removed from the agenda but the chairman asked if there was any discussion about these regarding whether to table the issue until a later time or go ahead and approve these recommendations from the committee. Dr. Wymer explained that with the upcoming changes in Gen Ed there might be an impact on what we vote in now so tabling these might be best. Much discussion ensued with two competing motions on the floor. The first motion by Marge Sowa was to table these recommendations. Another motion to approve them was made by Brigitte Robinson and seconded by Chris Turner. After much discussion a second was made on the motion to table by Diane Evett. There was a 9-1 vote to table the motion which eliminated the motion to approve.

Dr. Wymer took the floor to thank members who will be rotating off the council: Ann Coon, Shirlaura Bremer, Anthony Harris and Jana Lyner. He also distributed a list of members who are eligible to be nominated as the chair of this council for the 2013-14 year. This list will be delivered electronically to all members and nominations for this position will be taken. Once he checks with those nominated regarding their willingness to serve, those who remain will be on the ballot for election. This will all be done via email before the next meeting in September.

The meeting was adjourned by acclamation.

**CURRICULUM COUNCIL RECOMMENDATIONS**

**July 10, 2013**

**Request to Develop**

<b>Course Number</b>	<b>Course Title</b>	<b>Justification</b>
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EPI0001 (DL)	Classroom Management	To get the EPI program online per Dr. Spicer's request <b>Effective Date:</b> August 2013
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**ALLIED HEALTH DEPARTMENT**

**Program Addition:**

<b>Program</b>	<b>Designation</b>	<b>Rationale</b>
Dental Hygiene	BS	This is for concept approval of a new Bachelor of Science degree in Dental Hygiene. This degree will consist of 60 credit hours beyond the associate degree. <b>Effective Date:</b> August 2014

**BIOLOGICAL SCIENCES**

**Program Addition:**

<b>Program</b>	<b>Designation</b>	<b>Rationale</b>
Biomedical Sciences	BS	This is a request for concept approval for a new bachelor of science degree in Biomedical Sciences. This degree will consist of 60 credit hours beyond the associate degree and is designed to prepare students for graduate medical education. <b>Effective Date:</b> August 2014

**Program Modification:**

<b>Program</b>	<b>Designation</b>	<b>Rationale</b>
Pre-Clinical Laboratory Sciences	MEDTC-AA	The state of Florida is adopting new edits for the 2013-2014 academic year recommending limits to AA, CT, and ATD programs to no greater than 60 hours. Currently the Pre-Clinical Laboratory Sciences (MEDTC-AA) has 61 Total Program Credits. If these limits were in place this academic year, MEDTC-AA would receive critical errors due to program length. The biology department has convened to discuss amending the Total Program Hours to be consistent with the new edits. MEDTC-AA provides the first two years of college education leading to transfer to a Florida school offering a baccalaureate degree in Medical Technology. The Department of Biology at Pensacola State College currently has a bridge with Program in Clinical Laboratory Sciences at the University of West Florida and the majority of our program graduates move seamlessly into Medical Technology at UWF where they receive their B.S. degree and board certification as a Clinical Laboratory Scientist. University of West Florida requires 27 hours of science prerequisites, including 3 credit hours of Human Physiology, PCB X301. According to the UWF program director of CLS, BSC X093 or BSC X094 are not equivalent courses; this common prerequisite is also mandatory at other CLS programs in state institutions such as University of South Florida and Florida Gulf Coast University. Graduates of PSC will have to take PCB X301 in their third year regardless of BSC X094 or BSC X904L completion. The Program Director of CLS has advised the Department of Biology at PSC that the elimination of BSC1094L will not significantly affect student performance in the CLS program. <b>Effective Date:</b> August 2014

**BUSINESS DEPARTMENT**

**Program Addition:**

<b>Program</b>	<b>Designation</b>	<b>Rationale</b>
Concentration in Law Enforcement Administration	BAS	This is a new concentration within the BAS in Administration & Supervision. The Law Enforcement Administration Concentration will require the development of 4 new courses for the BAS Degree. This is for program concept approval. <b>Effective Date:</b> May 2014
Human Resource Management Concentration	BAS	This is a new concentration to be offered within the BAS in Administration & Supervision. This concentration will require the development of four new courses for this degree. <b>Effective Date:</b> May2014
Project Management Concentration	BAS	This is a new concentration within the BAS in Administration & Supervision. Three courses will need to be developed for this degree. This is for program concept approval. <b>Effective Date:</b> May 2014

**Course Modification:**

<b>Course Number</b>	<b>Course Title</b>	<b>Modification</b>	<b>Justification</b>
CCJ2687	Victimology	<b>Prerequisites:</b> Current – CJE1600 Proposed - None	No prerequisites needed for this course. <b>Effective Date:</b> August 2013
FIN 3400	Financial Management	<b>Prerequisites:</b> Current – ACG3024, OR ACG2001, AND ACG3024, OR ACG2001, AND ACG2011, OR ACG2021 Proposed – ACG3024 OR FIN2001 OR ACG2021	Proposed prerequisites better fit for class. <b>Effective Date:</b> August 2013

**EDUCATION DEPARTMENT**

**Program Addition:**

<b>Program</b>	<b>Designation</b>	<b>Rationale</b>
Early Childhood Education	BS	This is a request for concept approval of a new Bachelor of Science Degree in Early Childhood Education. This degree will consist of 60 credit hours beyond the associate degree. <b>Effective Date:</b> August 2014

**INFORMATION TECHNOLOGY**

**Program Addition:**

<b>Program</b>	<b>Designation</b>	<b>Rationale</b>
Cybersecurity	BS	This is for program concept approval of a new Bachelor of Science in Cybersecurity. The program will consist of 60 credit hours of content beyond the associate degree. <b>Effective Date:</b> August 2014

**PROFESSIONAL SERVICE CAREERS**

**Course Inactivation:**

<b>Course Number</b>	<b>Course Title</b>	<b>Justification</b>
COS0001	Intro to Cosmetology	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0020	Consumer Relations/Salon Mgmt	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0064	Trichology	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0080L	Design Clinic I	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014


COS0081L	Design Clinic II	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0082L	Design Clinic III	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0301	Haircutting	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0401	Hairstyling I	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0402	Hairstyling II	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0420	Advanced Hairstyling	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0500C	Barber-Styling I	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0510C	Barber-Styling II	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0520C	Barber-Styling III	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0530C	Barber-Styling IV	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0540C	Barber-Styling V	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0550C	Barber-Styling VI	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0551C	Barber-Styling VII	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0552C	Barber-Styling VIII	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0590	Professional Barber I	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0591	Professional Barber II	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0592	Professional Barber III	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0593	Professional Barber IV	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014
COS0594L	Professional Barber V	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date:</b> August 2014




COS0600	PermWaving/ChemRelaxing	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date: August 2014</b>
COS0642L	Chemical Reformation Clinic II	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date: August 2014</b>
COS0643L	Chemical Reformation Clinic III	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date: August 2014</b>
COS0700	Haircoloring	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date: August 2014</b>
COS0946	Barbering Co-op	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date: August 2014</b>
COS0963	State Board Preparation	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date: August 2014</b>
CSP0002	Specialty Services	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date: August 2014</b>
CSP0007L	Specialty Services Clinic II	Alignment of programs with the Title IV regulations related to clock hour programs. <b>Effective Date: August 2014</b>

Douglas A Wymer  
 Dean, Baccalaureate Studies and Academic Support

17 July 2013  
 Date

  
 Vice President of Academic Affairs

july 17 2013  
 Date

  
 President



7/18/13  
 Date

**Appendix H:**  
**Student Survey Results**

## 1. What is your current associate degree major?

	Response Count
	234
answered question	234
skipped question	1



## 2. After you complete your current program, are you planning on earning a more advanced degree?

		Response Percent	Response Count
Yes		95.3%	221
No		4.7%	11
	answered question		232
	skipped question		3

## 3. At the bachelor's level, what is your planned major?

	Response Count
	223
answered question	223
skipped question	12



#### 4. Do you plan to complete your bachelor's degree at Pensacola State College?

		Response Percent	Response Count
Yes		25.4%	58
No		74.6%	170
answered question			228
skipped question			7

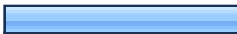

#### 5. If you plan to complete your bachelor's degree elsewhere, please tell us why:

		Response Count
		174
answered question		174
skipped question		61


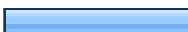


#### 6. If your desired bachelor's degree was offered here, would you prefer to stay at Pensacola State College?

		Response Percent	Response Count
Yes		89.4%	202
No		10.6%	24
Comments:			69
answered question			226
skipped question			9




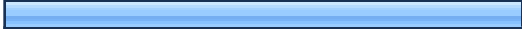
## 7. Would any of the proposed degrees meet your needs?

		Response Percent	Response Count
Yes		35.0%	78
No		65.0%	145
	If yes, which one?		58
answered question			223
skipped question			12

## 8. How should classes be offered? (check all that apply)

		Response Percent	Response Count
Traditional (face-to-face classes)		71.4%	167
All courses offered online		27.8%	65
Some courses offered online		54.3%	127
Hybrid (some online assignments, some face-to-face classes)		60.7%	142
	Other (please specify):		19
answered question			234
skipped question			1

**9. When should classes be offered? (check all that apply)**

		Response Percent	Response Count
Days		86.3%	201
Nights		85.4%	199
Weekends		48.9%	114
Online		77.7%	181
		<b>answered question</b>	<b>233</b>
		<b>skipped question</b>	<b>2</b>

**10. Which of the following components of a bachelor's degree program are important to you? Please rank each component on a 1-5 scale, with 1 as least important and 5 as very important.**

	<b>1 (least important)</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5 (very important)</b>	<b>Rating Count</b>
Reasonable tuition/fees	1.3% (3)	1.7% (4)	6.5% (15)	10.8% (25)	<b>79.7% (185)</b>	232
Field internships	4.8% (11)	5.2% (12)	19.1% (44)	23.0% (53)	<b>47.8% (110)</b>	230
Faculty	0.4% (1)	1.3% (3)	13.2% (30)	29.8% (68)	<b>55.3% (126)</b>	228
Curriculum requirements	0.0% (0)	1.3% (3)	17.0% (39)	36.2% (83)	<b>45.4% (104)</b>	229
Convenient schedule (day, night weekend classes)	0.4% (1)	1.7% (4)	5.2% (12)	16.6% (38)	<b>76.0% (174)</b>	229
Additional in-field certifications	3.9% (9)	7.4% (17)	20.5% (47)	27.5% (63)	<b>40.6% (93)</b>	229
Online courses	14.4% (33)	10.5% (24)	18.3% (42)	19.2% (44)	<b>37.6% (86)</b>	229
NO online courses	<b>56.7% (127)</b>	8.9% (20)	20.1% (45)	5.8% (13)	8.5% (19)	224
Hybrid (some work online, fewer class meetings)	18.8% (43)	13.1% (30)	<b>34.1% (78)</b>	16.6% (38)	17.5% (40)	229
Ability to work fulltime while in school	4.8% (11)	5.2% (12)	11.4% (26)	17.9% (41)	<b>60.7% (139)</b>	229
Use of social media for class interaction and assignments	24.1% (55)	13.6% (31)	<b>25.4% (58)</b>	16.2% (37)	20.6% (47)	228
Community interaction with the program	11.0% (25)	14.1% (32)	<b>31.7% (72)</b>	19.4% (44)	23.8% (54)	227
Service Learning in the community	9.3% (21)	11.0% (25)	<b>37.4% (85)</b>	20.3% (46)	22.0% (50)	227
Digital textbook availability	17.2% (39)	10.6% (24)	22.9% (52)	21.1% (48)	<b>28.2% (64)</b>	227
Teamwork with other students	12.7% (29)	11.8% (27)	<b>28.9% (66)</b>	19.7% (45)	26.8% (61)	228

Please list any other components that are important to you, as well as any additional comments you would like to share: 38

<b>answered question</b>	<b>232</b>
<b>skipped question</b>	<b>3</b>

**Q1. What is your current associate degree major?**

1	Early Childhood Education	Oct 22, 2013 4:31 PM
2	Business	Oct 18, 2013 10:02 AM
3	Pre-Clinical Laboratory Science	Oct 14, 2013 6:58 PM
4	Dental Hygiene	Oct 13, 2013 7:20 PM
5	pre pharmacy	Oct 12, 2013 1:30 PM
6	PTA	Oct 11, 2013 3:18 PM
7	Pre-Physical Therapy	Oct 10, 2013 12:19 PM
8	Liberal Arts	Oct 9, 2013 8:11 PM
9	Pre-Physical Therapy	Oct 9, 2013 3:53 PM
10	Computer Information Systems	Oct 8, 2013 10:09 PM
11	General Studies	Oct 7, 2013 11:12 PM
12	Pre-pharmacy	Oct 7, 2013 3:06 PM
13	Business	Oct 7, 2013 10:06 AM
14	General	Oct 7, 2013 8:09 AM
15	general-aa	Oct 7, 2013 6:37 AM
16	Paralegal Studies	Oct 6, 2013 9:32 PM
17	Business	Oct 6, 2013 10:23 AM
18	Business	Oct 5, 2013 5:49 AM
19	general studies	Oct 4, 2013 4:18 PM
20	Pre- Med	Oct 4, 2013 7:47 AM
21	ppt-aa	Oct 4, 2013 5:34 AM
22	early childhood	Oct 3, 2013 4:34 PM
23	Computer Programming and Analysis	Oct 3, 2013 10:04 AM
24	HPREX-AA	Oct 3, 2013 8:40 AM
25	Pre-CLS	Oct 2, 2013 6:05 PM
26	Biology	Oct 2, 2013 12:47 PM
27	Chemistry	Oct 2, 2013 10:04 AM



**Q1. What is your current associate degree major?**

28	COMP-AA Computer Information Systems	Oct 2, 2013 7:38 AM
29	General Education	Oct 1, 2013 10:47 PM
30	Nursing	Oct 1, 2013 8:29 PM
31	physical therapy assistant	Oct 1, 2013 4:00 PM
32	general	Oct 1, 2013 3:11 PM
33	Psychology	Oct 1, 2013 12:07 PM
34	Psychology	Oct 1, 2013 12:06 PM
35	paralegal	Oct 1, 2013 10:34 AM
36	Early Childhood Education	Oct 1, 2013 10:15 AM
37	General Studies	Oct 1, 2013 9:09 AM
38	AA	Oct 1, 2013 8:07 AM
39	pre-clinical laboratory science	Sep 30, 2013 5:57 PM
40	ITSEC-AS, CIT-AS	Sep 30, 2013 4:28 PM
41	Early Childhood Education Associate in Science	Sep 30, 2013 4:02 PM
42	BUS	Sep 30, 2013 11:54 AM
43	Business AA	Sep 30, 2013 11:36 AM
44	AS	Sep 30, 2013 10:00 AM
45	General Studies	Sep 30, 2013 9:29 AM
46	Pre-Nursing	Sep 30, 2013 9:07 AM
47	General Studies	Sep 29, 2013 6:28 PM
48	Music	Sep 29, 2013 6:18 PM
49	Pre-Med	Sep 29, 2013 2:08 PM
50	Computer Information Systems	Sep 29, 2013 8:49 AM
51	Criminal Justice	Sep 29, 2013 1:39 AM
52	Criminal Justice	Sep 29, 2013 1:38 AM
53	Early Childhood Education	Sep 28, 2013 8:06 PM
54	business (want to change)	Sep 28, 2013 6:27 PM

**Q1. What is your current associate degree major?**

55	Criminal Justice	Sep 28, 2013 3:45 PM
56	AA Degree	Sep 28, 2013 2:31 PM
57	General AA	Sep 27, 2013 9:53 PM
58	Criminal Justice	Sep 27, 2013 8:39 PM
59	general studies	Sep 27, 2013 11:19 AM
60	Paralegal Studies	Sep 27, 2013 9:28 AM
61	General	Sep 27, 2013 8:26 AM
62	Early childhood education	Sep 27, 2013 7:50 AM
63	Early Childhood Education	Sep 27, 2013 7:06 AM
64	AA is completed	Sep 27, 2013 4:50 AM
65	Hospitality and Tourism Management	Sep 26, 2013 9:45 PM
66	Criminal Justice	Sep 26, 2013 8:45 PM
67	general A.A.	Sep 26, 2013 8:28 PM
68	Computer Science	Sep 26, 2013 6:24 PM
69	early child hood	Sep 26, 2013 1:30 PM
70	social work	Sep 26, 2013 1:29 PM
71	Liberal Arts (General)	Sep 26, 2013 12:06 PM
72	Paralegal	Sep 26, 2013 11:14 AM
73	Criminal justice	Sep 26, 2013 9:28 AM
74	Pre-Pharm	Sep 26, 2013 9:26 AM
75	RN	Sep 26, 2013 9:21 AM
76	General Studies	Sep 26, 2013 9:09 AM
77	Pre-Engineering	Sep 26, 2013 8:39 AM
78	business	Sep 26, 2013 8:13 AM
79	Crimianal Justice	Sep 26, 2013 8:03 AM
80	Pharmacy	Sep 26, 2013 7:56 AM
81	General Studies	Sep 26, 2013 7:53 AM

**Q1. What is your current associate degree major?**

82	Criminal Justice	Sep 26, 2013 7:29 AM
83	Computer Information Technology	Sep 25, 2013 10:07 PM
84	Psychology	Sep 25, 2013 9:56 PM
85	General AA	Sep 25, 2013 9:55 PM
86	General A.A.	Sep 25, 2013 8:24 PM
87	CIT	Sep 25, 2013 7:18 PM
88	Liberal arts (general studies)	Sep 25, 2013 6:34 PM
89	Pre-Pharmacy	Sep 25, 2013 6:28 PM
90	Business Administration AS	Sep 25, 2013 6:16 PM
91	Business	Sep 25, 2013 5:57 PM
92	business administration	Sep 25, 2013 5:18 PM
93	Liberal Arts - graduated; now working on BAS	Sep 25, 2013 5:18 PM
94	General Studies	Sep 25, 2013 4:37 PM
95	business	Sep 25, 2013 4:12 PM
96	RN, AS	Sep 25, 2013 4:01 PM
97	Business Administrative	Sep 25, 2013 3:57 PM
98	General Studies	Sep 25, 2013 3:53 PM
99	General A.A.	Sep 25, 2013 3:47 PM
100	Computer Information Technology	Sep 25, 2013 3:37 PM
101	AAS	Sep 25, 2013 3:23 PM
102	Liberal Arts	Sep 25, 2013 3:07 PM
103	General Studies	Sep 25, 2013 2:38 PM
104	General Studies	Sep 25, 2013 2:08 PM
105	general	Sep 25, 2013 1:59 PM
106	General Studies	Sep 25, 2013 1:14 PM
107	General AA	Sep 25, 2013 12:21 PM
108	pre-medical	Sep 25, 2013 12:11 PM

**Q1. What is your current associate degree major?**

109	General Studies	Sep 25, 2013 11:47 AM
110	General Studies	Sep 25, 2013 11:46 AM
111	pre med	Sep 25, 2013 11:40 AM
112	I'm a PSC graduate with a General Studies degree	Sep 25, 2013 10:54 AM
113	General Studies	Sep 25, 2013 10:51 AM
114	dental hygiene	Sep 25, 2013 10:48 AM
115	General	Sep 25, 2013 10:46 AM
116	General	Sep 25, 2013 10:22 AM
117	paralegal	Sep 25, 2013 10:14 AM
118	General Studies/ Liberal Arts	Sep 25, 2013 10:00 AM
119	Computer Science	Sep 25, 2013 9:36 AM
120	General A.A. and Photography A.S.	Sep 25, 2013 9:15 AM
121	Gen-AA and Massage Therapy Program	Sep 25, 2013 9:04 AM
122	Physical Therapy Assistant	Sep 25, 2013 8:56 AM
123	Paralegal	Sep 25, 2013 8:50 AM
124	AA-CIS	Sep 25, 2013 8:31 AM
125	Business	Sep 25, 2013 8:24 AM
126	Art	Sep 25, 2013 8:21 AM
127	Business	Sep 25, 2013 8:12 AM
128	TEACH-AA	Sep 25, 2013 7:59 AM
129	Cyber forensics	Sep 25, 2013 7:54 AM
130	criminal justice	Sep 25, 2013 7:36 AM
131	pre pharmacy	Sep 25, 2013 7:34 AM
132	Business	Sep 25, 2013 7:16 AM
133	Computer Programming and Analysis	Sep 25, 2013 6:53 AM
134	Nursing (I Hope)	Sep 25, 2013 6:33 AM
135	Computer Science	Sep 25, 2013 6:17 AM

**Q1. What is your current associate degree major?**

136	general AA	Sep 25, 2013 6:15 AM
137	Liberal Arts (General Studies)	Sep 25, 2013 6:04 AM
138	Liberal Arts	Sep 25, 2013 5:40 AM
139	Computer Programming and Analysis	Sep 25, 2013 5:17 AM
140	Criminal Justices	Sep 25, 2013 5:11 AM
141	Cyber Forensics	Sep 25, 2013 3:47 AM
142	AA pre-med	Sep 24, 2013 10:56 PM
143	General Studies (Liberal Arts)	Sep 24, 2013 10:30 PM
144	General AA	Sep 24, 2013 10:11 PM
145	pre pharmacy	Sep 24, 2013 9:53 PM
146	Gen AA	Sep 24, 2013 9:33 PM
147	History-Public Service	Sep 24, 2013 9:29 PM
148	Pharmacy AA	Sep 24, 2013 9:22 PM
149	Information Security	Sep 24, 2013 9:17 PM
150	Information Technology Security	Sep 24, 2013 9:06 PM
151	Paralegal Studies (Legal Assisting)	Sep 24, 2013 8:54 PM
152	business	Sep 24, 2013 8:46 PM
153	pre-physical therapy	Sep 24, 2013 8:35 PM
154	Pre-Pharmacy	Sep 24, 2013 8:00 PM
155	Early Childhood Development	Sep 24, 2013 7:57 PM
156	Information Technology Security	Sep 24, 2013 7:55 PM
157	Business	Sep 24, 2013 7:55 PM
158	Computer Information Systems	Sep 24, 2013 7:43 PM
159	Paralegal Studies	Sep 24, 2013 7:39 PM
160	Business	Sep 24, 2013 7:35 PM
161	Computer Science	Sep 24, 2013 7:29 PM
162	Criminal Justice	Sep 24, 2013 7:26 PM

**Q1. What is your current associate degree major?**

163	Nursing	Sep 24, 2013 7:22 PM
164	BAS Admin/Supervision	Sep 24, 2013 7:17 PM
165	business	Sep 24, 2013 7:15 PM
166	general	Sep 24, 2013 7:10 PM
167	Business	Sep 24, 2013 7:02 PM
168	Computer Programming and Analysis	Sep 24, 2013 6:52 PM
169	Paralegal	Sep 24, 2013 6:48 PM
170	General Studies/Nursing RN	Sep 24, 2013 6:46 PM
171	Psychology	Sep 24, 2013 6:35 PM
172	computer science	Sep 24, 2013 6:33 PM
173	Information Technology Security	Sep 24, 2013 6:29 PM
174	Early Education	Sep 24, 2013 6:25 PM
175	general AA	Sep 24, 2013 6:24 PM
176	Criminal Justice	Sep 24, 2013 6:21 PM
177	business administration	Sep 24, 2013 5:58 PM
178	associate in nursing	Sep 24, 2013 5:49 PM
179	General	Sep 24, 2013 5:40 PM
180	RN-nursing	Sep 24, 2013 5:35 PM
181	Pre-Law	Sep 24, 2013 5:32 PM
182	Business	Sep 24, 2013 5:20 PM
183	General	Sep 24, 2013 5:05 PM
184	Business	Sep 24, 2013 5:02 PM
185	Business	Sep 24, 2013 4:56 PM
186	Liberal Arts	Sep 24, 2013 4:41 PM
187	information technology	Sep 24, 2013 4:40 PM
188	business administration	Sep 24, 2013 4:33 PM
189	Graphic Design/General	Sep 24, 2013 4:32 PM

**Q1. What is your current associate degree major?**

190	criminal justice/ switching to Cyber Forensics	Sep 24, 2013 4:29 PM
191	Criminal Justice	Sep 24, 2013 4:27 PM
192	General	Sep 24, 2013 4:25 PM
193	Pre-Engineering AA	Sep 24, 2013 4:23 PM
194	General Studies	Sep 24, 2013 4:19 PM
195	Psychology	Sep 24, 2013 4:02 PM
196	Nursing AA	Sep 24, 2013 4:01 PM
197	Business	Sep 24, 2013 3:57 PM
198	Computer Information Systems	Sep 24, 2013 3:48 PM
199	Prepharmacy	Sep 24, 2013 3:44 PM
200	general	Sep 24, 2013 3:37 PM
201	Computer Information System	Sep 24, 2013 3:33 PM
202	Computer information systems	Sep 24, 2013 3:31 PM
203	History - Public Service	Sep 24, 2013 3:23 PM
204	Pre physical therapy	Sep 24, 2013 3:22 PM
205	Business	Sep 24, 2013 3:21 PM
206	Business	Sep 24, 2013 3:17 PM
207	Biology	Sep 24, 2013 3:15 PM
208	Business	Sep 24, 2013 3:09 PM
209	paralegal studies	Sep 24, 2013 3:07 PM
210	Teach AA	Sep 24, 2013 3:02 PM
211	AA GENERAL	Sep 24, 2013 2:59 PM
212	Pre-Med	Sep 24, 2013 2:59 PM
213	Criminal Justice	Sep 24, 2013 2:50 PM
214	General Studies	Sep 24, 2013 2:43 PM
215	A.A. General Studies	Sep 24, 2013 2:35 PM
216	General Studies	Sep 24, 2013 2:20 PM

**Q1. What is your current associate degree major?**

217	Paralegal Studies	Sep 24, 2013 2:19 PM
218	RN	Sep 24, 2013 2:19 PM
219	Pre-Engineering	Sep 24, 2013 2:17 PM
220	Computer Science	Sep 24, 2013 2:09 PM
221	General Studies	Sep 24, 2013 2:06 PM
222	Computer Information Systems	Sep 24, 2013 2:04 PM
223	ITSEC-AS	Sep 24, 2013 2:02 PM
224	pre-law	Sep 24, 2013 2:01 PM
225	Environmental Science	Sep 24, 2013 2:00 PM
226	Computer science	Sep 24, 2013 1:51 PM
227	Computer Science AA	Sep 24, 2013 1:51 PM
228	Business administration	Sep 24, 2013 1:45 PM
229	Computer Information Systems	Sep 24, 2013 1:42 PM
230	General AA	Sep 24, 2013 1:41 PM
231	English-AA	Sep 24, 2013 1:28 PM
232	Computer Science	Sep 24, 2013 1:26 PM
233	Business AA	Sep 24, 2013 1:12 PM
234	English	Sep 24, 2013 1:12 PM



**Q3. At the bachelor's level, what is your planned major?**

1	Early Childhood Education	Oct 22, 2013 4:31 PM
2	Accounting	Oct 18, 2013 10:02 AM
3	Clinical Laboratory Science	Oct 14, 2013 6:58 PM
4	Undecided	Oct 13, 2013 7:20 PM
5	pharmacy	Oct 12, 2013 1:30 PM
6	Health Field	Oct 11, 2013 3:18 PM
7	Exercise Science	Oct 10, 2013 12:19 PM
8	Unsure	Oct 9, 2013 8:11 PM
9	Sports Physical Therapy	Oct 9, 2013 3:53 PM
10	Computer Science	Oct 8, 2013 10:09 PM
11	Health Care Administration	Oct 7, 2013 11:12 PM
12	Pharmacy	Oct 7, 2013 3:06 PM
13	Accounting	Oct 7, 2013 10:06 AM
14	Elementary Education	Oct 7, 2013 8:09 AM
15	criminal justice	Oct 7, 2013 6:37 AM
16	Criminal Justice	Oct 6, 2013 9:32 PM
17	Forensic Accounting	Oct 6, 2013 10:23 AM
18	Business	Oct 5, 2013 5:49 AM
19	forencsis	Oct 4, 2013 4:18 PM
20	PRE-MED	Oct 4, 2013 7:47 AM
21	physical therapy	Oct 4, 2013 5:34 AM
22	early childhood	Oct 3, 2013 4:34 PM
23	Software Engineering	Oct 3, 2013 10:04 AM
24	Athletic Training	Oct 3, 2013 8:40 AM
25	Admin & Supervision	Oct 2, 2013 7:48 PM
26	CLS	Oct 2, 2013 6:05 PM
27	Plant Genetics	Oct 2, 2013 12:47 PM

**Q3. At the bachelor's level, what is your planned major?**

28	Chemical Engineering	Oct 2, 2013 10:04 AM
29	BS in Computer Science (Computer Information Systems option)	Oct 2, 2013 7:38 AM
30	BSN	Oct 1, 2013 10:47 PM
31	Nursing	Oct 1, 2013 8:29 PM
32	undecided	Oct 1, 2013 3:11 PM
33	Industrial Psychology	Oct 1, 2013 12:07 PM
34	Industrial Psychology	Oct 1, 2013 12:06 PM
35	Early Childhood Education or Elementary Education	Oct 1, 2013 10:15 AM
36	Ocean Engineering	Oct 1, 2013 9:09 AM
37	Occupational Safety and Health or Emergency Management	Oct 1, 2013 8:07 AM
38	clinical laboratory science	Sep 30, 2013 5:57 PM
39	Cybersecurity	Sep 30, 2013 4:28 PM
40	Early Childhood Education	Sep 30, 2013 4:02 PM
41	Sound Engineer	Sep 30, 2013 11:54 AM
42	unsure	Sep 30, 2013 11:36 AM
43	Human Resource Mgt.	Sep 30, 2013 10:00 AM
44	Education	Sep 30, 2013 9:29 AM
45	Nursing	Sep 30, 2013 9:07 AM
46	Dental Hygiene	Sep 29, 2013 6:28 PM
47	Communications	Sep 29, 2013 6:18 PM
48	Pre Professional Biology	Sep 29, 2013 2:08 PM
49	Same	Sep 29, 2013 8:49 AM
50	ADMINISTRATION AND SUPERVISION - Public Safety	Sep 29, 2013 1:39 AM
51	Criminal Justice	Sep 29, 2013 1:38 AM
52	Currently hold a Bachelors in Organizational Management, looking for Bachelors in Early Childhood Education.	Sep 28, 2013 8:06 PM
53	political science maybe	Sep 28, 2013 6:27 PM
54	Criminal Justice	Sep 28, 2013 3:45 PM

**Q3. At the bachelor's level, what is your planned major?**

55	BS Veterinary Technology	Sep 28, 2013 2:31 PM
56	Undecided	Sep 27, 2013 9:53 PM
57	Law Enforcement Administration	Sep 27, 2013 8:39 PM
58	Project Management - Acquisitions	Sep 27, 2013 11:19 AM
59	Anything involving law	Sep 27, 2013 9:28 AM
60	Not sure	Sep 27, 2013 8:26 AM
61	Law studies	Sep 27, 2013 7:50 AM
62	Early Childhood Education	Sep 27, 2013 7:06 AM
63	Human Resource Management	Sep 27, 2013 4:50 AM
64	Hospitality and Tourism Management	Sep 26, 2013 9:45 PM
65	Criminal Justice	Sep 26, 2013 8:45 PM
66	only a Bachelor degree	Sep 26, 2013 8:28 PM
67	Computer Science	Sep 26, 2013 6:24 PM
68	early child hood	Sep 26, 2013 1:30 PM
69	social work	Sep 26, 2013 1:29 PM
70	To work in the fashion industry	Sep 26, 2013 12:06 PM
71	Pre-Law	Sep 26, 2013 11:14 AM
72	Criminal justice/information technology	Sep 26, 2013 9:28 AM
73	Medical technology	Sep 26, 2013 9:26 AM
74	BSN	Sep 26, 2013 9:21 AM
75	Computer Hardware Engineer	Sep 26, 2013 9:09 AM
76	Electrical Engineering and Geophysics	Sep 26, 2013 8:39 AM
77	business	Sep 26, 2013 8:13 AM
78	Criminal Justice	Sep 26, 2013 8:03 AM
79	Pharmacy	Sep 26, 2013 7:56 AM
80	Social Work	Sep 26, 2013 7:53 AM
81	Criminal Justice	Sep 26, 2013 7:29 AM

**Q3. At the bachelor's level, what is your planned major?**

82	Computer Information Technology	Sep 25, 2013 10:07 PM
83	Psychology	Sep 25, 2013 9:56 PM
84	BAS organizational administration	Sep 25, 2013 9:55 PM
85	Education or Buisness Administration	Sep 25, 2013 8:24 PM
86	Information Security/Cyber Security	Sep 25, 2013 7:18 PM
87	Graphic design	Sep 25, 2013 6:34 PM
88	Pharmacist	Sep 25, 2013 6:28 PM
89	Botanical	Sep 25, 2013 5:57 PM
90	business administration	Sep 25, 2013 5:18 PM
91	Organizational Administration	Sep 25, 2013 5:18 PM
92	business	Sep 25, 2013 4:12 PM
93	BSN	Sep 25, 2013 4:01 PM
94	Forensic Science	Sep 25, 2013 3:53 PM
95	A.A.S.	Sep 25, 2013 3:47 PM
96	Computer Information Technology	Sep 25, 2013 3:37 PM
97	Biology	Sep 25, 2013 3:23 PM
98	Environmental Science	Sep 25, 2013 3:07 PM
99	Social Work	Sep 25, 2013 2:38 PM
100	Social Sciences	Sep 25, 2013 2:08 PM
101	law	Sep 25, 2013 1:59 PM
102	Health Services? (Science)	Sep 25, 2013 1:14 PM
103	Biology or Health Mangagement	Sep 25, 2013 12:21 PM
104	pre-medical	Sep 25, 2013 12:11 PM
105	Computer Science	Sep 25, 2013 11:47 AM
106	Speech and Hearing Sciences	Sep 25, 2013 11:46 AM
107	pre med	Sep 25, 2013 11:40 AM
108	Psychology	Sep 25, 2013 10:54 AM

**Q3. At the bachelor's level, what is your planned major?**

109	Dance	Sep 25, 2013 10:51 AM
110	biology	Sep 25, 2013 10:48 AM
111	Elementary education	Sep 25, 2013 10:46 AM
112	Psychology	Sep 25, 2013 10:22 AM
113	administration	Sep 25, 2013 10:14 AM
114	Psychology	Sep 25, 2013 10:00 AM
115	Information Technology	Sep 25, 2013 9:36 AM
116	Archeology or History	Sep 25, 2013 9:15 AM
117	undecided	Sep 25, 2013 9:04 AM
118	Health Care Management	Sep 25, 2013 8:56 AM
119	Computer Science	Sep 25, 2013 8:31 AM
120	Human Resource Management	Sep 25, 2013 8:24 AM
121	Business amination	Sep 25, 2013 8:12 AM
122	Education(K-6) and Exceptional Child Education(K-12)	Sep 25, 2013 7:59 AM
123	computer science	Sep 25, 2013 7:54 AM
124	criminal investigation	Sep 25, 2013 7:36 AM
125	pharmD	Sep 25, 2013 7:34 AM
126	Advertising	Sep 25, 2013 7:16 AM
127	Computer Science	Sep 25, 2013 6:53 AM
128	RN	Sep 25, 2013 6:33 AM
129	Computer Science	Sep 25, 2013 6:17 AM
130	Business	Sep 25, 2013 6:15 AM
131	Interpreter Training Program	Sep 25, 2013 6:04 AM
132	Psychology	Sep 25, 2013 5:40 AM
133	Computer Engineer	Sep 25, 2013 5:17 AM
134	Criminal Justices	Sep 25, 2013 5:11 AM
135	doctorate	Sep 24, 2013 10:56 PM

**Q3. At the bachelor's level, what is your planned major?**

136	Biology	Sep 24, 2013 10:30 PM
137	Public Safety Administraton	Sep 24, 2013 10:11 PM
138	pharmacy	Sep 24, 2013 9:53 PM
139	Psychology	Sep 24, 2013 9:33 PM
140	History	Sep 24, 2013 9:29 PM
141	Pharmacy major	Sep 24, 2013 9:22 PM
142	Cybersecurity	Sep 24, 2013 9:17 PM
143	something continuing the InfoTechSec path and perhaps into forensics	Sep 24, 2013 9:06 PM
144	Paralegal Studies	Sep 24, 2013 8:54 PM
145	seminary	Sep 24, 2013 8:46 PM
146	exercise science	Sep 24, 2013 8:35 PM
147	Pharmacy	Sep 24, 2013 8:00 PM
148	Early Childhood Development	Sep 24, 2013 7:57 PM
149	Information Technology Security	Sep 24, 2013 7:55 PM
150	Health Care Administration	Sep 24, 2013 7:55 PM
151	Anything IT related	Sep 24, 2013 7:43 PM
152	Legal Studies	Sep 24, 2013 7:39 PM
153	Accounting	Sep 24, 2013 7:35 PM
154	Computer Science	Sep 24, 2013 7:29 PM
155	Criminal Justice	Sep 24, 2013 7:26 PM
156	R.N. Nursing	Sep 24, 2013 7:22 PM
157	BAS Admin/Supervision	Sep 24, 2013 7:17 PM
158	not planned yet	Sep 24, 2013 7:15 PM
159	business	Sep 24, 2013 7:10 PM
160	Business	Sep 24, 2013 7:02 PM
161	Computer Information Systems	Sep 24, 2013 6:52 PM
162	Organization & Administration	Sep 24, 2013 6:48 PM

**Q3. At the bachelor's level, what is your planned major?**

163	BSN	Sep 24, 2013 6:46 PM
164	Psychology	Sep 24, 2013 6:35 PM
165	computer science	Sep 24, 2013 6:33 PM
166	Computer Science	Sep 24, 2013 6:29 PM
167	BA in education	Sep 24, 2013 6:25 PM
168	electrical engineering	Sep 24, 2013 6:24 PM
169	Criminal Justice	Sep 24, 2013 6:21 PM
170	accounting	Sep 24, 2013 5:58 PM
171	nursing	Sep 24, 2013 5:49 PM
172	Social work	Sep 24, 2013 5:40 PM
173	BSN-nursing	Sep 24, 2013 5:35 PM
174	Legal Studies	Sep 24, 2013 5:32 PM
175	Business	Sep 24, 2013 5:20 PM
176	BSN	Sep 24, 2013 5:05 PM
177	Accounting	Sep 24, 2013 5:02 PM
178	Business	Sep 24, 2013 4:56 PM
179	Radiography	Sep 24, 2013 4:41 PM
180	organization administration	Sep 24, 2013 4:40 PM
181	operational, industrial management, or a general business degree	Sep 24, 2013 4:33 PM
182	Advertising/Design	Sep 24, 2013 4:32 PM
183	cyber forensics	Sep 24, 2013 4:29 PM
184	Something of a criminal justice nature.	Sep 24, 2013 4:27 PM
185	Computer science	Sep 24, 2013 4:25 PM
186	Chemical/Biomedical Engineering	Sep 24, 2013 4:23 PM
187	BS is either Business Management or Communications	Sep 24, 2013 4:19 PM
188	Psychology	Sep 24, 2013 4:02 PM
189	Nursing BSN	Sep 24, 2013 4:01 PM

**Q3. At the bachelor's level, what is your planned major?**

190	Business	Sep 24, 2013 3:57 PM
191	Computer Science, Computer Information Systems	Sep 24, 2013 3:48 PM
192	Pharmacy professional degree. PharmD	Sep 24, 2013 3:44 PM
193	communications	Sep 24, 2013 3:37 PM
194	Computer Science	Sep 24, 2013 3:33 PM
195	Computer Information Systems	Sep 24, 2013 3:31 PM
196	History or Journalism	Sep 24, 2013 3:23 PM
197	Physical therapy	Sep 24, 2013 3:22 PM
198	Business	Sep 24, 2013 3:21 PM
199	Botany	Sep 24, 2013 3:15 PM
200	Organizational leadership	Sep 24, 2013 3:09 PM
201	education and history	Sep 24, 2013 3:02 PM
202	Social Science	Sep 24, 2013 2:59 PM
203	Biology	Sep 24, 2013 2:59 PM
204	Public Safety / Public Services	Sep 24, 2013 2:50 PM
205	Biomedical Engineering and MBA, Hopeful Petroleum Engineering Masters	Sep 24, 2013 2:43 PM
206	Undecided	Sep 24, 2013 2:35 PM
207	Bachelors of Science in Nursing, or Business Administration/Healthcare Administration	Sep 24, 2013 2:19 PM
208	Computer Engineering	Sep 24, 2013 2:17 PM
209	Computer Science	Sep 24, 2013 2:09 PM
210	Organizational Administration BAS because PSC does not currently offer a BAS in Human Resources Management.	Sep 24, 2013 2:06 PM
211	Bachelor of Science in Computer Information Systems	Sep 24, 2013 2:04 PM
212	IT Security	Sep 24, 2013 2:02 PM
213	anthropology	Sep 24, 2013 2:01 PM
214	Environmental Management	Sep 24, 2013 2:00 PM
215	Computer Science	Sep 24, 2013 1:51 PM



**Q3. At the bachelor's level, what is your planned major?**

216	Computer Science BS	Sep 24, 2013 1:51 PM
217	Business	Sep 24, 2013 1:45 PM
218	Computer Information Systems	Sep 24, 2013 1:42 PM
219	English Teaching	Sep 24, 2013 1:41 PM
220	English	Sep 24, 2013 1:28 PM
221	Computer Science	Sep 24, 2013 1:26 PM
222	International Studies	Sep 24, 2013 1:12 PM
223	English	Sep 24, 2013 1:12 PM

**Q5. If you plan to complete your bachelor's degree elsewhere, please tell us why:**

1	Pensacola state doesn't offer a bachelor's degree in early childhood education!!	Oct 22, 2013 4:31 PM
2	Degree program not offered at the campus	Oct 18, 2013 10:02 AM
3	PSC does not offer a bachelors in my field	Oct 14, 2013 6:58 PM
4	Cost and all online	Oct 13, 2013 7:20 PM
5	D Pharm not available at PSC	Oct 12, 2013 1:30 PM
6	If I complete my bachelor's somewhere else, it will be because PSC does not offer BS in my field online	Oct 11, 2013 3:18 PM
7	PSC Does not offer the degree	Oct 10, 2013 12:19 PM
8	I am not particularly interested in the advanced degrees offered at PSC.	Oct 9, 2013 8:11 PM
9	Pensacola State College does not offer a Physical Therapy/Sports Physical Therapy degree	Oct 9, 2013 3:53 PM
10	Pensacola state does not offer a bachelors in computer science	Oct 8, 2013 10:09 PM
11	PSC doesn't offer the advance degree I am seeking.	Oct 7, 2013 11:12 PM
12	No Accounting/ Forensic Accounting program available	Oct 7, 2013 10:06 AM
13	University of West Florida because PSC does not offer the classes that I would need to get a degree in Elementary Education	Oct 7, 2013 8:09 AM
14	uwf, because psc doesnt offer it	Oct 7, 2013 6:37 AM
15	Because you don't offer it.	Oct 6, 2013 9:32 PM
16	Degree not available	Oct 6, 2013 10:23 AM
17	Variety	Oct 5, 2013 5:49 AM
18	the program isnt offered	Oct 4, 2013 4:18 PM
19	PRE-MED/surgical technogist	Oct 4, 2013 7:47 AM
20	PSC does not offer a bachelors in early childhood	Oct 3, 2013 4:34 PM
21	PSC does not offer it.	Oct 3, 2013 10:04 AM
22	Not offered at Pensacola State	Oct 3, 2013 8:40 AM
23	Not offered at PSC	Oct 2, 2013 6:05 PM
24	Chemical engineering is not offered at PSC.	Oct 2, 2013 10:04 AM
25	Not currently offered at PSC	Oct 2, 2013 7:38 AM
26	Pensacola State College does not offer my degree at a bachelor's level.	Oct 1, 2013 12:07 PM

**Q5. If you plan to complete your bachelor's degree elsewhere, please tell us why:**

27	Pensacola State College does not offer my degree at a bachelor's level.	Oct 1, 2013 12:06 PM
28	Pensacola State does not offer a bachelor's degree in the education field.	Oct 1, 2013 10:15 AM
29	PSC does not offer a bachelor's in engineering	Oct 1, 2013 9:09 AM
30	PSC does not offer any courses in these areas of learning.	Oct 1, 2013 8:07 AM
31	not offered here; will have to transfer to UWF	Sep 30, 2013 5:57 PM
32	Pensacola State College does not offer a bachelor's in Early Childhood Education	Sep 30, 2013 4:02 PM
33	PSC does not offer degrees in sound engineering	Sep 30, 2013 11:54 AM
34	Albright College because I am moving to PA and can go there for free.	Sep 30, 2013 11:36 AM
35	Because it is not offered at Pensacola State College	Sep 30, 2013 9:29 AM
36	I would prefer it if PSC had a direct 4 year program. I also would like to begin working elsewhere and continue my degree online, while working.	Sep 30, 2013 9:07 AM
37	Didn't a big variety of Degrees	Sep 29, 2013 6:28 PM
38	There is not a program for my planned degree at PSC that I know of.	Sep 29, 2013 6:18 PM
39	Because the degree I'll be seeking isn't offered	Sep 29, 2013 2:08 PM
40	Because it isn't offered at PSC	Sep 29, 2013 8:49 AM
41	n/a	Sep 29, 2013 1:39 AM
42	Currently there are no Bachelor Criminal Justice degrees of any type at Pensacola State.	Sep 29, 2013 1:38 AM
43	Not offered. :(	Sep 28, 2013 8:06 PM
44	don't offer political science	Sep 28, 2013 6:27 PM
45	Pensacola State does not offer the bs degree in this field	Sep 28, 2013 2:31 PM
46	Available programs	Sep 27, 2013 9:53 PM
47	Currently PSC does not offer a four year degree in Criminal Justice	Sep 27, 2013 8:39 PM
48	not offered	Sep 27, 2013 11:19 AM
49	I never want to leave Pensacola State College! :)	Sep 27, 2013 9:28 AM
50	they don't have a bachelors degree at the school	Sep 27, 2013 7:50 AM
51	Not offered	Sep 27, 2013 7:06 AM
52	PSC does not offer a BA in Hospitality and Tourism Management	Sep 26, 2013 9:45 PM

**Q5. If you plan to complete your bachelor's degree elsewhere, please tell us why:**

53	No Criminal Justice Program at PSC	Sep 26, 2013 8:45 PM
54	UWF because there is no Forensic accounting degree	Sep 26, 2013 8:28 PM
55	Bachelor's not offered at PSC -- would stay at PSC if it was. LOVE PSC!!!	Sep 26, 2013 6:24 PM
56	Pensacola State does not have my degree in a bachelors program	Sep 26, 2013 1:30 PM
57	UWF because you do not offer a bs or masters degree in my field of study	Sep 26, 2013 1:29 PM
58	Pensacola State College does not offer fashion design programmes	Sep 26, 2013 12:06 PM
59	Not offered	Sep 26, 2013 11:14 AM
60	I believe that the degree from uwf holds better weight	Sep 26, 2013 9:28 AM
61	It's not offered at PSC	Sep 26, 2013 9:26 AM
62	UWF offers the classes need for a BS	Sep 26, 2013 9:09 AM
63	Because Pensacola State doesn't offer a BS in Electrical Engineering or Geophysics	Sep 26, 2013 8:39 AM
64	not offered at PSC	Sep 26, 2013 8:13 AM
65	I plan to move on at UWF, my bachelors in criminal justice is not offered here.	Sep 26, 2013 8:03 AM
66	More sufficient programs	Sep 26, 2013 7:56 AM
67	You do not have a bachelors in my degree field.	Sep 26, 2013 7:53 AM
68	PSC does not offer the bachelor's degree which you should bc, criminal justice is a top ten career field.	Sep 26, 2013 7:29 AM
69	Because it's not offered	Sep 25, 2013 9:56 PM
70	Pensacola State Does not offer a Bachelor for Business Admin or Education	Sep 25, 2013 8:24 PM
71	pensacola state college do not offer a bachelor degree for the program I'm taking	Sep 25, 2013 6:28 PM
72	do not offer a bachelor's in business administration	Sep 25, 2013 5:18 PM
73	PSC does not offer it	Sep 25, 2013 4:01 PM
74	Because of where I live.	Sep 25, 2013 3:53 PM
75	You don't offer aa degree in ASL Interpreting.	Sep 25, 2013 3:47 PM
76	UWF the course is not offered here	Sep 25, 2013 3:37 PM
77	PSC does not have the program	Sep 25, 2013 3:23 PM
78	Because a Bachelors in Environmental Science is not offered by PSC, PSC does not have lab courses in Environmental Science, and also because a degree from	Sep 25, 2013 3:07 PM

**Q5. If you plan to complete your bachelor's degree elsewhere, please tell us why:**

	a University would look better for future employment.	
79	The degree I want to pursue isn't offered here at PSC.	Sep 25, 2013 2:38 PM
80	want to travel	Sep 25, 2013 1:59 PM
81	I don't know, at the moment, if a bachelor's degree at PSC would be sufficient enough for me to apply to a college of medicine.	Sep 25, 2013 1:14 PM
82	You don't offer what I need to complete my bachelor's degree.	Sep 25, 2013 12:21 PM
83	They do not offer a four year degree in pre-medical or pre-professional	Sep 25, 2013 12:11 PM
84	Being funded by the VA, They setup my education plan.	Sep 25, 2013 11:47 AM
85	This degree is not offered at PSC	Sep 25, 2013 11:46 AM
86	physician asst (graduate medical program is not offered at this institution)	Sep 25, 2013 11:40 AM
87	I plan on going into the military soon, so I won't be here to attend PSC	Sep 25, 2013 10:54 AM
88	quality of the program, prestige of the degree	Sep 25, 2013 10:51 AM
89	May not have the courses or major of my choice	Sep 25, 2013 10:48 AM
90	New experiences	Sep 25, 2013 10:46 AM
91	Bachelor's in psychology not offered at PSC	Sep 25, 2013 10:22 AM
92	I'm pretty sure it's not offered	Sep 25, 2013 10:00 AM
93	Pensacola State doesn't offer the degree	Sep 25, 2013 9:36 AM
94	More choices and better experience at other institutions	Sep 25, 2013 9:15 AM
95	not sure	Sep 25, 2013 9:04 AM
96	N/A	Sep 25, 2013 8:56 AM
97	You don't offer the degree.	Sep 25, 2013 8:31 AM
98	Not offered here	Sep 25, 2013 8:24 AM
99	More choices.	Sep 25, 2013 8:21 AM
100	It's not offered here	Sep 25, 2013 7:59 AM
101	The degree path that I am looking for is not offered at PSC	Sep 25, 2013 7:54 AM
102	you do not have it	Sep 25, 2013 7:36 AM
103	PSC does not offer advertising!	Sep 25, 2013 7:16 AM
104	Moving for work	Sep 25, 2013 6:53 AM

**Q5. If you plan to complete your bachelor's degree elsewhere, please tell us why:**

105	Not offer, as to my knowledge.	Sep 25, 2013 6:17 AM
106	it is not offered and I feel like other colleges offer more of a selection i.e. time/day, number of classes.. etc	Sep 25, 2013 6:15 AM
107	Pensacola State College does not offer a sign language interpretation degree.	Sep 25, 2013 6:04 AM
108	The degrees offered are not very good.	Sep 25, 2013 5:40 AM
109	I do not believe they offer this.	Sep 25, 2013 5:17 AM
110	because i want to go somewhere with the requirement i need to reach my degree goals	Sep 24, 2013 10:56 PM
111	Better opportunitites elsewhere	Sep 24, 2013 10:30 PM
112	fsu	Sep 24, 2013 9:53 PM
113	FSU has a great Psychology program, and offers up to a Doctorate degree.	Sep 24, 2013 9:33 PM
114	PSC doesn't have a bachelor degree in History	Sep 24, 2013 9:29 PM
115	Pensacola state college doesn't have a pharmacy bachelor degree program.	Sep 24, 2013 9:22 PM
116	not currently offered	Sep 24, 2013 9:17 PM
117	I'm not 100% certain that I will seek a bachelor's degree, and I'm not sure if it is offered at PSC.	Sep 24, 2013 8:54 PM
118	not a messianic hebrew college, also not in israel	Sep 24, 2013 8:46 PM
119	Isn't Offered at PSC	Sep 24, 2013 8:35 PM
120	PSC does not have a pharmacy program.	Sep 24, 2013 8:00 PM
121	It is not offered at Pensacola State College.	Sep 24, 2013 7:57 PM
122	The degree at PSC is not offered online. UWF offers the degree completely online.	Sep 24, 2013 7:55 PM
123	Because you don't offer any bachelor's in IT	Sep 24, 2013 7:43 PM
124	PSC does not offer a bachelor's degree for Legal Studies	Sep 24, 2013 7:39 PM
125	It is not offered at PSC.	Sep 24, 2013 7:35 PM
126	A bachelor's degree is not offered in computer science at PSC.	Sep 24, 2013 7:29 PM
127	A bachelors in criminal justice is not offered at PSC	Sep 24, 2013 7:26 PM
128	Online R.N program at PSC is not designed for International Students.	Sep 24, 2013 7:22 PM
129	I can only complete an associates degree at PSC	Sep 24, 2013 7:15 PM

**Q5. If you plan to complete your bachelor's degree elsewhere, please tell us why:**

130	not offered at the moment	Sep 24, 2013 7:10 PM
131	PSC does not offer a bachelor's degree for my major	Sep 24, 2013 7:02 PM
132	Pensacola State College does not offer the degree	Sep 24, 2013 6:52 PM
133	I plan on moving.	Sep 24, 2013 6:35 PM
134	You do not offer my degree	Sep 24, 2013 6:25 PM
135	I want to get out of Pensacola, FL.	Sep 24, 2013 6:24 PM
136	Pensacola State College doesn't offer it.	Sep 24, 2013 6:21 PM
137	you don't offer the course	Sep 24, 2013 5:58 PM
138	No bachelors degree for social work.	Sep 24, 2013 5:40 PM
139	UWF because as far as I understand PSC is not fully accredited for BSN.	Sep 24, 2013 5:35 PM
140	Not offered at PSC	Sep 24, 2013 5:32 PM
141	PSC does not currently offer a BA in Accounting	Sep 24, 2013 5:02 PM
142	Pensacola State College Warrington Campus	Sep 24, 2013 4:41 PM
143	there are no bachelor's business programs or I would get it from psc	Sep 24, 2013 4:33 PM
144	Doesn't have my speciality in the degree	Sep 24, 2013 4:32 PM
145	depends on if PSC brings in the bachelors for Cyber Forensics	Sep 24, 2013 4:29 PM
146	If not at PSC, it's just simply that there's more to offer non-local.	Sep 24, 2013 4:27 PM
147	Pensacola State Does not offer a Chemical/Biomedical Engineering Degree	Sep 24, 2013 4:23 PM
148	The degree I am seeking is not offered and classes are difficult to get with only certain classes being offered online.	Sep 24, 2013 4:19 PM
149	PSC does not offer my major.	Sep 24, 2013 4:02 PM
150	not offered	Sep 24, 2013 3:57 PM
151	Not offered	Sep 24, 2013 3:48 PM
152	Pensacola State college does not have a pharmacy school.	Sep 24, 2013 3:44 PM
153	because you dont offer it.	Sep 24, 2013 3:37 PM
154	PSC does not offer BA in Computer Science	Sep 24, 2013 3:33 PM
155	Doesn't offer the degree	Sep 24, 2013 3:31 PM
156	Because PSC doesn't offer these type of degrees I'll be seeking.	Sep 24, 2013 3:23 PM

**Q5. If you plan to complete your bachelor's degree elsewhere, please tell us why:**

157	Not available at psc	Sep 24, 2013 3:22 PM
158	PSC does not offer a four year degree in Botany	Sep 24, 2013 3:15 PM
159	Degree not offered	Sep 24, 2013 3:09 PM
160	bachelor programs in history and education not offered at the college.	Sep 24, 2013 3:02 PM
161	Pensacola State doesn't offer my Bachelor's Degree for medical school	Sep 24, 2013 2:59 PM
162	FSU	Sep 24, 2013 2:35 PM
163	Would be more credible coming from University.	Sep 24, 2013 2:19 PM
164	Not available at PSC	Sep 24, 2013 2:17 PM
165	UWF, psc doesnt have a bachelors degree in comptuter science	Sep 24, 2013 2:09 PM
166	There isn't a bachelor's degree program offered at PSC.	Sep 24, 2013 2:04 PM
167	I don't believe PSC has a bachelors degree for IT subjects	Sep 24, 2013 2:02 PM
168	PSC doesn't offer it	Sep 24, 2013 2:00 PM
169	Not offered	Sep 24, 2013 1:51 PM
170	Florida State University because they off the degree there.	Sep 24, 2013 1:51 PM
171	Not offered at PJC	Sep 24, 2013 1:42 PM
172	Pensacola State does not have my degree program.	Sep 24, 2013 1:41 PM
173	Program not offered at PSC	Sep 24, 2013 1:12 PM
174	psc doesnt have english as a four year major	Sep 24, 2013 1:12 PM



**Q6. If your desired bachelor's degree was offered here, would you prefer to stay at Pensacola State College?**

1	I would love to stay at Pensacola State. I love the the campus and the teachers!	Oct 22, 2013 4:31 PM
2	I absolutely would 110%	Oct 14, 2013 6:58 PM
3	Undecided where I will get my bachelor's degree, especially with the tuition increase for my credits.	Oct 13, 2013 7:20 PM
4	Primarily, the fees are good. However, in addition to lower fees I have become accustomed to PSC and enjoy its style.	Oct 10, 2013 12:19 PM
5	It would keep things simple.	Oct 9, 2013 8:11 PM
6	I have been taking classes at this school for the past few years...I really like the (more personal) atmosphere and the teachers. I really would prefer to stay here at PSC, but unfortunately, a BS in Physical Therapy is not offered.	Oct 9, 2013 3:53 PM
7	There is only one accredited online pharmD program in the country and it is located in Nebraska. The closest pharmacy program is in Crestview at the Florida A&M campus. The start up cost would be big but the return would be bigger. We need a Pharmacy program based out of Pensacola.	Oct 7, 2013 3:06 PM
8	I love PSC. Ive gone to big universities but came back to PSC because of the great teachers and small classrooms	Oct 3, 2013 4:34 PM
9	I would love to stay here to complete my bachelor's degree.	Oct 3, 2013 8:40 AM
10	Much less expensive than UWF	Oct 2, 2013 6:05 PM
11	I would love to remain enrolled at Pensacole State to continue my education to get a bachelor's degree however we have been told that there will not be a bachelor's degree in the education field at Pensacola State. I work that a program that pays for the education of it's staff and all our teachers have to acquire their bachelor's degree's in early childhood or elementary education. We are a federally funded program and have been mandated to get degrees in order to kepp our jobs. A lot of the staff have completed their A.S. in early childhood from the college, but have not pursued their bachelor's yet because UWF does not have a early childhood degree program. It would benefit us greatly if Pensacola State would offer a bachelor's degree in early childhood education.	Oct 1, 2013 10:15 AM
12	I would much rather participate in classeoom instruction than online courses.	Oct 1, 2013 8:07 AM
13	I would much prefer to continue attending PSC with the excellent staff who teach the education courses.	Sep 30, 2013 4:02 PM
14	I am sick of how boring it is in P'cola and the horrible drivers.	Sep 30, 2013 11:36 AM
15	I hope the college can find a way to expand it's Education department to include a bachelor's degree. There are some great Education teachers at this school at it would be wonderful to stay here to complete my degree.	Sep 30, 2013 9:29 AM
16	It would be much easier and cheaper to stay at PSC if there was a communications degree.	Sep 29, 2013 6:18 PM
17	I have enjoyed not only the lower cost of tuition, but also the teachers, staff, &	Sep 29, 2013 2:08 PM

**Q6. If your desired bachelor's degree was offered here, would you prefer to stay at Pensacola State College?**

	extremely close proximity to my house. It'd be convenient if my degree were offered & accredited at PSC.	
18	Criminal Justice or Criminology Bachelor degrees would be perfect and I would stay here to complete them instead of having to transfer schools that offer Bachelor programs.	Sep 29, 2013 1:38 AM
19	Pensacola State does not offer a Bachelors in Earl Childhood Education. Shame on you! There is not a college in the local area that offers this Bachelors. It is so sad that the Board can not look outside the box and see how this would benefit the area and Pensacola State.	Sep 28, 2013 8:06 PM
20	Focus in Sports Security Management	Sep 28, 2013 3:45 PM
21	I would prefer to stay at PSC. I have spent 4 years here, and would like to not have to transfer because PSC doesnt offer what I need. I dread going to UWF, so I might not even get a BA.	Sep 26, 2013 9:45 PM
22	see no. 5. PSC is awesome. LOVE IT.	Sep 26, 2013 6:24 PM
23	I would love to see Pensacola State College have a Early Child Hood Bachelors program	Sep 26, 2013 1:30 PM
24	There is a stigma placed on the collage as an "easy" school and I want my degree to hold some weight.	Sep 26, 2013 1:29 PM
25	It is closer to home and I am quite sure Pensacola State College will have excellent educators to advance me in my field of study.	Sep 26, 2013 12:06 PM
26	Maybe because uwf doesn't offer a cyber forensic degree	Sep 26, 2013 9:28 AM
27	No, but I do have family members that are interested in the Degrees	Sep 26, 2013 9:09 AM
28	I'm planning on switching to UWF in a year when i graduate from PSC with an AS in Pre-Engineering, but I would much rather just stay at Pensacola State to earn it, because I am already familiar with the faculty and administration, the campus, and I like the small college atmosphere.	Sep 26, 2013 8:39 AM
29	I would love to complete a 4 yr business degreee with PSC	Sep 26, 2013 8:13 AM
30	Bc all my professor's has had some type of experience in my career field and could open some doors for me locally	Sep 26, 2013 7:29 AM
31	So long as bachelors degree forms around the degree that I am now in and is offered at the Pensacola campus.	Sep 25, 2013 10:07 PM
32	As long as the pricing is affordable and remains cheaper than other institutions, I plan on staying.	Sep 25, 2013 6:34 PM
33	This is my fourth semester at Milton PSC and I enjoy the school. I love all the different classes they offer and the extra tutors they provide.	Sep 25, 2013 5:57 PM
34	I, personally, love Pensacola State College. Someone offered to pay for me to attend UWF, but I declined because I like the smaller and more intimate feel of	Sep 25, 2013 5:18 PM

**Q6. If your desired bachelor's degree was offered here, would you prefer to stay at Pensacola State College?**

	PSC. UWF seems so overwhelming, and very very expensive.	
35	I would also like to study what used to be called Home Economics. There is a lot of good information that needs to be gotten out to people about things in the home and on the farm. I think working for the Agricultural Extension Office could be a very rewarding job.	Sep 25, 2013 4:12 PM
36	Though UWF is bigger and offers more, PSC is a less expensive choice.	Sep 25, 2013 3:37 PM
37	want to travel	Sep 25, 2013 1:59 PM
38	Yes, I would preferred to stay here.	Sep 25, 2013 12:11 PM
39	Not sure one way or the other.	Sep 25, 2013 11:47 AM
40	not enough time to build a program I would be willing to commit to. Too small town. PSC needs to ELEVATE their repuation with the degrees they already have before they start offering more degrees.	Sep 25, 2013 10:51 AM
41	more economical at PSC	Sep 25, 2013 10:14 AM
42	N/A	Sep 25, 2013 8:56 AM
43	I would like to see more advanced computer classes offered at PSC	Sep 25, 2013 7:54 AM
44	I am here already. Why not stay?	Sep 25, 2013 6:17 AM
45	Its is much cheaper and more convenient to my job and kids school.	Sep 25, 2013 5:11 AM
46	I might. It depends on how long it takes to get it and if i want to stay here longer	Sep 24, 2013 10:56 PM
47	I would really like it if pensacola state college offered a pharmacy bachelor degree program so I would be able to continue my next degree at a university or get into pharmacy school.	Sep 24, 2013 9:22 PM
48	Presently, I would prefer to continue at PSC. Continuing my education will depend on securing funding to pursue it, but getting into some kind of entry-level position in this field will also be an important part of the pathway.	Sep 24, 2013 9:06 PM
49	Although PSC offers a much more affordable education, it lacks the extra experience a full university can offer.	Sep 24, 2013 8:00 PM
50	If available completely online.	Sep 24, 2013 7:55 PM
51	PLEASE! I am begging you! I would wait a year to start my bachelor's if I knew you guys were going to implement a single IT related bachelor. Count me in on the cybersecurity degree.	Sep 24, 2013 7:43 PM
52	I thoroughly enjoy PSC and would love to obtain my bachelors from here; unfortunately Criminal Justice is not offered as a four year degree	Sep 24, 2013 7:26 PM
53	I would love to stay at Pensacola State and get my bachelor's degree in Nursing.	Sep 24, 2013 7:22 PM
54	The cybersecurity degree is what I would be looking for and would love to work	Sep 24, 2013 6:29 PM

**Q6. If your desired bachelor's degree was offered here, would you prefer to stay at Pensacola State College?**

	on it.	
55	I would stay for sure if a bachelor's degree in criminal justice was offered.	Sep 24, 2013 6:21 PM
56	cheaper and much nicer service	Sep 24, 2013 4:40 PM
57	I like PSC and what it has to offer	Sep 24, 2013 4:29 PM
58	Absolutely! I would love to stay at PSC, I like the cost, eLearning and familiarity of the school. The only reason I wouldn't stay is because PSC doesn't offer exactly what I need/want.	Sep 24, 2013 4:27 PM
59	I am a 53-year old, displace housewife who has to work full-time. I have found it difficult to take the classes I need at PSC without taking time off from work. I am grateful to my employer for his flexibility during my last semester, but PSC offers very few evening classes and the Saturday classes I registered for were cancelled before the semester even began. In order to earn a Bachelor's I need to find a school that has a certified and trusted online program that will offer everything I need online to earn my BS. PSC doesn't have such a program, offering only certain classes online and others only on campus. At at this time PSC offers neither a BS in Communications nor a BS in Business Management nor has an accredited, comprehensive online program.	Sep 24, 2013 4:19 PM
60	I will graduate with my AA from PSC next semester and I am very satisfied with the experience.	Sep 24, 2013 4:02 PM
61	Since my degree is a professional degree, not a bachelor's degree, I would prefer to be at an established medical school with a good reputation versus a start up school.	Sep 24, 2013 3:44 PM
62	i love the atmosphere of this college and the whole staff is really helpful. You dont find this college experience at bigger universities. I love it.	Sep 24, 2013 3:37 PM
63	Cheaper prices and smaller class sizes a benefit	Sep 24, 2013 3:21 PM
64	Yes I would stay here if the accreditations were the ones needed to get into medical school.	Sep 24, 2013 2:59 PM
65	Engineering and Law Degrees needed.	Sep 24, 2013 2:19 PM
66	Yes, unless it would cost as much or more than UWF.	Sep 24, 2013 2:09 PM
67	It would be nice if the college expanded the Organizational Administration degree to include more for students who will go into the field of Human Resources. Several jobs hire in this area, but without the right background or education it is hard to get a foot in the door. Currently if you would like to gain more knowledge in this field you would need to visit SHRM.org for possible classes and certificates but none are actual degrees. Having the HRM degree available would be awesome...I'm currently a clerical assistant working in HR, but in order for me to move up the ladder or transfer I need to build on to my skills and obtain my advanced degree...this would be perfect. I would also keep me from having to go out to UWF for classes they have directly relating to HR.	Sep 24, 2013 2:06 PM
68	I would love to stay at PSC for a bachelors but the degrees are not available to	Sep 24, 2013 2:02 PM

**Q6. If your desired bachelor's degree was offered here, would you prefer to stay at Pensacola State College?**

my knowledge.

69 My reason for leaving is nothing against Pensacola State; it is the best school for the amount of money I can save in my first few years of college. I am only wanting to get out of the city. Sep 24, 2013 1:28 PM

**Q7. Would any of the proposed degrees meet your needs?**

1	Dental Hygiene	Oct 13, 2013 7:20 PM
2	Exercise Science	Oct 10, 2013 12:19 PM
3	Possibly Biomedical Sciences	Oct 9, 2013 3:53 PM
4	Health Care Administration	Oct 7, 2013 11:12 PM
5	Law Enforcement Administration	Oct 7, 2013 6:37 AM
6	I would be most likely to consider, PSC's BAS in Administration and Supervision with Project Management concentration	Oct 6, 2013 10:23 AM
7	Admin & Supervision	Oct 2, 2013 7:48 PM
8	Dental Hygeine	Oct 1, 2013 10:47 PM
9	the biomedical might would come close though	Sep 30, 2013 5:57 PM
10	Cybersecurity	Sep 30, 2013 4:28 PM
11	Dental Hygiene	Sep 29, 2013 6:28 PM
12	Biomedical Studies	Sep 29, 2013 2:08 PM
13	Law Enforcement Administration	Sep 29, 2013 1:38 AM
14	project management, if some of the classes covered acquisitions	Sep 27, 2013 11:19 AM
15	Law Inforcement Administration possibly	Sep 27, 2013 9:28 AM
16	Human Resource Management	Sep 27, 2013 4:50 AM
17	Maybe -- Project management.	Sep 26, 2013 6:24 PM
18	Cyber forensic	Sep 26, 2013 9:28 AM
19	HR possibly	Sep 26, 2013 8:13 AM
20	Infomation Technology Security Officer, this is the closest in relation to my field.	Sep 25, 2013 10:07 PM
21	B.A. In graphic design	Sep 25, 2013 6:34 PM
22	I have not seen one i do not like yet.	Sep 25, 2013 5:57 PM
23	Organizational Administration is perfect for me because I am an administration assistant at the courthouse, but the HR and Law Enforcement tracks would have been beneficial as well.	Sep 25, 2013 5:18 PM
24	cyber security also sounds interesting.	Sep 25, 2013 4:12 PM
25	Human Resource Management	Sep 25, 2013 3:57 PM
26	Biology	Sep 25, 2013 1:14 PM

**Q7. Would any of the proposed degrees meet your needs?**

27	Dental Hygiene	Sep 25, 2013 12:21 PM
28	Bachelors of science	Sep 25, 2013 10:54 AM
29	Hospitality is the only one I would be remotely interested in.	Sep 25, 2013 10:51 AM
30	Legal administration	Sep 25, 2013 10:14 AM
31	Cybersecurity	Sep 25, 2013 9:36 AM
32	Health Care Management	Sep 25, 2013 8:56 AM
33	CyberSecurity	Sep 25, 2013 8:31 AM
34	perhaps cyber security	Sep 25, 2013 6:53 AM
35	I feel like the business degree offered here is a "generic business degree" as many have stated recently	Sep 25, 2013 6:15 AM
36	Anything in the Law enforcement, Criminology, Law Administrative,	Sep 25, 2013 5:11 AM
37	Cybersecurity	Sep 25, 2013 3:47 AM
38	*Human Resource Management, Law Enforcement Administration, Project Management	Sep 24, 2013 10:11 PM
39	Cybersecurity	Sep 24, 2013 9:17 PM
40	Cybersecurity	Sep 24, 2013 9:06 PM
41	Cybersecurity	Sep 24, 2013 7:43 PM
42	Law Enforcement Administration looks interesting, I would need to know the specifics.	Sep 24, 2013 7:26 PM
43	Human Resource Manager	Sep 24, 2013 7:15 PM
44	Cybersecurity	Sep 24, 2013 6:52 PM
45	Human Resource Management	Sep 24, 2013 6:48 PM
46	Biomedical	Sep 24, 2013 6:46 PM
47	Cybersecurity	Sep 24, 2013 6:29 PM
48	Law Enforcement Administration	Sep 24, 2013 6:21 PM
49	Biomedical	Sep 24, 2013 4:56 PM
50	Possibly Law Enforcement Administration.	Sep 24, 2013 4:27 PM
51	Cybersecurity	Sep 24, 2013 3:48 PM
52	Public Safety / Public Services	Sep 24, 2013 2:50 PM

**Q7. Would any of the proposed degrees meet your needs?**

53	Pre-Engineering	Sep 24, 2013 2:43 PM
54	I was unable to find any proposed degrees.	Sep 24, 2013 2:09 PM
55	Human Resource Management	Sep 24, 2013 2:06 PM
56	Cybersecurity	Sep 24, 2013 2:04 PM
57	Maybe cyber security	Sep 24, 2013 1:51 PM
58	Human resource management	Sep 24, 2013 1:45 PM



**Q8. How should classes be offered? (check all that apply)**

1	The classes should cater to the traditional and non-traditional student.	Oct 18, 2013 10:02 AM
2	A face-to-face program and an online option to increase the number of students able to participate in the program.	Oct 7, 2013 3:06 PM
3	Of course, the more diversified the offering, the more people are likely to find something that fits into their situation.	Oct 6, 2013 10:23 AM
4	Traditional classes are still necessary, but as online media is developed and made more interactive online solutions become much more useful	Oct 2, 2013 7:38 AM
5	Being a person with dyslexia, I gain more knowledge from traditional classroom interactions with the instructor and fellow students.	Sep 27, 2013 4:50 AM
6	I like the traditional, and feel like it's the most affective. But do to people's schedules, I know that online and Hybrid are very helpful. Also, some classes that are only 1 or 2 credits, I think should be hybrid or online because they are less demanding	Sep 26, 2013 9:45 PM
7	I prefer math classes that utilize MyMathLab, i find it is much easier to understand the homework with the help of MyMathLab	Sep 26, 2013 8:39 AM
8	for the bachelors for nusing	Sep 25, 2013 4:01 PM
9	Pensacola State needs to harness the technology available and provide a greater array of course options. The college has a number of military and military spouse students that would benefit from online and video lectures.	Sep 25, 2013 11:47 AM
10	pensacola state college in offering physician assistant programs would be offering the only such program in northwest florida...UWF is too busy building a football team (their priority)...the only other choices is USA in Mobile or FSU in tallahassee	Sep 25, 2013 11:40 AM
11	the on line classes are more economical to take, no gas and provides freedom to student to work.	Sep 25, 2013 10:14 AM
12	I personally prefer traditional style classes, but I know that other students like online courses.	Sep 25, 2013 8:56 AM
13	Traditional classes are great for those who need that type of instruction but more Hybrid classes should be offered because not everyone needs that level of instruction.	Sep 25, 2013 7:54 AM
14	I think I would learn better face to face.	Sep 25, 2013 6:17 AM
15	On-line works best for scheduling	Sep 24, 2013 9:06 PM
16	Because I work a full time job, and have a family, I prefer night classes or online classes. There is one of my classes this term that is during the day that I have to miss work to attend. This cuts my hours at work, cutting my paycheck.	Sep 24, 2013 8:54 PM
17	I would offer both	Sep 24, 2013 4:40 PM
18	There are some classes that have to be face to face but I would like to see more	Sep 24, 2013 2:02 PM

**Q8. How should classes be offered? (check all that apply)**

hybrid classes available.

19 There are some classes that are very hard to grasp without direct student and teacher interaction. For example, philosophy was awful the first time around. One I was able to take it in-class, it is much more enjoyable and much easier than I anticipated.

Sep 24, 2013 1:28 PM

**Q10. Which of the following components of a bachelor's degree program are important to you? Please rank each component on a 1-5 scale, with 1 as least important and 5 as very important.**

1	The hardest thing about taking courses is having to work full time and go to school. The class schedules for on campus doesn't accomodate for the working class. It's basically night class or nothing.	Oct 18, 2013 10:02 AM
2	The tuition increase due to the amount of credits I have, especially since I am a single mother.	Oct 13, 2013 7:20 PM
3	Classes offered at the South Santa Rosa center are most helpful for those of us that live to the East of Pensacola.	Oct 9, 2013 8:11 PM
4	Most important is transitional programs like Co-op positions or other opportunities to engage with actual local businesses in the field of study.	Oct 6, 2013 10:23 AM
5	as well as any (addiitional) - you mean additional - comments you would like to share: Well now that you MENTION IT..... The Pensacola State College bookstore is STUPIDLY expensive, I only receive federal pell grants and have to use them there, I swear that I spend an extra \$300+ at the schools store than I would have if they were actually reasonable. I make it a point to NEVER sell my books back to the schools store because you're lucky if you get a QUARTER of what you as a student paid for it. The school can claim it has a low tuition all it wants, but don't be in a science degree and depend on grants because you'll end up spending and extra \$1000 a year on books. Thanks PSC, this was exactly why I couldn't take classes this fall, and I WAS about to graduate next year. Since no one on campus gives a sh*t I feel better finally getting to express my first amendment on this little survey.	Oct 2, 2013 12:47 PM
6	The cost of tuition should be the number one priority. The reason a lot of students, including myself, attend PSC is because it's a fraction of the cost of UWF. If the proposed bachelor degrees raised the cost of tuition for everyone, then they should be reconsidered.	Oct 2, 2013 10:04 AM
7	more and more people are going back to college while working full time. Night and online classes are important for this to be a reality. I would much rather stay at PSC and finish a BS than transfer to UWF because the classes arent offered.	Oct 2, 2013 7:38 AM
8	More scholarships and financial assistance for students returning to school later in life, the 50 and over range.	Oct 1, 2013 10:15 AM
9	I think it would be a great opportunity for any student if professionals, in the area or not, come in and talk with the students pursuing a degree in Cyber-security. If the students were allowed face time with IT professionals in their field of choice they may gain a better grasp on what will be expected of them once they graduate. I'm not saying this doesn't already happen in class, but we all know what is theoretical is not always what is practiced in the field. Also, if this does happen, please don't forget about the night classes. Most of us work full time and would be unable to attend any daytime scheduled talks. Thank you for your time.	Sep 30, 2013 4:28 PM
10	Please add a Bachelor of Science in Early Childhood Education degree at PSC! It would greatly benefit students currently attending, and living in the surrounding area.	Sep 30, 2013 4:02 PM

**Q10. Which of the following components of a bachelor's degree program are important to you? Please rank each component on a 1-5 scale, with 1 as least important and 5 as very important.**

11	Perhaps PSC could partner with a school like Full Sail University to offer on campus labs for degree programs like sound engineering so veterans using the GI Bill could receive full BAH benefits while enrolled in online programs.	Sep 30, 2013 11:54 AM
12	Taking courses that are needed for a career or job rather than taking courses that would not be very useful.	Sep 29, 2013 6:18 PM
13	I work a full time job and a part time job, so I really need on-line classes. Thanks for allowing suggestions.	Sep 29, 2013 1:39 AM
14	If a traditional class is needed, it should be available at more than the Pensacola campus. Also, once a week classes are much more convenient when dealing with transportation and child care.	Sep 27, 2013 9:53 PM
15	I am a mother of 3 in my 40's starting college later in life. I want to take advantage of "everything" that comes my way, while striving for success in gaining my higher education! I LOVE Pensacola State College and all of my teachers. It's a top notch, local school, with all of the resources I need to help me better myself for the sake of my children. I was a stay at home mother for many years so finding a decent paying job has been very difficult. I now realize the great importance of getting my higher education!	Sep 27, 2013 9:28 AM
16	Classes that are at that school need to stay at school. No online homework or test. If you pay to be in a classroom then that's where you should take test and turn in homework. Doing half or almost all of the work online is pointless. Then your attendance should not matter for classes that require all online work.	Sep 26, 2013 8:28 PM
17	It can't be that difficult to add a Computer Science major. You can do it! But you must do so within 2 semesters :-)	Sep 26, 2013 6:24 PM
18	It is very disappointing that Pensacola State offers no Engineering or Physics Bachelors programs, and I would love to see one before I graduate in fall of 2014 so that I could just continue going to Pensacola State.	Sep 26, 2013 8:39 AM
19	Just offer the Criminal Justice program in a bachelor's degree.. The pay to be an Police Officer is really low in Escambia County but, having a degree I am more likely to stay here in Pensacola, FL bc as long as I am doing my job, promotions will come faster bc I have a degree.	Sep 26, 2013 7:29 AM
20	Job placement assistance in the field of study during the school term like a co-op would be beneficial to the learning process. This would especially be helpful in fields such as IT, Engineering, Teaching, and etc. The technical fields of study usually have a requirement of experience in the field to obtain a job. Although students would not be transferring to another school if they finish their Bachelors at PSC, a transfer scholarship for transferring to the baccalaureate program would be helpful since a lot of the students are paying for themselves or taking out student loans.	Sep 25, 2013 10:07 PM
21	I would like if the multimedia degree was still offered at PSC. My degree is geared towards graphic design in the fashion industry. Advertising is very important in this field and I need to learn how to work with video, music and other mediums in the industry.	Sep 25, 2013 6:34 PM

**Q10. Which of the following components of a bachelor's degree program are important to you? Please rank each component on a 1-5 scale, with 1 as least important and 5 as very important.**


22	The dry erase boards at the Warrington Campus all seem to be drawing their last breath. The instructors spend as much time cleaning the boards as they do eaching	Sep 25, 2013 4:12 PM
23	I enjoy going to P.S.C. and I plan on obtaining my bachelor degree through them. Hopefully one day they will offer advanced degrees that are higher than a bachelors, but I hope that this does not increase the tuition rates too much. That is part of the reason why P.S.C. has the attendance rates that it does, because the tuition rates are reasonable in comparison to other colleges and universities.	Sep 25, 2013 8:56 AM
24	I do not think online classes should involce team work. My grade should not depend on others	Sep 25, 2013 8:24 AM
25	Pensacola State College should offer an A.A degree in Interpreter Training! The closest schools that offer an A.A degrees are Bishop State in Mobile, AL and a community college in Jacksonville, FL. To help service the Deaf community in Escambia, Santa Rosa, and Okaloosa, it would be highly beneficial for PSC to start an Interpreter Training Program.	Sep 25, 2013 6:04 AM
26	I believe PSC needs to advance into a 4 year school since more students are coming. If PSC had my bachelor History degree I would stay, PSC is nice and cozy. Also to make PSC even better the Milton campus needs a cafeteria. Thank you	Sep 24, 2013 9:29 PM
27	Any component that is truly a significant contributor toward my learning I am in favor of. However, some aspects can complicate the endeavors. One such aspect is course work which requires teaming up; working full time is already very demanding and the bachelors program is more intense than the associates. I do not need something that makes any aspect more complicated than necessary. A single parent working full-time and attending college has a very full plate. I am not exactly sure of how I weigh the last five categories. I would love an internship that comes with a paycheck - I can't take one without it.	Sep 24, 2013 9:06 PM
28	I would be more likely to get a bachelor's degree in Paralegal Studies/Legal Assisting if it were to be offered at PSC. I am already familiar with the campus and most of the instructors, and transferring to UWF seems a little intimidating to me. I personally prefer night/online classes, due to a full-time job and a family.	Sep 24, 2013 8:54 PM
29	Please!!! If you guys come up with a timeline for when you may offer Cybersecurity as a bachelors can you send me an email? mharding0111@gmail.com. I will hold off taking classes in the spring if I knew PSC will offer this. Thanks!	Sep 24, 2013 7:43 PM
30	My experience at PSC has been a great one, I wish you offered the entire four year degree because I would much rather attend PSC than UWF.	Sep 24, 2013 7:26 PM
31	Many F-1 Visa holders would appreciate the opportunity to earn bachelor's degree at Pensacola State College.	Sep 24, 2013 7:22 PM
32	I am very interested in the Cybersecurity degree if it is offered and would work to achieve it.	Sep 24, 2013 6:29 PM

**Q10. Which of the following components of a bachelor's degree program are important to you? Please rank each component on a 1-5 scale, with 1 as least important and 5 as very important.**

33	As many Bachelor Degrees as possible.	Sep 24, 2013 5:05 PM
34	I took the Hybrid Intermediate Algebra and i really enjoyed meeting in class so we can ask the teacher questions and let them go over the assignments first and then doing work online ,not in class as many days.	Sep 24, 2013 4:29 PM
35	As much as I love PSC, the reason I have to live at home and can't pursue the program I want is because of cost. Since Pell Grant gives me such a miniscule amount compared to actual tuition costs of a bachelor's degree, I'm somewhat forced to stay. Also, since new graduates have a hard time finding a job, I believe in internships and co-ops. It is much easier to start a career with one on your resume. I also work, and having my school schedule and work schedule cooperate is vital.	Sep 24, 2013 4:27 PM
36	Heavier mathematical options for classes.	Sep 24, 2013 2:43 PM
37	I work from 7am-5:30 pm and take one class on wednesdays and take the rest of my classes online. If there were more classes available online I could complete my degree much faster...and that would be amazing.	Sep 24, 2013 2:09 PM
38	The dental hygiene would also be another great program to have...This was actually another field I was considering, but at the time there wasn't a school offering the program. I also expressed interest in the HUC program however with it only being offered during the day it was impossible for me to work full time and attend class...if this program were available online or had some evening times scheduled that would have been excellent I see this position being advertised a lot here in Pensacola.	Sep 24, 2013 2:06 PM

**Appendix I:**  
**Business Survey Results**  
**(from Chamber of Commerce)**

**1. I support the offering of some or all the proposed programs due to unmet needs.**

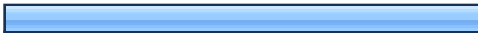

		Response Percent	Response Count
YES		100.0%	7
NO		0.0%	0

Comments: 1

answered question 7

skipped question 0

**2. I believe an unmet need exists within our region for additional programs (at the certificate, associate of science or bachelor's degree levels) other than those listed above.**

		Response Percent	Response Count
YES		71.4%	5
NO		28.6%	2



If YES, Please list programs that are needed and why: 2

answered question 7


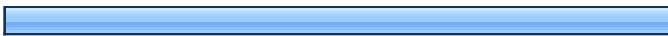


skipped question 0



**3. My agency would be willing to submit a letter of support for these programs. (If you respond YES, we will contact you with further information.)**

		Response Percent	Response Count
YES		57.1%	4
NO		42.9%	3
answered question			7
skipped question			0

**4. Contact information:**

		Response Percent	Response Count
Name:		100.0%	4
Agency:		100.0%	4
Email:		100.0%	4
Phone:		100.0%	4
answered question			4
skipped question			3

**Q1. I support the offering of some or all the proposed programs due to unmet needs.**

1	For our industry (technology solutions provider), project management and cybersecurity are both valid skill sets	Jun 21, 2013 3:12 AM
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**Q2. I believe an unmet need exists within our region for additional programs (at the certificate, associate of science or bachelor's degree levels) other than those listed above.**

1	If Pensacola State does not already have, a technology program around data / voice / video / wireless networking design, management, and support.	Jun 21, 2013 3:12 AM
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2	Software Applications Development, Network Administration, Web Development	Jun 20, 2013 3:30 PM
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**Q4. Contact information:****Name:**

1	La-Vonne Haven	Jun 26, 2013 1:47 PM
2	Thomas Greek	Jun 25, 2013 12:05 PM
3	Don Roy	Jun 21, 2013 3:12 AM
4	John Prumatico	Jun 20, 2013 3:30 PM

**Agency:**

1	Camp Fire	Jun 26, 2013 1:47 PM
2	Navy Federal Credit Union	Jun 25, 2013 12:05 PM
3	Teklinks	Jun 21, 2013 3:12 AM
4	Innovation Coast	Jun 20, 2013 3:30 PM

**Email:**



1	lhaven@cfgulfwind.org	Jun 26, 2013 1:47 PM
2	Thomas_Greek@NavyFederal.org	Jun 25, 2013 12:05 PM
3	droy@teklinks.com	Jun 21, 2013 3:12 AM
4	johnp@innovationcoast.com	Jun 20, 2013 3:30 PM

**Phone:**

1	8590476-1760	Jun 26, 2013 1:47 PM
2	850-912-0865	Jun 25, 2013 12:05 PM
3	251-202-0858	Jun 21, 2013 3:12 AM
4	850-607-8056	Jun 20, 2013 3:30 PM

**Appendix J:**  
**Program Advisory Committee Survey**

**1. I support the offering of some or all the proposed programs due to unmet needs.**



		Response Percent	Response Count
YES		92.6%	25
NO		7.4%	2

Comments: 7

answered question 27

skipped question 0

**2. I believe an unmet need exists within our region for additional programs (at the certificate, associate of science or bachelor's degree levels) other than those listed above.**

		Response Percent	Response Count
YES		44.0%	11
NO		56.0%	14

If YES, Please list programs that are needed and why: 10

answered question 25

skipped question 2

### 3. Are there any additional comments you would like to share?

	Response Count
	3
answered question	3
skipped question	24

**Q1. I support the offering of some or all the proposed programs due to unmet needs.**

1	The only program I question is the Project Management, I believe UWF offers a similar program.(?)	Oct 17, 2013 1:03 PM
2	I believe that the programs will add value to our students and to the community. In my work environment both HR and Project Mgmt are both important in the day to day decision making process.	Oct 1, 2013 1:36 PM
3	I believe that the programs will add value to our students and to the community. In my work environment both HR and Project Mgmt are both important in the day to day decision making process.	Oct 1, 2013 1:36 PM
4	I do not necessarily agree with the Hyg BS. Most of the Hyg personnel I know burnout fairly early in their career. The addition of 2 years will also not bring more money. Hyg is similar to a specialized mechanic working on the wheels, they are hired for their specialty which can not grow beyond wheels. You would be either furthering their time in education prior to entering the job market or bringing them back in after working for a while, but neither will raise the hourly cap of \$20-25 through a higher degree. I believe in Cybersecurity and operate a company who focuses on cyber for the USAF. If the students came out with certifications and time interning doing the work, I would consider this a plus when hiring. While I think its great you will offer it, I am not sure if there is a need for BA in Project Management. PMs require experience gained much like a journeyman electrician, under the tutelage of an experienced PM. We would significantly slow their entry into the workplace with 4 year degree that will land them in the journeyman role regardless. That being said, its nice to have, but would recommend a AS first or as an option (which you might).	Sep 30, 2013 4:57 PM
5	I wish they had this when I went through the Hygiene program.	Sep 30, 2013 4:44 PM
6	Project Management, Biomedical Sciences and Cyber Security would definitely be needs in this area in the future.	Sep 30, 2013 3:20 PM
7	Good to see much needed Project Management track	Sep 30, 2013 2:06 PM

**Q2. I believe an unmet need exists within our region for additional programs (at the certificate, associate of science or bachelor's degree levels) other than those listed above.**

1	I'm sure given opinions from others there are many programs that could be beneficial, however narrowing them down to what would be the most advantageous for the school and the general population may be more complex.	Oct 17, 2013 1:03 PM
2	I would like to see more medical and homeland, cyber and forensic computer degrees offered in our region. Many of Northwest Florida student attend out-of-state as online students. Pensacola should focus on keeping students in the Pensacola area.	Oct 2, 2013 8:10 PM
3	Electronic Controls Process Control Design & Fabrication for Industrial Applications	Oct 1, 2013 12:17 PM
4	not sure	Oct 1, 2013 10:02 AM
5	Entrepreneurship - Entrepreneurs are more likely college and high school dropouts, but offer a great employment resource. They challenge the traditional educational flow and typically resist conforming to the required structures. They would significantly increase their likelihood of success if they were taken through an immersive program designed to give them the tools the needed. It would also be a great compendium for other programs/degrees. Imagine the Culinary degree student who left with the knowledge to be an restaurant entrepreneur...or the Computer Science Major...or Advertising...or..or.. Governmental Affairs - We need more people who understand the structure of government (beyond political science, history, and Law) and with the knowledge to effect the system. It is also a highly marketable expertise anywhere. Urban Planning - We need people locally who understand how to build and grow a city. It is also a highly marketable expertise anywhere. Economic Development - We need more people working to better the future business and economy of our area. It is also a highly marketable expertise anywhere.	Sep 30, 2013 4:57 PM
6	1. Instrumentation & Control Technology 2. Electrical	Sep 30, 2013 3:20 PM
7	Helathcare Adminstration Restaurant and Hotel Management, Each of these fields seems to be in high demand in our local economy. I would prefer that we focus on the local economy and train our students to join the workforce locally and help stimulate our local economy.	Sep 30, 2013 2:31 PM
8	Early Education / Child Care / Pre-Kindergarten / 4 Year Degrees Early Education is so vital in this community and Child Child facilities are continuously growing.	Sep 30, 2013 2:26 PM
9	There is a real unmet need for IT mangement and service excellence	Sep 30, 2013 2:06 PM
10	Certified Electronics Technician; installation, programming and service of required skills for an Alarm and Electronic Security Technician	Sep 30, 2013 1:57 PM



**Q3. Are there any additional comments you would like to share?**

1	I support PSC's continued efforts to provide education that will benefit all individuals in the Pensacola area, by offering programs that are geared toward today's working environment and making it affordable.	Oct 1, 2013 10:02 AM
2	A while back I made a recommendation to the committee here, regarding the concept of connecting the disciplines through group projects. This was to bring the Accounting, Marketing, Business, IT, etc majors into a cross-discipline project to promote business development. The idea being that they would experience all the facets of creating a business from their disciplines point of view, thus either creating a business in the end or the least teaching them the reality of the experience for their future aspirations. My questions is: What ever came of the idea? The people I spoke to were really behind the idea and tapped my knowledge and experience on the subject successively, but to my knowledge it hasn't developed into anything.	Sep 30, 2013 4:57 PM
3	I think we will need more plumbers, welders, and other trade jobs in the future.	Sep 30, 2013 4:44 PM

**Appendix K:**  
**Advisory Committee Minutes**

**PENSACOLA STATE  
COLLEGE**

**BAS in Administration and Supervision Advisory Committee Meeting  
13 Sep 2011**

Meeting called to order at 12:00

Location: Bldg 10 Pensacola Campus of Pensacola State College

**Attendance**

<b><u>PSC</u></b> Sadiqa Ali Steve Bannow Linda Bloom Frances Duncan Sandra Hartley Krist Lien Carla Rich Christa Ruber Marc Ward	<b><u>Community Representatives</u></b> Namrata Advani Ed Grayson Marc Ward Anne Henderson
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TOPIC	DISCUSSION	Actions
<b>Approval of minutes Of previous meeting</b>	First meeting.	NA
<b>Old Business:</b>	First meeting.	NA
<b><u>New Business:</u></b>	<ol style="list-style-type: none"> <li>1. Welcome and Introductions. The meeting began with the Chair, Steve Bannow, calling the session to order. After introducing himself, Dr. Bannow asked the attendees to introduce themselves.</li> <li>2. The first item of business: Why are we here? Discussion led by Dr. Bannow to explain the purpose of an Advisory Committee and the roles that the PSC Faculty/Staff and our community representatives play. (Our mission is to gather and exchange information from/with the business, public services, healthcare, and other components of the community</li> </ol>	<p>NA</p> <p>NA</p>

	<p>to help expand, improve, and make more responsive our Baccalaureate programs.)</p> <p>3. Area-of-Specialization Briefings. First, Krist Lien, Head, Art Department, discussed the status of various initiatives within his area. He focused on the emphasis of the BAS and its direct relationship to the actual work done by the student once he/she graduates from the program. He also noted the importance of making the program known and available to students who might otherwise attend far more expensive and distant schools to receive very similar training. Our second briefer was Dr. Christa Ruber, Head, Allied Health Department, who discussed the Healthcare Management concentration. Included in her briefing was her emphasis on the importance of the local input from students. She noted that her program had a current enrollment of 120 students (exceeding initial expectations). The third presenter was Dr. Linda Bloom, Head, Business Department, who was the main briefer for the Organizational Management concentration. She provided some history of the development of the BAS and the fast growth of our enrollment(s) – far exceeding the early predictions -- as well as leading a brief discussion of how we have responded to that expansion. One issue that was discussed was difficulties/challenges associated with on-line course development. Dr. Bloom also noted the importance of the welcome letters that she provided to all new students. BAS Administration Specialist, Sadiqa Ali, also briefed the committee on her role in the day-to-day functioning of the BAS program. While providing many administrative services to faculty and staff, Ms Ali is also a key source of important information to current and prospective students. Dr. Carla Rich spoke next. She focused her comments on our target (student) market: originally conceived of as current members of the workforce looking for training and skills that would help them to climb their career ladders. In addition to this group, we have found a new source of students who are younger and not necessarily members of the workforce who are essentially staying in college as a way to spend their time constructively as they determine their ultimate workplace goals. The final briefing was made by Ms Sandra Hartley, Head, Health Sciences Department, who provided information on the Public Safety/Public Service concentration. Ms Hartley's comments focused on enrollment and how initial forecasts of demand by individuals in the fire and emergency services sectors has been quickly shifted to demand for courses from the criminal justice and law enforcement sector. She also noted the extreme importance of moving ahead with on-line courses for her students – especially because of the high percentage of them involved in shift work. She noted that her concentration would be changing its name to Public Administration soon after the coming SACS site visit. She also commented on the excellence of her faculty and how we should consider recruiting students from other colleges who might be home during the summer.</p> <p>4. Dr. Bannow provided a briefing on the coming SACS (Southern Association of Colleges and Schools) Site Visit to be held 26-28 September. SACS, PSC's accreditation body, will be on campus to review our compliance with fundamental rules and charters granting us authority to offer baccalaureate level course work and degrees. Ms Hartley pointed out that</p>	<p>NA</p> <p>NA</p>
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	<p>this is a scheduled (SOP) visit and does not suggest any problems with the program. Dr. Bannow pointed out that we will be receiving recommendations from the site visitors that will require action and that this is the norm.</p> <p>5. The committee also discussed (briefly) the importance of and need for evaluative tools (e.g., graduating student and employer surveys) to best respond to student and community needs and to grow and improve program offerings. Additionally, Bachelor of Applied Science Learning Outcomes (BASLOs – what students in a particular course of study should know as a result of obtaining their degrees) were discussed. These and associated rubrics will be forwarded to all Advisory Committee Members.</p> <p>6. Additional New Business and Comments from Community Members/Representatives. Mr. Ed Grayson noted his eagerness to review the BASLOs. He also stated his willingness to engage in prospective student recruitment of Gulf Power employees. A brief discussion involving the various modes of course delivery (face-to-face, hybrid, and on line) followed with our agreement that the ultimate goal should be and is 100% on-line course availability. Mr. Marc Ward (both a full-time PSC faculty member and a current member of the community’s workforce) noted the importance of the input he had been receiving from community law enforcement and an initiative with the Escambia and Santa Rosa County Sherriff Departments to hold closed-group courses (potentially provided by PSC staff at Sheriff Department facilities). He will be following up on this. Ms Anne Henderson spoke next, registering strong support for an initiative to pursue recruitment of other-college students to do course work at PSC while they are in the community during summer vacation. The group noted that common course numbering and few pre/corequisites could greatly facilitate this initiative. Namrata Advani also mentioned the importance of recruiting and getting the name of the College and the availability of our programs out to the community – young and older individuals alike. This discussion led Ms Hartley to mention the coming “Surviving Trauma” conference. Dr. Bannow stated that he would follow up on funding PSC’s involvement with this conference.</p>	<p>Dr. Bannow for action.</p> <p>Send copies of PSLOs and associated rubrics to Advisory Committee Members (Dr. Bannow).</p> <p>Follow up on obtaining funding for PSC involvement with the “Surviving Trauma” Conference (Dr. Bannow).</p> <p>Dr. Bannow for action.</p>
<p><b><u>Other:</u></b></p>	<ol style="list-style-type: none"> <li>1. We need to send a blurb about course/program offerings to Ed Grayson at Gulf Power.</li> <li>2. Dr. Bannow mentioned the availability of Rockefeller Scholarship money for our 4-year students. Krist Lien noted the recent acquisition of specific scholarship funding recently made available to his students.</li> <li>3. Agenda items for the next meeting were discussed. Consensus was reached that a few guest speakers from various components of the College (e.g., Financial Aid, Bookstore, Student Services/Advising, the Library. The Foundation) is warranted.</li> <li>4. A new meeting start time needs to be considered, perhaps between 4 and 5 PM) to increase attendance from our Community representatives</li> </ol>	<p>Dr. Bloom for action. NA</p> <p>Dr. Bannow for action.</p> <p>Dr. Bannow for action.</p>

<b>Future Dates:</b>		
Tentative 13 March 2012 @ tentative 4:00 PM		

**Adjourned at:** 1:15

**Submitted by:** Steven W. Bannow

**Reviewed by:** Dr. Linda Bloom, Krist Lind, Dr. Christa Ruber, Ms Sandra Hartley  
14 Sep 2011  
Program Director Date

# PENSACOLA STATE COLLEGE

## BAS in Administration and Supervision Advisory Committee Meeting 15 March 2012

Meeting called to order at 4:15 p.m.

Location: Bldg 21 Pensacola Campus of Pensacola State College

**Attendance**

**Advisory Committee Members**

Namrata Advani, Sgt.  
Leland Butcher, Sheriff  
Wendell Hall, Margie  
Hobbs, RN, H. Britt  
Landrum, Jr., Michael  
Torres, MD, Sandy  
Sansing, Thomas  
Schneider, MD,  
Absent member- Ed  
Grayson  
Observer-Jo Mayo

**Pensacola State Department Representative**

Frances Duncan, Kathy Dutremble, Becky  
Heddy, Karen Kessler, Sarah Lewis, Mary  
Ellen Roy, Beth Smithers, Marc Ward,  
Patrice Whitten

**Pensacola State Admin. Faculty and Staff Representatives**

Dr. Ed Meadows, S. Bannow,  
L. Bloom, K. Lien, S. Hartley,  
C. Rich, C. Ruber, M. Ward,  
S. Ali

TOPIC	DISCUSSION	ACTION
<b>Approval of minutes of previous meeting/Election of committee chairperson</b>	Motion to approve minutes of Sept. 11, 2011 - Krist Lien Seconded – Christa Ruber Ms. Margie Hobbs by consensus vote will chair the BAS Advisory Committee	Motion carried
<b>Welcome and Introductions</b>	<ol style="list-style-type: none"> <li>1. Dr. Bannow stated that this meeting would be recorded for minute's purposes and then asked that everyone introduce themselves.</li> <li>2. Dr. Bannow stated that this was the first full BAS Advisory Committee meeting and explained that the purpose of the committee was to have the involvement of the community to help the BAS program be responsive to the needs of the community. He stated that as introductions were made you can see the variety of community members, medical doctors, members of law enforcement, health care personnel, a member of the graphic design community, and members from the business and education communities.</li> <li>3. He stated that the next Advisory meeting would have concentration break-out sessions.</li> <li>4. Dr. Bannow explained that our degree, a Bachelor's of Applied Science Degree in Administration and Supervision, has four concentration areas: Graphic Design - Mr.</li> </ol>	N/A

	<p>Krist Lien, Health Care Management - Dr. Christa Ruber, Organizational Administration  -  Dr. Linda Bloom and Carla Rich, and Public Safety/Public - Ms. Sandra Hartley.</p> <p>5. As the concentration areas were named, Dr. Bannow introduced the concentration coordinator. He asked Ms. Hartley to discuss the possible name change for Public Safety/Public Service. Ms. Hartley stated that the concentration name Public Safety/Public Service was wordy and feels that a change to just Public Safety would be a better fit for the concentration. She stated the concentration participates are from, emergency management, law enforcement, firemen, and that the name "Public Safety" would encompass them all.</p> <p>6. Dr. Bannow then thanked everyone for taking the time to be here.</p> <p>7. Dr. Bannow stated that Ms. Anita Brown, the first graduate of the BAS program, (health care management concentration), was invited to this meeting to share her experiences as a student in the BAS program. She was however, unable to attend and sent her regrets.</p> <p>8. Advisory Committee members and guests introduced themselves and gave a brief profile.</p> <p>Sandy Sansing – Businessman. Graduate of PJC 40 years ago when tuition was \$99 per semester.</p> <p>Wendell Hall – Sheriff Santa Rosa County. He has 30 years in law enforcement. Attended PJC Law Enforcement Academy many years ago. He is looking forward to contributing to the program.</p> <p>Margie Hobbs, RN at UWF - Graduate of PJC. Currently works with EMS and education</p> <p>Sgt. Leland Butcher – Adjunct in the PSC Criminal Justice program</p> <p>Michael Torres - Medical Emergency doctor. Has an MBA and is certified in Medical Management.</p> <p>Michael Schneider – Wellness physician</p> <p>Britt Landrum – HR for 42 years with a degree in social welfare/behavioral counseling.</p>	
<p><b>Old Business</b></p>		
<p><b>SACS Report</b></p>	<p>Dr. Ed Meadows, president of Pensacola State College gave SACS (Southern Association of Colleges and Schools) report in Dr. Spicer's absence. He stated the BAS degree is a degree primarily for people in the workforce. He stated that SACS is the accreditation agency for the College. SACS has granted the College the ability to receive and distribute federal funds. Eleven thousand students received some form of financial aid at the College last academic year. Seventy percent of the aid was from federal funds and approximately 30% was from PSC Foundation grants as stated by Karen Kessler, Director Financial Aid. Dr. Meadows stated that without the SACS accreditation, many students would not have received financial aid (e.g., Pell grants), and without this assistance many students would not be able to attend college.</p>	



	<p>Dr. Meadows stated that Pensacola State College is a 2-plus-2 institution that offers a BAS degree. The first two years the students receives an associate degree and can now stay at PSC to attain a Bachelor degree the next two years.</p> <p>He stated that a generic BA degree could possibly be attained at PSC in the next two to three years. The student would enter as a freshman seeking a four year degree. When this change happens, Pensacola State College would still be an open access institution.</p> <p>Dr. Meadows thanked each committee member for volunteering their time to the BAS program and asked for suggestions and ideas for making the program even more beneficial to the community and the workforce.</p>	
<b>“Surviving Trauma” Conference –S. Hartley</b>	<p>Ms. Hartley gave a briefing on the Surviving Trauma Conference.</p> <p>Approximately 300-500 medical professionals of all levels from the three area hospitals and other institutions attended the conference. The Pensacola State College BAS/BSN programs were discussed at length at the conference.</p>	
<b>Escambia/Santa Rosa County Sheriff Department initiative</b>	<p>Mr. Ward and Sheriff Hall gave a briefing on the Escambia and Santa Rosa counties Sheriff Departments closed group initiates and Cyber Crime Technology.</p> <p>The College offers an education program for members of the two county departments at their facilities. Participants do not need to come to the campus to complete the program.</p> <p>Sheriff Hall and Morgan agree that a Cyber Crime Tech program would be beneficial to both counties and they would be willing to offer internships to certificate participates and jobs to program completers. Ms Hartley stated that there is a need for 911 Dispatchers and a greater need in retaining them.</p>	
<b>Initiative to recruit other-college students during vacation period</b>	<p>Dr. Bannow stated that he has not developed his plan yet, but will work on it.</p>	
<b>New Business</b>	<b>Area Emphasis Briefing</b>	
<b>Enrollment – S. Lewis</b>	<p>Ms. Lewis prepared a handout with data showing BAS enrollment in 2011 – 2012; enrollment by program; and the process she uses as BAS Admission Specialist. (handout attached)</p>	
<b>College Development – P. Whitten</b>	<p>Ms. Whitten, director of the College Foundation, discussed how the Foundation works to provide grants and scholarships to students by being the fundraising arm of the College. The Foundations has endowed scholarships as well as generous monetary gifts from businesses and community people. Pensacola State College was granted a \$25,000 Rockefeller Scholarship to pay tuition for BAS students. The Foundation also has Faculty Development funding for faculty teaching in the BAS program..</p>	
<b>Financial Aid – Karen Kessler</b>	<p>Ms. Kessler, Director of Financial Aid, discussed financial aid and a few Federal Rule changes. Pell Grant – the calculation changed from using eighteen credit hours to twelve credit hours when calculating Pell grant funding.</p>	
<b>Marketing –E. Roy</b>	<p>Ms. Roy presented College Bookmarks to everyone. They are used as one of the marketing tools. She talked briefly about the BAS Honor Society (Sigma Beta Gamma) that was just</p>	

	established. She asked that the name of students who have successfully completed the program be given to the Marketing department to be used in future recruitment projects.	
<b>Area Concentration Briefings</b>		
<b>Graphic Design - Lien</b>	Mr. Lien stated that thirty-nine students in the Graphic Design concentration are home grown coming in with AAS Graphic Design degrees. He mentioned the Art Department's success at the Addy Awards (Advertising competition recognition). Of the forty-four awards available our students received two gold and one silver medal.	
<b>Health Care Management - Ruber</b>	Dr. Ruber stated that 50% of the students in the health care management emphasis hold AS health degrees and 50% have associate degrees in other areas. There are 149 students in concentration and three students should graduate in May.	
<b>Organization Administration – Bloom/Rich</b>	Dr. Bloom/Dr. Rich	
<b>Public Safety/Public Service - Hartley</b>	Ms. Hartley stated she will be retiring and Dr. Ruber will also handle this concentration. She discussed the need for more students in this concentration.	
<b>Open Discussion</b>		
	Dr. Schneider asked if Pensacola State College has a working relationship with Troy State and  Ms. Hartley-It would be nice to have real life work experiences for BAS students in a business environment. Perhaps small businesses could/would offer internships to students in our BAS program. The consensus is that it would be good for the business and the student to have internships	
<b>Next Meeting Date</b>	TBA September 2012	
<b>Note</b>	Meeting digitally recorded. Recording kept in BAS Office if more specific data is needed.	
<b>Adjourn</b>	5:35 p.m.	

**PENSACOLA STATE COLLEGE**  
**Edward M. Chadbourne Library**  
**Minutes**  
**BAS Advisory Committee**  
**October 17, 2012**

**Members Present:** N. Advani, M. Hobbs, S. Sansing, T. Schneider, T. Smith

**Members Absent:** E. Grayson, H.B. Landrum, Jr., M. Torres, Wendell Hall

**Admin. Faculty and Staff:** S. Bannow, D. Wymer, D. Busse K. Dutremble, S. Lewis, C. Rich,  
C. Ruber. K. Lien, S. Hartley, L. Butcher, M. Ward, S. Ali

**Absent:** E. Spicer, L. Bloom

The regular meeting of the BAS Advisory Committee was called to order at 4:15 p.m.  
The meeting followed the agenda sent to Advisory Committee members on October 3, 2012.

Motion to approve Minutes of March 15 by K. Lien, second by T Schneider – motion carried.

Introductions by Dr. Bannow – Dr. Doug Wymer, incoming Dean of BAS Studies and Academic Support; Ms. Tafawn Smith, Student Representative BAS Advisory Committee

Ms. Smith made a brief presentation.

Dr. Bannow gave an overview of BAS Honor Society Delta Beta Sigma.  
Induction of twenty BAS students will be November 7, 2012, at 5:30 p.m. in Chadbourne Library.

**OLD BUSINESS**

- **SACS Briefing**  
Dr. Bannow reported on SACS credentials process.
- **Annual Baccalaureate Accountability Report to the State**  
The annual report was submitted by the College on September 28.
- **Closed Group Initiative with Sheriff's Department-M. Ward**  
A two semester Cyber-crime program is being developed and there is a need to hire staff.
- **Summer Transient Student Initiative – Dr. Bannow**  
He is still working on this initiative. No Report at this time.

**NEW BUSINESS**

- **Enrollment – S. Lewis**  
PowerPoint presentation with data for number of graduates to date; enrollment to date; and her Focus Areas:
  1. Consistent Process
  2. Contact Applicants and Admitted Students
  3. Decrease Gap between Admitted and Enrolled
  4. Recruitment
- **Marketing Strategies – S. Nichols**  
Dr. Bannow stated she is working on several BAS Marketing ideas.
- **Recruitment – Kathy Dutremble**

## **NEW BUSINESS (con't)**

- **New Program Initiatives - S. Hartley**  
New BAS programs are being looked at. She asked that committee members let her know what they feel are the needs of the community as well as any overall items regarding BAS programs.
- **Internship Ideas – C. Ruber**  
There is a need for internship opportunities in the health care management program. She will continue to look at other institutions whose BAS programs involve internships.

## **CONCENTRATION BRIEFINGS**

- **Graphic Design – K. Lien**  
There are fifty majors. The department continues to grow their own for the BAS program.
- **Health Care Management – C. Ruber**  
Concentration is doing well. Graduates are being promoted in their respective companies.
- **Organizational Administration – C. Rich**  
She is getting good feedback from students. Many unemployed students are returning to earn the BAS degree to help them compete for available jobs.
- **Public Safety Management – C. Ruber**  
Enrollment is low, but initiatives for growing this concentration are under review.

## **OPEN DISCUSSION**

- **Dr. Thomas Schneider**
  1. Thank you to Dr. Bannow for pulling this committee together.
  2. Brief discussion regarding getting students involved in the Pensacola Rowing Club.
  3. He advocates for preventive medicine, a key purpose of which is to lower health care costs while advancing good health.
- **Sgt. Leland Butcher**  
He has concerns regarding other institutions' expensive on-line courses that are not being completed. He also asked: Why can't Pensacola State offer more criminal justice courses on-line? Several members provided evidence that the BAS program does offer a wide range of on-line courses and that the ultimate goal is to make all courses available on-line while offering them in hybrid and traditional formats as well.
- **BASLO Assignment – Dr. Bannow**  
Please review the final copy of the BASLOS sent to SACS. Prepare any comments, concerns, questions for next Advisory Committee meeting.

The next BAS Advisory Committee meeting will be April 17, 2013.  
Meeting adjourned at 5:10 p.m.

**Pensacola State College  
Edward M. Chadbourne Library  
BAS Advisory Committee Meeting  
April 4, 2013**

**AGENDA**

**Welcome**

**Minutes**

**Introductions**

**Old Business**

**SACS Briefing –  
Annual Report to the State –**

**New Business**

**Enrollments – Sarah Lewis  
Proposed New Programs Report – Sandy Hartley**

**Area Concentration Briefings**

**Graphic Design – Krist Lien  
Health Care Management – Christa Ruber  
Organizational Administration – Carla Rich  
Public Safety Management – Christa Ruber**

**Open Discussion**

**BASLO**

**Discuss Date, Time, Place for Next Meeting**

**Adjourn**

**Pensacola State College Baccalaureate Advisory Committee Meeting**

**April 4, 2013**

**Current baccalaureate programs: Administration & Supervision BAS**

**Current Concentrations:** Graphic Design Management, Healthcare Management, Organizational Administration, Public Safety Management.

**Proposed new concentrations:** Human Resource Management, Law Enforcement Administration, Project Management.

**Current Bachelor of Science program: Bachelor of Science in Nursing**

**Proposed New Bachelor of Science programs:** Dental Hygiene, Early Childhood Education, Information Assurance, and Medical Sciences.

***Please complete and turn in the following brief survey. Thank you for your input!***

**Name:** \_\_\_\_\_ **Agency:** \_\_\_\_\_

**Title:** \_\_\_\_\_ **Email:** \_\_\_\_\_

**Yes/No:** *You may write additional comments on the back of this page.*

\_\_\_\_\_ I support the implementation of all of the proposed programs. There is an unmet need within our region for graduates of these programs.

**Comments:**

\_\_\_\_\_ I support the implementation of some of the proposed programs. There is an unmet need within our region for graduates of the following programs:

\_\_\_\_\_.

**Comments:**

\_\_\_\_\_ I believe an unmet need exists within our region for additional programs, other than those listed above. If yes, please list the programs that are needed:

\_\_\_\_\_  
\_\_\_\_\_.

**Comments:**

**PENSACOLA STATE COLLEGE**  
**Edward M. Chadbourne Library**  
**Minutes**  
**BAS Advisory Committee**  
**April 4, 2013**

**Members Present:** N. Advani, M. Hobbs, T. Smith

**Members Absent:** E. Grayson, H.B. Landrum, Jr., S. Sansing, M. Torres, Wendell Hall

**Admin. Faculty and Staff:** D. Wymer, L. Bloom, S. Lewis, C. Rich, C. Ruber. M. Hopkins, S. Hartley, L. Butcher, M. Ward, S. Ali

**Guest:** Charlotte Peacock

The regular meeting of the BAS Advisory Committee was called to order at 4:15 p.m.  
Motion to approve Minutes of ~~April 4, 2013~~ October 17, 2012 by C. Ruber, second by T. Smith  
– motion carried.

Dr. Rich introduced Ms. Charlotte Peacock, Director of the Project Management Institute  
Emerald Coast Florida Pensacola Branch.

**OLD BUSINESS**

- **SACS Briefing**  
Dr. Wymer reported on SACS process.
- **Annual Baccalaureate Accountability Report to the State**

**NEW BUSINESS**

- **Enrollment – S. Lewis**  
PowerPoint presentation with data for number of graduates to date; enrollment to date;  
and her Focus Areas:
  1. Consistent Process
  2. Contact Applicants and Admitted Students
  3. Decrease Gap between Admitted and Enrolled
  4. Recruitment
- **New Program Initiatives - S. Hartley**  
Law Enforcement- daily working knowledge to supervise  
Dental Practitioner – mid level dental practitioner  
Human Resource Management

**CONCENTRATION BRIEFINGS**

- **Graphic Design M. Hopkins**  
There are thirty-five majors. The department continues to grow their own for the BAS  
program. Mr. Hopkins gave a detailed presentation on how the Graphic Design  
Concentration functions.
- **Health Care Management – C. Ruber**  
Concentration is doing well. However, graduates are not being promoted in their  
respective companies as they had hoped. Graduates who are not currently in the health  
care field are also having problems being hired.
- **Organizational Administration – C. Rich**  
She is getting good feedback from students. As mentioned previously many unemployed  
students are returning to earn the BAS degree to help them compete for available jobs.
- **Public Safety Management – C. Ruber**  
Enrollment is still low, but initiatives for growing this concentration are being reviewed.

## **OPEN DISCUSSION**

**There was a general discussion regarding a Cyber Forensics Degree.**

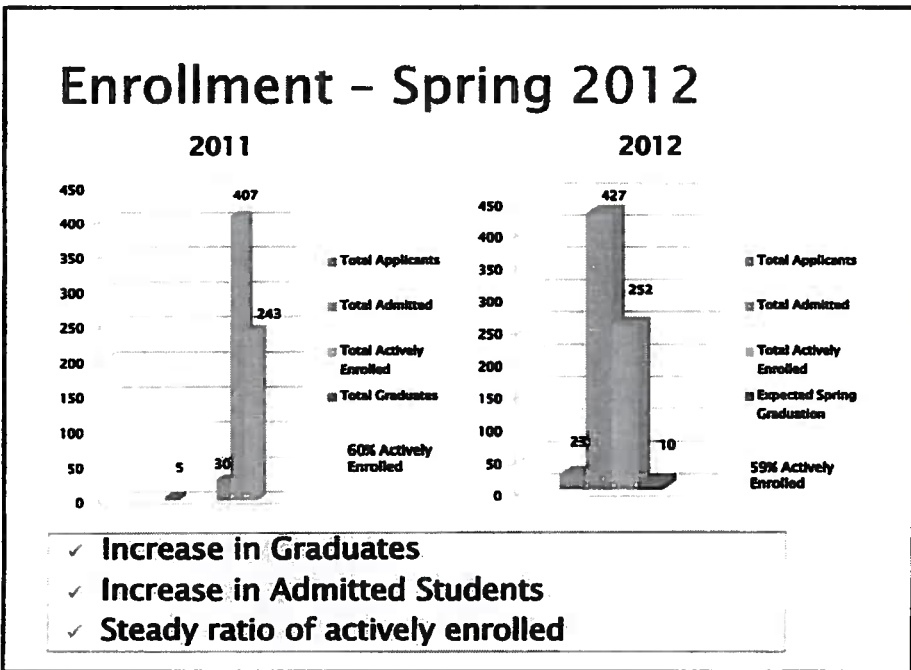
**The next BAS Advisory Committee meeting will be October 17, 2013.**

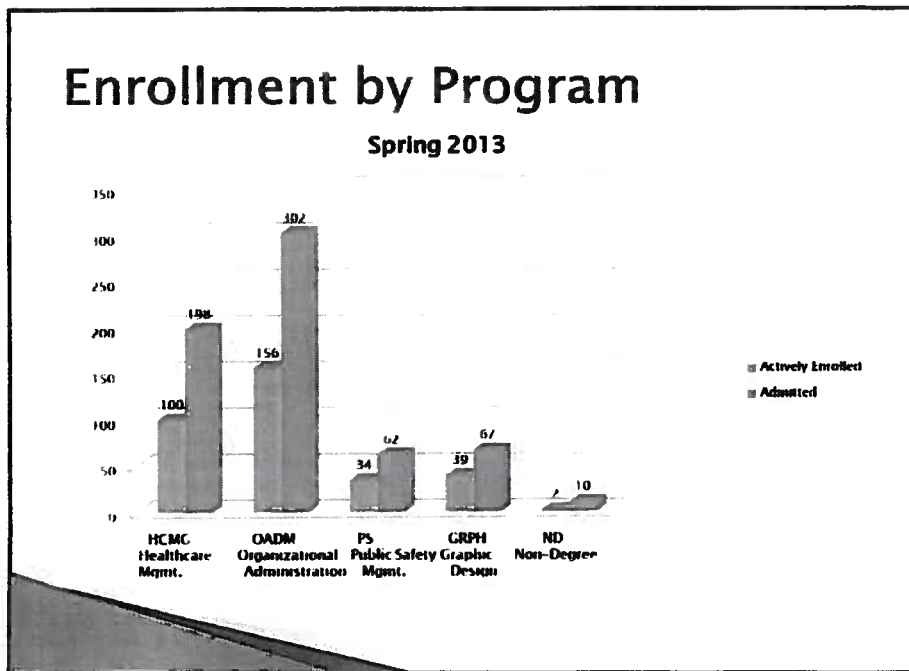
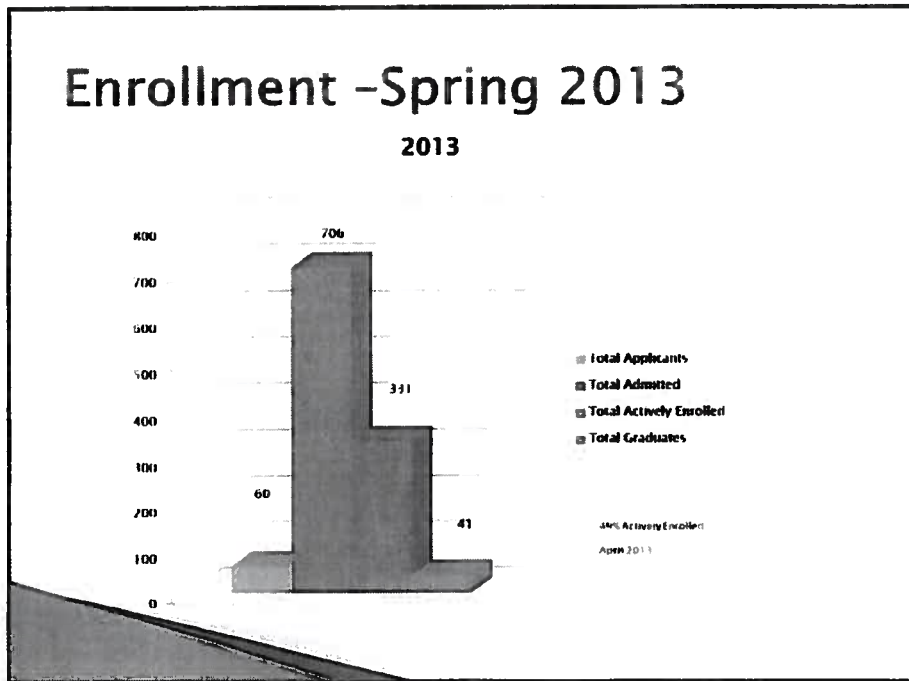
**Meeting adjourned at 5:14 p.m.**



# BAS Program Advisory Committee

4-4-2013





## Enrollment - Look at Summer

- ▶ It looks good!
- ▶ Registration opened 4-1
- ▶ Associate Degrees Conferring

## Graduates

Graduates	Fall 2011	Spring 2012	Summer 2012	Fall 2012	EXPECTED Spring 2013	EXPECTED Summer 2013	EXPECTED Fall 2013	Total
Healthcare Mgt	2	4	2	8	7	6	0	31
Organizational Admin	1	7	4	11	23	5	0	51
Public Safety Mgt	2	0	0	0	4	0	0	6
Graphic Design Mgt	0	0	0	0	0	0	1	1
Nursing BSN	2	1	4	2	4	4	0	17
<b>Total Graduates</b>	<b>7</b>	<b>12</b>	<b>10</b>	<b>21</b>	<b>38</b>	<b>17</b>	<b>1</b>	<b>88</b>

**BAS = 41**  
**Expected = 48**

## Focus Areas

- ▶ ***Decrease Gap between Admitted and Enrolled***
  - Enrollment Services – Fall phone campaign
- ▶ ***Contact with Students***
  - Reach out to students to those who applied but did not start classes
  - Heighten awareness
  - Retention
- ▶ ***Recruitment***
  - Information Sessions – May

**PENSACOLA STATE COLLEGE**  
**Business Administration Advisory Committee**  
**Spring Minutes**  
**March 18, 2013**

Dr. Linda Bloom, Ms. Yvonne Drake, Ms. Debbie Horak, Ms. Shirley Harris, Mr. Thomas Wallace, and Mr. Cecilio Rivera

The Business Administration Advisory Committee held its spring meeting on March 18, 2013 in Building 10, Room 1003.

The meeting was called to order by the Chair, Ms. Yvonne Drake at 5:30 p.m.

Ms. Shirley Harris, our new member, was officially introduced to the committee. Ms. Harris is Vice President of Finance and Accounting at Pen Air Federal Credit Union.

Ms. Sandy Hartley, Coordinator of Program Development, presented information to the committee relating to the connection and transition of our A.S. and A.A.S. programs into the proposed B.A.S. and B.S. degree programs. Committee members were given a document and asked to provide feedback or suggestions that will be of benefit to the B.A.S. and B.S. programs.

Dr. Bloom presented the “new” A.S. program to the committee. Dr. Bloom also announced that the current A.A.S. program will not be offered after the current academic year. Students currently enrolled in the existing A.S. and the A.A.S. programs will be given five years to complete their academic work.

The committee recommended that Psychology - PSY 2012 be required in the “new” A.S. program. The committee noted that this course should be taken to satisfy category V in the general education requirements.

The committee gave a “thank you” to Dr. Bloom for her service as Department Head and contributions to the committee. Dr. Bloom will be retiring June 30, 2013 – long before our next meeting.

Meeting adjourned at 6:10 p.m.

ec: Dr. Linda Bloom  
Mr. Jack Herndon  
Ms. Lois Stallworth

**Pensacola State College  
Edward M. Chadbourne Library  
BAS Advisory Committee Meeting  
October 17, 2013**

**AGENDA**

**Welcome and Introductions**

**Minutes**

**Old Business**

SACS 5<sup>th</sup> Year Report – Dr. Wymer

**New Business**

Enrollment and Completers – Sarah Lewis

Project Management Lunch

Educational Pathways and Program Modification

**Current Concentration Briefings**

Graphic Design – Krist Lien

Health Care Management – Christa Ruber

Organizational Administration – Carla Rich

Public Safety Management – Christa Ruber

**Proposed Concentration Briefing – Sandy Hartley**

**Open Discussion**

**Discuss Date, Time, Place for Next Meeting**

**Adjourn**

*Ask  
Due 10/4 4/14 netg*

**Pensacola State College  
Edward M. Chadbourne Library  
BAS Advisory Board Meeting  
October 17, 2013  
MINUTES**

Members Present: Namrata Advani, Margie Hobbs, Sandy Sansing, Thomas Schneider, Charlotte Peacock, Jennifer Grove

PSC Staff Present: Doug Wymer, Debra Kuhl, Sarah Lewis, Mark Hopkins, Christa Ruber, Carla Rich

The meeting was called to order at 4:00 PM.

- Dr. Wymer welcomed all members to the meeting.
  - The minutes of the previous meeting were read and approved.
  - Old Business
    - Dr. Wymer reported on the status of the SACS 5<sup>th</sup> year report, indicating that it had been submitted and that results would be reported in December.
  - New Business
    - Sarah Lewis provided an update on enrollment and completers of the existing baccalaureate programs.
    - Dr. Wymer reported on the recent lunch with the local Project Management group led by Charlotte Peacock. Curriculum for the proposed Administration and Supervision Concentration in Project Management was presented to the group at the lunch and was commented upon favorably by those in attendance.
    - Dr. Wymer reported on work being done to better define educational pathways into each of the Admin and Supervision concentrations.
    - Briefings on current concentrations were given by program coordinators.
    - Proposed Concentrations
      - Sandy Hartley presented the proposed additional concentrations to the Administration and Supervision BAS as well as the other proposed baccalaureate programs including
        - Cybersecurity
        - Dental Hygiene
        - Biomedical Sciences
- Committee members commented favorably on the new degrees and concentrations.

The meeting was adjourned at 5:30 PM.

**Pensacola State College  
Culinary Dining Room  
BAS Advisory Committee  
Minutes  
October 7, 2014**

**Members Present:** D. McLeod, C. Peacock, S.Hartnett, N.Advani, M. Hobbs, J. Grove, L. Butcher, S.Bryan

**Members Absent:** S.Weston, S.Sansing, T.Schneider, W. Hall

**Admin Faculty and Staff:** D. Wymer; D. Kuhl, K.Lien, D. Ward, S.Lewis, C. Ruber

**Visitors:** S.White, D.Tharp, B. Rodriguez, R. Garber, B. Herndon, T. Henderson

The regular meeting of the BAS Advisory Committee was called to order at 11:30 a.m.

Dr. Wymer welcomed members and invited them to eat as they were being served.

**NEW BUSINESS**

Ms. Sarah Lewis presented an update on enrollment.

- 372 enrolled as BAS/BSN majors
- 38 more have applied and are in a waiting status
- 185 have graduated as of summer 2014.3
- 37 scheduled to graduate in December

**CHANGES TO THE EXISTING PROGRAMS**

The baccalaureate programs and lower level Gen Ed programs are having a change in the foreign language requirement.

**DEVELOPMENT OF NEW ADVANCED TECHNICAL CERTIFICATES**

- Project Management ATC
- Human Resources Management ATC
- Law Enforcement Administration ATC

These new Advanced Technical Certificates will allow students to move ahead with their studies in these areas while the college waits out the one year moratorium on new programs that is being imposed by the Florida legislature. All the courses in these groups will be applicable toward the actual bachelor's level programs once they are in place.

**COURSE UPGRADES**

- These include reviews of the instructors and books
- Changes are in the works for Strategic Management – a capstone course for most of the OADM concentrations.
  - Our current capstone class is involved in a worldwide business simulation game. They have steadily climbed from #28 at the beginning of the semester to where they are now – in a four-way tie for first place.
  - This competition involves many large colleges and universities but we are holding our own.



## **SURVEY RESULTS AND OUR RESPONSES**

- Students were asked about preferred instructional type
  - 32% wanted face to face instruction
  - 33% wanted hybrid courses
  - 33% wanted online format
- There was a question about the course format
  - 60% like the current 8 week format
  - 40% wanted a regular 16 week format

To address these issues, in the Spring Semester there will be three courses offered as face-to-face for the full 16 weeks. These courses will also be available in the current on-line format so the students have a choice.

- Students were asked if grammar in their course work and correct grammar in their business communication was important. The majority said these were important issues.

Our next meeting will be scheduled in early April, 2015. The meeting place has not been established but we may utilize the culinary program again to provide lunch for our members and to give the students service experience.

Dr. Kuhl asked to recognize those present who are currently teaching courses in one of these programs. Those present included Sherry Hartnett, Lt. Leland Butcher, Tammy Henderson, and Barbara Rodriguez.

Dr. Wymer thanked everyone for coming and asked for feedback on any of these issues so that the programs can be made more responsive to the community workplace needs.

The meeting was concluded at 12:10 as lunch was being served.

Respectfully submitted

Beth Herndon

**Pensacola State College**  
**BAS Advisory Board**  
**Minutes**  
**April 22, 2015**

**Members Present:**

Namrata Advani  
Susan (Carol) Bryan  
Kristie Kelley  
Denise McLeod

**Members Absent:**

Wendell Hall  
Sherry Hartnett  
Margie Hobbs  
Charlotte Peacock  
Sandy Sansing  
Tom Schneider

**Admin Faculty and Staff:**

Anne Henderson  
Debra Kuhl  
Christa Ruber  
Lisa Snyder  
Steve White  
Doug Wymer

The regular meeting of the BAS Advisory Committee was called to order at 4:00 pm.

Dr. Wymer welcomed members and introductions were made.

**Old Business:**

Approval of October 14, 2014 meeting minutes

Motion to approve minutes by Denise McLeod; second by Namrata Advani; unanimous vote

**New Business**

Student Spotlight

Tami Brown, Organizational Administration Concentration graduate, communicated her story of fulfilling her desire to teach. Once Tami's BAS degree was conferred in August 2014, she was promoted from a Teacher's Assistant to a 1<sup>st</sup> grade teacher; her contract has also been renewed for next year. Tami selected the BAS Supervision and Management degree because it would take less time to complete and made the most sense to her. She has also earned her Associate degree from PSC in 2010. Tami went to school full-time and worked full-time.

Enrollment Numbers

Dr. Wymer presented an update on enrollment.

- 226 BAS Graduates; 49 BSN as of December 2014
- 44 BAS and 6 BSN expected to graduate Spring & Summer 2015
- 1,252 declared BAS/BSN major
- 458 actively enrolled in Spring semester
- 94 have applied and are in a waiting status

Efforts to develop new ways to contact students who apply and never enroll are being made through Dean's office. Decreasing that gap and enrollment is a focus at PSC.

Marketing opportunities will be utilized to increase BAS visibility and attract new students. Two business positions are posted to support BAS programs. PSC is at 33% of faculty teaching in BAS that are doctoral level, 25% is required for accreditation.

### BAS Name Change

Most common name in Florida colleges for BAS program is Supervision and Management. Discussion on changing the name and what that might suggest followed. Some concern over using Supervision was made however; using Management in the title is appealing to Public Safety students.

Motion to approve name change by Kristie Kelley, Denise McLeod seconded; unanimous vote

### Curriculum Update

Dr. Wymer reported on the legislative activities that have put new BAS degrees and concentrations on hold for the past year. Once the moratorium is lifted, PSC will be at the top for consideration in for Cybersecurity and the three new concentrations.

### New Program Ideas

Denise McLeod indicated that Accounting was in demand.

### Membership

Many members will complete their three-year membership. Updated Advisory list will be emailed prior to Fall meeting.

Dr. Wymer thanked everyone for coming and asked for feedback on any of these issues so that the programs can be made more responsive to the community workplace needs.

The meeting was concluded at 5:30 pm.

Respectfully submitted

Sarah Lewis

## **Appendix L:**

**Meetings with PSC President, Dr. Meadows,  
and UWF President, Dr. Bense**

**Meeting with UWF  
April 17, 2013  
Agenda**

- 1. Flight Academy**
- 2. Collegiate High**
- 3. Direct Admit**
- 4. Reverse Transfer**
- 5. Nursing**
- 6. New programs for Pensacola State College**
  - a. Bachelor's in Cyber-Security**
  - b. Bachelor's in Dental Hygiene**
  - c. Bachelor's in Early Childhood Education**
  - d. Bachelor's in Medical Sciences**
  - e. New BAS emphasis in Human Resources Management**
  - f. New BAS emphasis in Law Enforcement Management**
  - g. New BAS emphasis in Project Management**
- 7. Other**

Notes from Meeting with UWF  
April 17, 2013  
Agenda

1. Flight Academy

UWF expressed an interest in partnering with the flight academy to offer a 1-credit course. PSC advised that there would be accreditation issues associated with acceptance of the credit.

2. Collegiate High

PSC clarified that the Collegiate High School is a part of the Adult Education program at the College.

3. Direct Admit

There was discussion about the possibility of a direct admit "PSC2UWF" program.

4. Reverse Transfer

Dr. Meadows discussed reverse transfer and stated that PSC would be amenable to discussing a Direct Admit program provided UWF is open to discussing a Reverse Transfer program.

5. Nursing

There was discussion concerning the acceptance of PSC BSN graduates into the UWF MSN program. It was agreed that the two Directors of Nursing should meet to discuss.

6. New programs for Pensacola State College

- a. Bachelor's in Cyber-Security
- b. Bachelor's in Dental Hygiene
- c. Bachelor's in Early Childhood Education
- d. Bachelor's in Medical Sciences
- e. New BAS emphasis in Human Resources Management
- f. New BAS emphasis in Law Enforcement Management
- g. New BAS emphasis in Project Management

PSC shared information on all degrees listed.

UWF shared their intent to start a cybersecurity minor or concentration area in their computer science degree.

It was agreed that the two institutions could work collaboratively to minimize duplication of degrees.

7. Other

**Appendix M:**  
**Meetings with UWF Faculty and Staff**

UWF Meeting Minutes  
September 23, 2013

Included in the meeting were Jennifer McFarren from the Chamber and Tyler Tiwari from GBSI (Global Business Solutions, Inc.) representing the business community.

Attendees from Pensacola State College: Dan Busse, Danny Steele, Robert Pratten, Jim Drennen and Dr. Wymer.

Attendees from UWF:

Karen Rasmusson, Organizer  
Sikha Bagui  
Stephen Spinner  
Pamela Northrup  
Dallas Snider  
Jennifer Edge  
Randall Reid  
Thomas Gilbar  
Tim O'Keefe  
Thomas Reichherzer  
Lakshmi Prayaga  
Leonard Ter Haar  
Diana Williams  
Eman El-Sheikh  
Dave Dawson  
Bhuvaneswari Ramachandran  
Ezzat Bakhom  
Matthew Crow  
Anthony Pinto  
Frank Dufon  
Kimberly Tatum  
Jaromy Kuhl

The topics of discussion:

- Current offerings at both institutions.
- PSCs plan for the BS and the associated certs (Robert Pratten lead this portion of the discussion). We provided them a fairly detailed outline of our program.
- The differences in the focus of the current offering at UWF and the new PSC program.
  - The PSC program design is focused on obtaining IT industry certs using hands on approach
  - The UWF program was firmly rooted in their computer science department. They made it very clear that they were still working on their program.
- The low “hanging fruit” of articulation between our new BS to UWF’s masters in management etc.

The discussion was cordial with no indication that anyone in the group opposed anything that we proposed.

Meeting adjourned.



Proposed Programs Meeting  
At the University of West Florida  
November 1, 2013

Invitees:

University of West Florida Administrators and faculty

Pensacola State College faculty and Deans

Greater Pensacola Chamber of Commerce staff and Business members

1. Resolving differences in program “underpinnings”
2. UWF: presentation on current and proposed programs
3. UWF: information on a potential certification list
4. Discussion of proposed PSC programs
5. Collaboration efforts to enhance opportunities for students by sharing courses
6. Questions and answers and further discussion.
7. Adjournment.

UWF Meeting Minutes  
November 1, 2013

Included in the meeting were Jennifer McFarren from the Chamber and Tyler Tiwari from GBSI (Global Business Solutions, Inc.) representing the business community.

Attendees from Pensacola State College: Dan Busse, Danny Steele, Robert Pratten, Jim Drennen and Dr. Wymer.

Attendees from UWF:.

Karen Rasmusson, Organizer  
Sikha Bagui  
Stephen Spinner  
Pamela Northrup  
Dallas Snider  
Jennifer Edge  
Randall Reid  
Thomas Gilbar  
Tim O'Keefe  
Thomas Reichherzer  
Lakshmi Prayaga  
Leonard Ter Haar  
Diana Williams  
Eman El-Sheikh  
Dave Dawson  
Bhuvaneswari Ramachandran  
Ezzat Bakhoun  
Matthew Crow  
Anthony Pinto  
Frank Dufon  
Kimberly Tatum  
Jaromy Kuhl

The topics of discussion:

- The differences in program under pinning's was again discussed.
- More time was spent on the current UWF offerings and their potential certification list.
- Additionally, we discussed how we could "share students and courses" in order to keep costs low and provide additional opportunities for students.

Again the meeting was cordial and very pleasant with no indication of UWF having any issues with PSC offering a BS.

UWF handout is attached.

Meeting adjourned.

## Fall, 2013 UWF Information Technology/Cyber Security-Related Programs, Certificates, and Courses

### *Programs in Cyber Security Related Disciplines*

- **B.S. Computer Science/Cyber Security**  
The Cyber Security specialization prepares graduates to be leaders in the protection of data assets and analysis of potential threats to system and networks. The curriculum focuses on the techniques, policies, operational procedures, and technologies that secure and defend the availability, integrity, authentication, confidentiality, and non repudiation of information and information systems, in local as well as more broadly based domains. The major helps prepare students for careers as information systems security professionals, senior system managers, and system administrators responsible for information systems and security of those systems.
- **M.S.A./Cyber Security**  
The MSA with a specialization in Cyber Security is an interdisciplinary degree designed to help students prepare for leadership roles in organizations that are concerned about issues and risks associated with information technology, cyber security and other related disciplines. Comprised of a technical, business, and administration framework, courses help students who are mid-career professionals further their professional skills.

### *UWF Certificates in Cyber Security Related Disciplines*

- **Certificate in Cyber Security**  
Focused on networking and security, the Computer Science Certificate in Cyber Security prepares professionals to become Cyber Security Specialists. In this Certificate students develop technical and problem-solving skills to help organizations defend their network systems. (12-13 Hours)
- **Certificate in Information Security Analysis**  
The structure of the certificate is designed to prepare the student to interact effectively with the technical data security professionals. It will also prepare them to set for the CompTia Security + professional certification. The U.S. Department of Defense recognizes CompTIA certifications in its technical and management tracks for information assurance technicians and managers under DoD Directive 8570.1M. CompTIA certifications are also part of the State Department Skills Incentive Program (SIP) (<http://certification.comptia.org/getCertified/government.aspx>). (12 hours)
- **Certificate in Intelligence Analysis**  
In the Certificate in Intelligence Analysis, students develop skills related to federal and law enforcement strategies to protect national security and national interests abroad. As part of the Certificate, real-world examples are used to frame the content and application of classes. Practice and application of methods and tools used for intelligence analysis are integrated into courses. (12-16 Hours)

### *Potential Certifications (list under construction)*

CompTIA  
CompTia Security +

### *Selected Courses in Cyber Security Related Disciplines (to be used as required courses in programs of studies, as part of certificates, or electives)*

- **CCJ 3XX1 Cybercrime**  
Cybercrime is a course for students with a beginning interest in studying crimes committed using digital technology. The course explores the etiology of cybercrime, the various types of cybercrime, law enforcement response, and the prevention of digital crime.
- **CCJ 3XX2 Terrorism**  
Introduction to terrorism, which examines the history and evolution of terrorism in both international and domestic arenas. Topics will include the causes, motives, means, and organization of terrorism and terrorist groups. Finally, the course will explore governmental and law enforcement responses and programs aimed at terrorism and threats.
- **CCJ 4XX1 Homeland Security**  
Concepts of homeland security in theory and practice; the history and development of the U.S. Department of Homeland Security and its components; terrorism and other threats to U.S. National Security and the issues associated with achieving national security in a free society. The course will also examine the components of Critical Infrastructure, Emergency Management and Preparedness, and Policing, related to the practical application of homeland security initiatives.
- **CIS 4385 Cyber Security and Forensics (modification)**  
This course provides a understanding of how to effectively protect computer networks. Students will learn the tools and penetration testing methodologies used by ethical hackers. In addition, the course provides a thorough discussion of what and who an ethical hacker is and how important they are in protecting corporate and government data from cyber attacks.

## UWF Information Technology/Cyber Security-Related Programs, Certificates, and Courses

Students will learn about federal and state computer crime laws, penalties for illegal computer hacking thus providing a foundation in forensic evidence collection from electronic devices and the implications of security to users and forensic examiners. Applicable laws; disk and file recovery; persistent data; cryptography; privacy and anonymity; tools for collecting evidence and reporting results. Offered concurrently with CIS 5396; graduate students will be assigned additional work. Credit cannot be received in both CIS 4385 and CIS 5396.

- **CIS 4XX7 Cyber War Gaming**  
Every organization, whether part of the government or the private sector, needs “battle-tested” IT personnel in order to defend its networks against attack. The most effective way to provide this experience is to recreate the exact scenarios, no matter how nefarious, they will see in the real world. This course provides exercises that use different specialties (network, security, visualization, software, etc.) into color-coded red and blue teams that perform specific roles in attacking and defending IT infrastructures.
- **CIS 5396 Cyber Security and Forensics (modification)**  
Provides a foundation in forensic evidence collection from electronic devices and the implications of security to users and forensic examiners. Applicable laws; disk and file recovery; bit-stream images; volatile and persistent data; cryptography; privacy and anonymity; tools for collecting evidence and reporting results. Offered concurrently with CIS 4385; graduate students will be assigned additional work. Credit may not be received in both CIS 5396 and CIS 4385.
- **CNT 4007C Theory and Fundamentals of Networks**  
A functional systematic examination of the key components and theories of modern computer networks, including protocol stack, mobile networking, network security, multimedia networking and network management. Emphasizes the internet for studying network fundamentals and includes the use of tools to analyze network operations.
- **CNT4403 Computer and Network Security**  
Introduction to the concepts of computer and network security using currently available technology. Security analysis, physical threats, virus protection, system recovery, and encryption
- **COP 3022C Intermediate Computer Programming (High Level Language)**  
An intermediate course in object-oriented programming. Topics include object oriented modeling, algorithms, inheritance, polymorphism, input/ output, exception will be on issues of object-oriented design and good programming practices. Students entering this course are expected to have a solid knowledge of programming in the object-oriented paradigm. A supervised laboratory experience will accompany the intermediate computer programming course. Emphasis will be on developing skills in program design as a necessary prerequisite to effective implementation. The lab will provide active learning experiences in design and coding.
- **COP 4610C Theory and Fund of Operating Systems**  
A functional systematic examination of the key components and theories of a modern operating system, including process, thread management, synchronization, I/O, and memory management. Emphasizes using several modern operating systems and writing programming scripts to manipulate these operating systems.
- **COP 4634C Systems & Networks I**  
The design and implementation of various components of a modern operating system including process and thread management and synchronization, I/O programming and inter-process communication. Internet communication through TCP and UDP sockets, sliding window algorithms, and client/server and peer-to- peer application development.
- **COP 4635C Systems & Networks II**  
This course is a continuation of Systems and Networks I. The operating systems topics of virtual memory and file systems are included. Topics relevant to networking and multiprocessor programming are covered. These include deadlock analysis, networking devices, networking protocol stack structure, congestion and flow control analysis and algorithms, network routing algorithms, and network traffic analysis. The role of security in operating systems and networks is covered.
- **COP 4XX9 Database Security**  
The Database Security course follows guidelines set forth by the National Security Agency/Department of Homeland Security Centers of Academic Excellence in Information Assurance and Cyber Defense. This course is considered a core knowledge unit for institutions to be considered a Center of Academic Excellence. Database Security is designed to teach students how database systems are used, managed, and issues associated with protecting the associated data assets. This undergraduate course is a requirement for the B.S. in Cybersecurity and will be an elective for all other undergraduate Computer Science programs.
- **COP 4X10 Secure Software Development**  
Examines the importance of building security into the design, implementation and testing phases of software development. Covers coding techniques that avoid known vulnerabilities and test strategies that can uncover previously unknown weaknesses. Includes discussion of security policies and design principles.

## UWF Information Technology/Cyber Security-Related Programs, Certificates, and Courses

- **COP 5XX2 Secure Software Development**  
Examines the importance of building security into the design, implementation and testing phases of software development. Covers coding techniques that avoid known vulnerabilities and test strategies that can uncover previously unknown weaknesses. Includes discussion of security policies and design principles. Prior to taking this course students should have knowledge and skill in software development.
- **COP 6XX1 Database Security**  
The Database Security course follows guidelines set forth by the National Security Agency/Department of Homeland Security Centers of Academic Excellence in Information Assurance and Cyber Defense. This course is considered a core knowledge unit for institutions to be considered a Center of Academic Excellence. Database Security is designed to teach students how database systems are used, managed, and issues associated with protecting the associated data assets. This graduate course is a requirement for the M.S.A. in Cybersecurity and will be an elective for all other graduate Computer Science programs.
- **EEL 4XX0 Cyber Security of Industrial Control Systems**  
This course is used to teach and share in-depth defense strategies and up-to-date information on cyber threats and mitigations for vulnerabilities with the goal of improving cyber security preparedness in the industrial control systems community. This course provides an overview of operations security for industrial control systems and prepares the students for the risks and threats associated with electric grids and other centralized and distributed control systems.
- **EEL 5XX0 Cyber Security of Industrial Control System**  
This course is used to teach and share in-depth defense strategies and up-to-date information on cyber threats and mitigations for vulnerabilities with the goal of improving cyber security preparedness in the industrial control systems community. This course provides an overview of operations security for industrial control systems and prepares the students for the risks and threats associated with electric grids and other centralized and distributed control systems. This course introduces students to new developments in cyber threats, breaches and incidents in electrical grid and other industrial control systems. The course also discusses issues and methods to improve industrial security on the automation platform.
- **EME 3XX0 Introduction to Intelligence**  
An examination of the five major intelligence disciplines: Human Intelligence, Signals Intelligence, Geospatial Intelligence, Open Source Intelligence, and Measurements and Signatures Intelligence in addition the concept of combining intelligence into an all-source formatted product. The concepts of Information Security and its offensive counterpart, Computer Network Operations are explored. Using real-life scenarios, students analyze strategies to achieve various end goals. From infiltrating a network of foreign spies, to developing a suspect's placement in a network based off of their call patterns, to assessing the technical capabilities of an adversary nation, students will be immersed in a variety of practical exercises where they will be asked to perform various types of analysis themselves. In addition, students will produce clear, concise, and accurate products for dissemination. Students will explain the general flow of information within an intelligence product and associated components.
- **EME 3XX1 Introduction to Intelligence Analysis**  
Designed for those individuals who might be interested in entering the local, state, or federal intelligence community, foundational knowledge of analytic concepts, partners involved, and their respective functions is explored. Examination of multiple federal agencies, including the Central Intelligence Agency, Federal Bureau of Investigations, Drug Enforcement Administration, Department of Homeland Security, National Security Agency, National Reconnaissance Office, National Geo-spatial-Intelligence Agency, Defense Intelligence Agency, and each military service-specific intelligence organization. Concept of information sharing between the local, state, and federal level intelligence organizations are explored. Overview of Human Intelligence, Signals Intelligence, Geo-spatial Intelligence, Imagery Intelligence, Measurements and Signatures Intelligence, Open Source Intelligence and All-Source Intelligence. Foreign intelligence threats and existing methods that can be employed to counter them are investigated. Key problems faced by the Intelligence Analyst such as are reviewed.
- **EME 4XX0 Geospatial Analysis**  
Functions of geospatial toolsets, including setting up the workspace, adding imagery and various data-files, importing raw data from spreadsheets, reading data as a table, plotting data on a map, creating features, and manipulating data, are used to analyze cases and scenarios. Students will create professional products that can be used by analysts of all backgrounds. Students will use raw data for the analysis process.
- **EME 4XX1 Social Network Analysis**  
Social network analysis toolsets will be used to develop skills in integrating analytic disciplines and methods through real world scenarios by reading, creating, and manipulating SNA charts. Data sets will include class-generated content as well as large spreadsheets, where data will be manipulated through filters and conditional formatting, and using basic

**UWF Information Technology/Cyber Security-Related Programs, Certificates, and Courses**

algorithms to analyze their data and locate patterns and trends. Interpretation of raw data and product generation using tables and charts, students will develop skills in reading, interpreting, and presenting findings.

- **GIS 4043 Geographic Information Systems**  
Spatial database will be queried to solve spatial problems, analyze related attributes, and produce computerized cartographic output. Examines spatial data structures, data acquisition, processing, management, manipulation, and analysis for interdisciplinary applications and research. Permission is required.
- **GIS 4043L GIS Laboratory**  
Lab correlating with GIS 4043. Intended to be a fundamental lab that provides hands-on experience operating a GIS.
- **ISM 3011 E-Business: Systems Fundamentals**  
Use and application of information system technology in the business environment, with emphasis on the fundamental e-Business models, technology concepts and systems used to enable and conduct electronic business. Concepts include the components of an I.S., the systems development process, the functions of the various types of communication networks, hardware, and software, including practical, hands-on projects designed to enhance e-Business analytical skills. Completion of 45 semester hours of college course work is required prior to this course.
- **ISM 3323 Information Security Management**  
Information Security in the modern organization is both a management and a technology issue. Course recognizes that technology alone cannot address all the security issues; Prepares students for management and control of security of information systems in organizations; prepares students to make informed decisions regarding administration of information security infrastructure.
- **ISM 4483 E-Business Infrastructure Management**  
Explores the technology and management concepts, issues and decisions related to the infrastructure required to support end-to-end, partner-to-partner electronic business processes.
- **MAN 3301 Human Resources Management (3)**  
Introduction to personnel administration; emphasis on the basic personnel function of both the personnel specialist and the operating manager. Critical issues stressed include selection, compensation, OSHA, EEO, unions and discipline.
- **MAD 3107 Discrete Mathematics and Applications**  
Introductory combinatorics, counting, graphs and trees, and their applications; relations and partial orders; some algorithms associated with applications of graphs, trees, and relations. (General Studies Course: MAT) and (Gordon Rule Course: Theoretical Math).

**Appendix N:**

**Comparison of Proposed Cybersecurity  
Programs at UWF and PSC**

**Letter to FL Department of Education from  
UWF**

**Letter to Vice Chancellor and Chief  
Academic Officer**



Office of the Provost  
Academic Affairs  
11000 University Parkway  
Pensacola, FL 32514-5750

Dear Chancellor Hanna,

On behalf of President Judy Bense, I am writing in response to the November 6, 2013, email informing the SUS Presidents of Pensacola State College's (PSC) Letter of Intent dated November 5, 2013. In this letter, Pensacola State College stated its intentions to develop a Bachelor of Science in Cyber Security.

The intent of this letter is to inform you of my concerns regarding PSC's proposed bachelor's degree in cyber security. In the August 21, 2013, edition of the local newspaper, the *Pensacola News Journal* (<http://www.pnj.com/apps/pbcs.dll/article?AID=2013308210022>), it was made public that PSC plans to offer this program as soon as possible. UWF first heard of this initiative at a Chamber of Commerce meeting at which PSC announced its intention to develop a bachelor's program in this area. As you know, the University of West Florida (UWF) has received Information Technology Performance funding (\$7.5 million) through the Florida State University System Board of Governors, and so is poised to deliver high-quality programming in this area.

The funding UWF received will enable UWF to provide courses, certificates, and programs in cyber security at both the bachelor's and master's levels. UWF academic administrators met with PSC administrators and discussed our plans for developing cyber security programs. Our desire is to work with PSC on a 2+2 program to prepare their students for a seamless and efficient transition from the associate's level into our programs. It appears that PSC plans to move ahead with its own bachelor's program rather than collaborate on offerings that would provide the most efficient, least duplicative means of addressing local, regional, and state workforce needs. President Bense sent PSC a letter following the newspaper announcement and offered again to partner with PSC on a 2+2 program. It is clear to us that their proposed program will duplicate our efforts related to cyber security.

Please consider this my formal protest to PSC's proposed bachelor's program in cyber security.

In the meantime, and as always, UWF will continue to try to work with the administrators at PSC to develop cooperative and complementary programs, not only in cyber security, but in all appropriate areas.

Sincerely,

Martha D. Saunders, Ph.D.  
Provost and Vice President for Academic Affairs



Comparison of Proposed Cybersecurity Program to UWF's Cybersecurity Specialization within the Computer Science Program.

Pensacola State College's proposed Bachelor of Applied Science in Cybersecurity is based on the fundamental principles of the ten domains identified in the world renowned CISSP Certification:

1. Information Security Governance and Risk Management;
2. Access Control;
3. Security Architecture and Design;
4. Physical and Environmental Security;
5. Telecommunications and Network Security;
6. Cryptography;
7. Business Continuity and Disaster Recovery;
8. Legal, Regulations, Compliance, and Investigations;
9. Software Development Security; and
10. Security Operations.

#### **A. Review of CIP Codes**

PSC-Proposed BAS in Cybersecurity

CIP Code: 11.1003-Computer and Information Systems Security/Information Security

A program that prepares individuals to assess the security needs of computer and network systems, recommend safeguard solutions, and manage the implementation and maintenance of security devices, systems and procedures. Includes instruction in computer architecture, programming, and systems analysis; networking; telecommunications; cryptography; security system design; applicable law and regulations; risk assessment and policy analysis; contingency planning; user access issues; investigation techniques; and troubleshooting.

UWF-BS in Computer Science with Cybersecurity Specialization

CIP Code: 11.1010-Computer and Information Sciences, General

A general program that focuses on computing, computer science, and information science and systems. Such programs are undifferentiated as to title and content and are not to be confused with specific programs in computer science, information science, or related support services.

After reviewing the CIP codes, titles, and descriptions of the two programs it was determined that PSC's proposed program's CIP code represents a more applied and specialized approach to the field of cybersecurity than UWF's computer science program.

## **B. Review of Program Descriptions**

Proposed program description

### **Bachelor of Applied Science**

#### **Cybersecurity**

The Bachelor of Applied Science (BAS) degree in cybersecurity is built on the 10 fundamental domains identified in the world renowned CISSP Certification. Graduates from this program who enter from the Information Technology Security AS preferred academic pathway, will be prepared to earn 19 industry standard certifications during their college career that have been identified by industry partners as highly desirable in employees. Certifications provide quantifiable knowledge and skills in a specific technology and are recognized worldwide. Students will work in a hands-on environment throughout this program that will reinforce theoretical concepts and will enable students to apply their knowledge in new and exciting career opportunities upon graduation. Graduates will be well prepared to start careers Information Security Analysts, Information Technology Specialists, Data Security Administrators, Information Security Officers, Information Security Specialists, Information Systems Security Analysts, Computer Security Specialists, Information Security Managers, and Technology Security Analysts.

From the UWF web page:

### **Bachelor of Science**

#### **Computer Science, Cybersecurity Specialization**

The Cybersecurity specialization prepares graduates to be leaders in the protection of data assets and analysis of potential threats to system and networks. The curriculum focuses on the techniques, policies, operational procedures, and technologies that secure and defend the availability, integrity, authentication, confidentiality, and non repudiation of information and information systems, in local as well as more broadly based domains. The major helps prepare students for careers as information systems security professionals, senior system managers, and system administrators responsible for information systems and security of those systems.

After reviewing the program descriptions, it was clear that the focus of the two programs was to prepare students to enter the workplace; however; the proposed program's description more clearly explains the program's foundation for accomplishing this focus and stresses the applied focus of the proposed BAS in cybersecurity.

## **C. Review of Curriculum**

The proposed program is built on the foundation of the Associate of Science in Information Technology Security (Cybersecurity), which provides students with 48 credit hours of coursework specific to the information technology security field. Students then enter the proposed Bachelor of Applied Science in Cybersecurity and complete general education requirements and an additional 39 credit hours of upper level coursework that is all focused on cybersecurity as represented below.

### **PSC Cybersecurity AS Program Courses**

CIS1350 Security Awareness .....	3
CTS1300C Administering Microsoft Windows Workstation.....	3
COP1510 Programming Concepts .....	3
CET1020C Introduction to Networks .....	3
CET1610C Routing and Switching Essentials.....	3
CET2026C Connecting Networks .....	3
CTS1390C Install and Configure Windows Server 2012.....	3
CTS2120C Security+ .....	3
CET2890C Network Defense and Countermeasures.....	3
CTS2125C Hardening the Network Infrastructure .....	3
CET2025C Scaling Networks.....	3
CET2614C Cisco CCNA Security.....	3
CET2934 Professional Project.....	3
CTS2149 Fundamentals of Project Management .....	3
CTS2318 Information Security Management .....	3

### **PSC Cybersecurity BAS Program Courses**

CAP3134 Database Security .....	3
CEN3083 Securing the Cloud.....	3
CGS3812 Business Continuity and Disaster Recovery .....	3
CIS3367 Operating Systems Security.....	3
CIS4201 Laws and Legal Aspects of Information Technology.....	3
CIS4385 Computer Forensics and Investigations.....	3
CIS4512 Information Security and Risk Management .....	3
CIS4596 Cybersecurity Capstone .....	3
CTS3326 Security for Microsoft Systems Administrators .....	3
CIS4253 Ethics in Information Technology .....	3
CIS3353 Security Testing and Auditing .....	3
CIS4357 Advanced Security Practitioner .....	3
ISM4314 Project and Change Management .....	3

Upper level courses in the UWF BS in Computer Science with Specialization in Cybersecurity do not include any courses that are part of the proposed BAS in Cybersecurity at PSC. The University of West Florida's upper level major courses are included below from the university webpage.

### **UWF Upper Level Major Courses**

CDA3101 Introduction to Computer Organization .....	3
CEN4078 Secure Software Development.....	3
CIS4368 Introduction to Database Security .....	3
CIS4385 Cyber-Security and Forensics.....	3
CIS4595C Capstone Systems Project.....	3
CNT4403 Computer and Network Security .....	3
CNT4416 Cyber War Gaming.....	3
COP3014 Algorithm and Program Design .....	3
COP3022 Intermediate Computer Programming.....	3
COP3530 Data Structures and Algorithms I.....	3
COP4710 Database Systems.....	3
COP4723 Database Administration.....	3

ISM3323 Information Security management.....	3
Choose one group of courses from the following groupings.....	6
COP4610 Theory and Fundamentals of Operating systems	
CNT4007C Theory and Fundamentals of Networks (or)	
or	
COP4634 Systems & Networks I	
COP4635 Systems & Networks II	
Major-Related Electives.....	15

After reviewing the curriculum of the two programs it was determined that the proposed BAS program’s curriculum has a more applied focus than the more theoretical curriculum of UWF’s computer science program and that the two programs have very different course requirements.

The four year UWF curriculum (see last page of this appendix) includes six security related courses plus four elective courses. The UWF program web page does not list the electives available to the cybersecurity specialization so a student may be able to complete the BS in Computer Science with Specialization in Cybersecurity with only 18 credit hours in cybersecurity courses. If there are adequate cybersecurity electives, the maximum number of cybersecurity courses in the UWF curriculum is 10, or 30 credit hours.

The four year combination of the Associate of Science in Information Technology Security (Cybersecurity) and Bachelor of Applied Science in Cybersecurity includes 15 cybersecurity courses totaling 45 credit hours of coursework focused on cybersecurity and preparing students for cybersecurity related industry standard certifications that have been identified by our industry partners as necessary for employment in the cybersecurity field.

**D. Review of Industry Certifications**

The third step of the review process was to review current industry certifications that students in each program will be prepared to earn through courses in the program. PSC’s proposed Bachelor of Applied Science in Cybersecurity combined with the Associate of Science in Information Technology Security (Cybersecurity) will prepare students to earn 19 industry standard certifications as indicated below.

- **CompTIA:**

Certification	Coursework embedded in
A+	ITSEC-AS
Network +	ITSEC-AS
Security +	ITSEC-AS
Linux +	ITSEC-AS
Project +	ITSEC-AS
Cloud Essentials	ITSEC-AS
Cloud +	CYSEC-BAS
Certified Advanced Security Practitioner	CYSEC-BAS

- **Cisco:**

Certification	Coursework embedded in
Cisco Certified Network Associate (CCNA)	ITSEC-AS
Cisco CCNA Security IINS certification	ITSEC-AS

- **Microsoft: Microsoft Certified Solutions Associate (MCSA)**

Certification	Coursework embedded in
MCDT 70-680/70-688	ITSEC-AS
MCDT 70-410	ITSEC-AS
MCDT 70-411	ITSEC-AS
MCDT 70-412	ITSEC-AS

- **Project Management Institute:**

Certification	Coursework embedded in
Certified Associate in Project Management (CAPM)	CYSEC-BAS

- **Mile2:**

Certification	Coursework embedded in
Certified Disaster Recovery Engineer (CDRE)	CYSEC-BAS
Certified Digital Forensics Examiner (CDFE)	CYSEC-BAS
Certified Information Systems Security Officer (CISSO)	CYSEC-BAS
Certified Penetration Testing Engineer (CPTe)	CYSEC-BAS

Through meetings with industry partners it was made clear that the most successful cybersecurity professional would come from a program that was constructed around industry standard certifications. Certification credentialing signifies quantifiable knowledge and skills in a specific technology and makes graduates more attractive to employers. The proposed program is clearly designed to deliver graduates with the skills needed by employers.

The UWF web page does not bring any attention to industry standard certifications that students will be prepared to earn through the Bachelor of Science in Computer Science with specialization in Cybersecurity.

## **E. Conclusion**

In conclusion, it is clear that PSC's proposed Bachelor of Applied Science in Cybersecurity is a very different program than UWF's Bachelor of Science in Computer Science with specialization in Cybersecurity. PSC's proposed program is built on a foundation of worldwide standards in the cybersecurity field, includes more applied cybersecurity coursework than UWF's program, and prepares graduates for the workplace through numerous industry certifications. Students

from PSC's proposed program will be prepared to start immediately in the work place in understanding and identifying the risks, developing security plans, making equipment recommendations, and installing, configuring, and managing that equipment to protect the corporate environment. Additionally, PSC's proposed program likely serves a different student population than UWF's program. The average age of Pensacola State College Associate in Science students is 31, and the average age of students in the Associate of Science in Information Technology Security (Cybersecurity) is 31.



OFFICE OF THE  
BOARD OF GOVERNORS  
STATE UNIVERSITY  
SYSTEM OF FLORIDA

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Office of the Provost  
Vice President for Academic Affairs  
11000 University Parkway  
Pensacola, FL 32514-5750

January 22, 2014

Jan Ignash, Ph.D.  
Vice Chancellor and Chief Academic Officer  
Florida SUS Board of Governors  
State University System  
325 West Gaines Street, Suite 1614  
Tallahassee, FL 32399-0400

Re: Pensacola State College - proposed Cyber Security degree

Dear Dr. Ignash:

I'm glad we had some time last week to discuss UWF's concerns regarding PSC's proposed degree in Cyber Security. The faculties of the two institutions have met to discuss possibilities for collaboration. My reports indicate that there is a lot of duplication between the proposed PSC program and the one we are launching. The group did identify some possible options to give us common ground. Our preference would be a 2+2 program but I do not think PSC is agreeable to that.

Bottom line, the proposed program from Pensacola State College is very applied and more consistent with their Bachelor of Applied Science degree. UWF's will have more theoretical value with advanced programming skills so that students can approach higher level of manipulation in the Cyber Security area (with application developed through internships and other guided experiences). They are very different programs, but the name doesn't distinguish the difference.

If PSC were to change its degree designation to a Bachelor of Applied Science we would withdraw our objection.

Sincerely yours,

Martha D. Saunders, Ph.D.  
Provost and Vice President for Academic Affairs

**Appendix O:**  
**Letter to Dr. Judith Bense, dated**  
**October 26, 2015**





Office of the President

Pensacola State College  
1000 College Boulevard  
Pensacola, FL 32504-8998

850-484-1700  
Fax 850-484-1840

[www.pensacolastate.edu](http://www.pensacolastate.edu)

# PENSACOLA STATE COLLEGE

October 26, 2015

Dr. Judith Bense  
President  
University of West Florida  
11000 University Parkway  
Pensacola, FL 32514

Dear Dr. Bense:

The faculty and staff at Pensacola State College and the University of West Florida have been working together to further our articulation agreements beyond the 2 + 2 AA transfer and the "PSC to UWF" Direct Admit program. Recently, we jointly agreed to our AA degree in Computer Science articulating to the BS degree in computer science at UWF. In exploring possible articulation of our AS degree in Computer Science related fields, we determined that, due to the applied nature of those programs, they are not designed for transfer to the BS degree in Computer Science at UWF.

Pensacola State College plans to offer the BAS degree in Cybersecurity as a 2 + 2 for our students enrolled in the AS degree in Cyber Forensics. When we first presented the baccalaureate plan for UWF comment, it was proposed as a BS degree. UWF objected and stated that if we would change the degree to a BAS, UWF would withdraw its objection. We complied with that request, and the objection was withdrawn.

Due to the moratorium last year on new baccalaureate degrees, our BAS degree proposal was delayed in getting placed on the State Board of Education agenda for consideration. Our proposal is currently being reviewed by Division staff at the Department of Education. The Division staff has asked that we again contact you to determine if there have been any other objections that may have developed over this extended period of time.

In working with the UWF computer science faculty and our industry partners, we have determined that our curriculum is different than the curriculum offered at UWF. PSC's BAS degree in Cybersecurity and UWF's concentration in cybersecurity through its computer science department can meet the current and future workforce needs of this rapidly expanding field in Northwest Florida.

Please let me know if you have any further concerns regarding our BAS degree in Cybersecurity.

Sincerely,

Edward Meadows  
President

c: Dr. Martha Saunders, Provost and Executive Vice President, UWF  
Dr. Erin Spicer, Vice President, Academic Affairs, PSC

## **Appendix P:**

### **SACSOC**

**Letter of Approval for Pensacola State  
College to offer Baccalaureate Degrees**



7/11/10  
26

**SOUTHERN ASSOCIATION OF COLLEGES AND SCHOOLS  
COMMISSION ON COLLEGES**

1866 Southern Lane • Decatur, Georgia 30033-4097

Telephone 404/679-4500 Fax 404/679-4558

www.sacscoc.org

July 8, 2010

Dr. Charles E. Meadows  
President  
Pensacola State College  
1000 College Boulevard  
Pensacola, FL 32504-8998

Dear Dr. Meadows:

The following action regarding your institution was taken at the June 2010 meeting of the Board of Trustees of SACS Commission on Colleges:

The Commission on Colleges awarded membership at Level II to offer the Bachelor of Science in Nursing and the Bachelor of Applied Science in Administration and Supervision, and authorized a Substantive Change Committee to visit the institution to review continued compliance with the *Principles of Accreditation*. Please note that Commission policy states: "An institution may not initiate any expansion of programs at the new degree level until **after** the Commission has taken positive action on its continued accreditation following a Substantive Change Committee visit" ("Substantive Change for Accredited Institutions," p. 9).

The Commission provided the following comments to assist the institution in preparing for the visit of the Substantive Change Committee:

**CR 2.5 (Institutional Effectiveness)**

The institution provided a Strategic Plan; however, the plan included only goals, with neither an explanation as to how the accomplishment of the goals would be measured nor what time frame would be used for the accomplishment of each goal. It is suggested that the institution provide these missing elements.

**CS 3.3.1.1 (Institutional Effectiveness: Educational Programs)**

The institution appears to have developed student learning outcomes for the BAS and BS programs. Some of these outcomes, however, include three or four different skills or competencies. Consequently, measuring the accomplishment of these outcomes will likely be problematic. An outline for developing rubrics for data collection for the new program does appear to be extant. Implementation, however, might prove challenging.

**CS 3.5.4 (Terminal Degrees of Faculty)**

With only one doctorally prepared person in nursing, the institution should pay particular attention to documenting how it will ensure that at least 25 percent of the discipline course hours are taught by faculty members holding the terminal degree.

C: DA Gonzalez  
Debbie Dowma



Dr. Charles E. Meadows  
July 8, 2010  
Page Two

**CS 3.7.1 (Faculty Competence)**

Strengthen the documentation of the qualifications of the BAS and BS faculty members for teaching specific courses. A review of the nursing faculty indicated limited information about courses taken or special expertise that qualifies some of the faculty members to teach such courses as pathophysiology and pharmacology. Eleven faculty members for whom insufficient documentation of qualifications was provided in the application for level change are identified on the "Justifying and Documenting Qualifications of Faculty" form.

We appreciate your continued support of the activities of the Commission on Colleges. If you have questions, please contact the staff member assigned to your institution.

Sincerely,

A handwritten signature in cursive script that reads "Belle S. Wheelan".

Belle S. Wheelan, Ph.D.  
President

BSW:rlb

Enclosure

cc: Dr. Gerald D. Lord



## Justifying and Documenting Qualifications of Faculty

**Institution:** Pensacola State College

Name of Faculty Member	Department and Courses Taught	Not Acceptable	Insufficient Documentation
Linda C. Bloom (FT)	<u>BAS in Administration and Supervision:</u> COM 3120 Organizational Communication FIN 3400 Financial Management MAN 3240 Organizational Behavior URS 3061 Values, Ethics & Conflict Resolution		X
Henry Christen (PT)	<u>BAS in Administration and Supervision:</u> ENT 3004 Entrepreneurship/Small Business Management MAR 3802 Marketing for Managers		X
Yvonne Drake (PT)	<u>BAS in Administration and Supervision:</u> MAR 3802 Marketing Management		X
Linda Weishahn (FT)	<u>BAS in Administration and Supervision:</u> ISM Information Assurance Management		X
Katja Rogers (PT)	<u>BAS in Administration and Supervision:</u> HSC 3500 Epidemiology HSA 3113 Healthcare Trends and Issues HSA 4191 Health Information Systems HSA 4160 Healthcare Marketing HSA 4383 Quality Management in Healthcare		X
Jana Lyner (FT)	<u>BS in Nursing:</u> NUR 31254 Pathophysiology		X
Johnnie Mixon (FT)	<u>BS in Nursing:</u> NUR 4636 Community Health Nursing Theory NUR 4636L Community Health Nursing Practicum		X
Lynette Ruckman (FT)	<u>BS in Nursing:</u> NUR 3145 Pharmacology in Nursing Practice		X
Angela Sanders (FT)	<u>BS in Nursing:</u> NUR 3125 Pathophysiology		X
Suzanna Taylor (FT)	<u>BS in Nursing:</u> NUR 4636 Community Health Nursing Theory		X
Karen Young (FT)	<u>BS in Nursing:</u> NUR 3125 Pathophysiology NUR 3145 Pharmacology in Nursing Practice		X

**Appendix Q:**  
**Common Prerequisite Application**

## Common Prerequisite Application for Unique CIP/Degree Program

Degree Program Name: Cybersecurity CIP Code: 11.1003

Anticipated Degree Total Hours: 120

Are other degree programs under this name currently found in the Common Prerequisite Manual (CPM)? \_\_\_\_\_ Yes  No

If yes, under what CIP code? \_\_\_\_\_ Track \_\_\_\_\_

*If your degree program is the same as above, you should use the **Application to Modify Currently Approved Common Prerequisites**.*

Institution Requesting Program Added: Pensacola State College

Name of Contact Person: Douglas A. Wymer

Email Address: dwymer@pensacolastate.edu Phone Number: 850-484-2020

- Please list your proposed common prerequisites, along with the additional information requested below. You can find details about individual courses at the following hyperlink to the Statewide Course Numbering System ([SCNS](#)). Type in the prefix and four digit number of the proposed course and select the Search button. The resulting hyperlink of the course number leads to a page with two tabs: statewide course detail and institutions. Clicking on the institutions tab will identify the institutions offering the course. Please add rows to the table as appropriate.

Proposed Course Prefix and Number	Title of Proposed Course	# Credit Hours	Will count as general ed at your institution?	# FCS Currently Offering Course	# SUS Currently Offering Course	# Private Institutions offering course in FL	Additional recommended alternative courses to primary
CGS1061C	Intro to computers in Technology	3	NO	2	0	1	CGS1570
CET2890C	Network Defense and Countermeasures	3	NO	3	0	0	
CET2614C	Cisco CCNA Security	3	NO	2	0	0	
CTS2120C	Security+	3	NO	16	0	0	
CTS2106C	Linux+	3	NO	12	0	2	
CTS2125C	Hardening the Network Infrastructure	3	NO	1	0	0	
CTS2318	Information Security Management	3	NO	1	0	0	

2. Is the credit hour total for required prerequisite coursework more than 24 credit hours?  
 a. Yes \_\_\_\_\_ b. No X

If yes, how do you anticipate students meeting the general education requirement?

- a. \_\_\_\_\_ Course(s) are anticipated to be “core” general education  
 b. \_\_\_\_\_ Course(s) are anticipated to be part of most institutions’ general education program  
 c. \_\_\_\_\_ Other (please specify):

3. If your request includes course(s) that are offered currently at three or fewer FCS institutions, please provide a justification as to why these courses are critical for a student’s success in your upper division.

Five of the seven courses meet this criterion (CGS1061C, CET2890C, CET2614C, CTS2125C, and CTS2318). These courses are critical to student success in the upper level Cybersecurity courses because students must possess the necessary skills and knowledge to take on advanced and greater technical concepts and functions. These classes provide the building blocks (as indicated below) for which students will be required to draw upon in the upper division classes.

Course	Foundational knowledge for Cybersecurity BAS degree
CGS1061C Intro to Computers in Technology	Students must thoroughly understand the hardware, operating systems architecture, principles of applications design and use, and how these interact with outside resources such as Intranets, Extranets, and the Internet. This course provides an in depth view of the various applications in use and the knowledge gained will be tested and used again in future classes regarding vulnerabilities and mismanagement.



Course	Foundational knowledge for Cybersecurity BAS degree
CET2890C Network Defense and Countermeasures	This course provides the student with an in depth view of networking, the threats that are posed by existing and potential threats of zero day attacks. Mitigating procedures are provided for various threat scenarios and persistent threat attacks analyzing the methods and impacts to private, SOHO, and corporate networks. These concepts coupled with the Hardening the Network Infrastructure and Information Security Management allows the student a broad perspective of the operating environment and its associated risks, which are consistently reviewed and repeated throughout the bachelor degree.
CET2614C Cisco CCNA Security	Cisco holds over 90 percent of the market share in networking hardware. This course incorporates concepts previously learned and combines complex labs with security principles to configure network hardware using routers, switches, and security appliances for intrusion detection and prevention, firewall configurations, and DMZ development. Security policy and procedures are reinforced throughout the course.
CTS2125C Hardening the Network Infrastructure	Students must thoroughly understand the architecture and devices available to protect internal resources from both internal and external threats. This course addresses the various options for the current threats on the Internet, how to implement various defense, and in-depth options to defend against persistent threats. This course and its concepts carry into the bachelor degree and this content is further inspected in subsequent courses.

Course	Foundational knowledge for Cybersecurity BAS degree
CTS2318 Information Security Management	Possessing knowledge and skills to defend a network, computer systems, and data is not enough. Students must understand, develop policies and procedures, and employ information management principles to sustain defenses and operations. Concepts of this course are reinforced throughout the bachelor degree.

4. If your request includes courses that are offered currently at only your institution, do you have enough elective credit hour space in your upper division curriculum so that the associate in arts transfer student can complete the courses and still be held harmless in excess hours and time?
- a. Yes X b. No \_\_\_\_\_

The preferred academic pathway into the Bachelor of Applied Science in Cybersecurity at Pensacola State College is the Information Technology Security (Cybersecurity) AS degree, which includes all coursework on this list. A student entering this program from the preferred pathway will have additional general education requirements to meet for the BAS degree. A student entering from an AA degree will have the general education requirements met, and will have ample room in the program to complete any prerequisite courses as necessary.

5. If your request includes courses that are offered only at your institution, are you willing and able to offer these courses online or during the summer so that transfer students can complete the courses without delaying admission for the fall?
- a. Yes X b. No \_\_\_\_\_

**Appendix R:**  
**Letters of Support**

September 4, 2015

Ms. Madeline M. Pumariega, Chancellor  
Florida College System  
325 West Gaines Street, Room 1544  
Tallahassee, Florida 32399-0400

Dear Chancellor Pumariega,

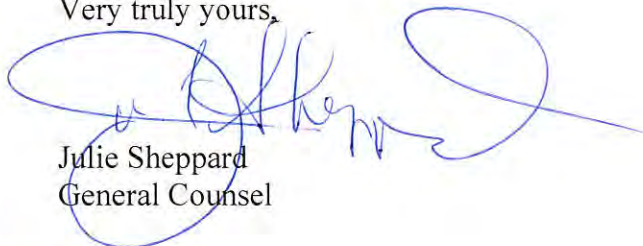
Please accept this letter in support of the proposal by Pensacola State College to offer a Bachelor of Applied Science in Cybersecurity. IHMC is a not-for-profit research institute of the Florida University System and is located in Pensacola Florida. Current active research areas at IHMC include: artificial intelligence, cognitive science, knowledge modeling and sharing, adjustable autonomy, robotics and exoskeletons, advanced interfaces and displays, cyber security, communication and collaboration, linguistics, computer-mediated learning systems, intelligent data understanding, software agents, expertise studies, work practice simulation, knowledge representation, big data and machine learning, and other related areas.

As both an organization that strives to hire locally and desires to see career and employment choices for our area youth, please know that the greater Pensacola area has need for both this degree program and these graduates. IHMC currently has numerous research projects in the cyber security arena and would be in a position to offer internships and jobs.

It is our understanding that Pensacola State College is proposing a workforce-oriented degree with industry-requested certifications for its graduates. IHMC would be delighted to include these future PSC graduates in our employment pool.

Please feel free to contact me if I can be of further assistance at [jsheppard@ihmc.us](mailto:jsheppard@ihmc.us) or by phone at 850.202.4435.

Very truly yours,



Julie Sheppard  
General Counsel



FLORIDA INSTITUTE FOR HUMAN & MACHINE COGNITION

PENSACOLA

OCALA

40 South Alcaniz St. • Pensacola, FL 32502

15 SE Osceola Ave • Ocala, FL 34471

850.202.4462

352.387.3050

[www.ihmc.us](http://www.ihmc.us)

# KINETIC STRATEGIES

6901-A N. 9<sup>TH</sup> AVENUE, PENSACOLA, FL 32504  
888-503-0668

Ms. Madeline M. Pumariega, Chancellor

Florida College System

325 West Gaines Street, Room 1544

Tallahassee, Florida 32399-0400

Dear Chancellor Pumariega,

Kinetic Strategies fully supports the proposal by Pensacola State College to offer a Bachelor of Applied Science in Cybersecurity.

Our community has a need for such graduates. Indications of this need include a Job Fair held in June of this year by Homeland Security. Along with the federal need for such graduates, numerous private and public agencies in our area seek skilled graduates in this field.

Pensacola State College is proposing a workforce-oriented degree that will prepare students to graduate with several of the industry-requested certifications in hand.

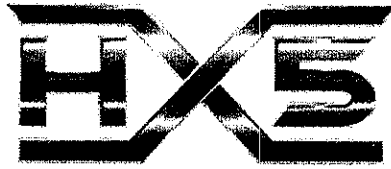
Kinetic Strategies would welcome the addition of certified skilled, hands-on ready graduates to our candidate pool.

Thank you for your consideration.

Sincerely,



Chuck Hodge  
CEO  
Kinetic Strategies



*8(a), Service Disabled Veteran, Woman Owned Small Business*

***Providing Research and Development, Engineering, and Technical Services to the U.S. Government***

September 4, 2015

Ms. Madeline M. Pumariega, Chancellor  
Florida College System  
325 West Gaines Street, Room 1544  
Tallahassee, Florida 32399-0400

Dear Chancellor Pumariega,

HX5, LLC fully supports the proposal by Pensacola State College to offer a Bachelor of Applied Science in Cybersecurity.

Our community has a need for such graduates. Indications of this need include a Job Fair held in June of this year by Homeland Security. Along with the federal need for such graduates, numerous private and public agencies in our area seek skilled graduates in this field.

Pensacola State College is proposing a workforce-oriented degree that will prepare students to graduate with several of the industry-requested certifications in hand.

HX5, LLC would welcome the addition of certified skilled, hands-on ready graduates to our candidate pool.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink that reads "Regenta Gray". The signature is written in a cursive style with a large, looping initial 'R'.

Regenta Gray  
Human Resources Manager

212 Eglin Parkway, S.E.  
Fort Walton Beach, FL 32548  
850-362-6551  
[www.hxfive.com](http://www.hxfive.com)



H2 Performance Consulting Corporation  
4400 Bayou Blvd, Suite 5B  
Pensacola, FL 32503  
Phone: 850. 474.0844

September 10, 2015

Ms. Madeline M. Pumariega, Chancellor  
Florida College System  
325 West Gaines Street, Room 1544  
Tallahassee, Florida 32399-0400

Dear Chancellor Pumariega,

H2 Performance Consulting fully supports the proposal by Pensacola State College to offer a Bachelor of Applied Science in Cybersecurity. Our community has a need for such graduates. Indications of this need include a Job Fair held in June of this year by Homeland Security. Along with the federal need for such graduates, numerous private and public agencies in our area seek skilled graduates in this field.

Pensacola State College is proposing a workforce-oriented degree that will prepare students to graduate with several of the industry-requested certifications in hand.

H2 Performance Consulting would welcome the addition of certified skilled, hands-on ready graduates to our candidate pool.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Holly Smith", is written over a light blue circular stamp.

Holly Smith  
President

September 11, 2015

Ms. Madeline M. Pumariega, Chancellor  
Florida College System  
325 West Gaines Street, Room 1544  
Tallahassee, Florida 32399-0400

Dear Chancellor Pumariega,

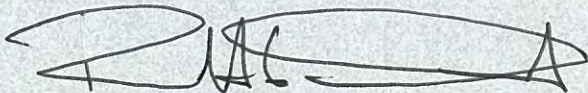
Technical Software Services, Inc. (TECHSOFT) fully supports the proposal by Pensacola State College to offer a Bachelor of Applied Science in Cybersecurity. Our community has a need for such graduates. Indications of this need include a Job Fair held in June of this year by Homeland Security. Along with the federal need for such graduates, numerous private and public agencies in our area seek skilled graduates in this field.

Pensacola State College is proposing a workforce-oriented degree that will prepare students to graduate with several of the industry-requested certifications in hand.

Technical Software Services, Inc. (TECHSOFT) would welcome the addition of certified skilled, hands-on ready graduates to our candidate pool.

Thank you for your consideration.

Sincerely,



Robert G. David  
President  
TECHSOFT, Inc.





Ms. Madeline M. Pumariega, Chancellor

Florida College System

325 West Gaines Street, Room 1544

Tallahassee, Florida 32399-0400

Dear Chancellor Pumariega,

Pen Air Federal Credit Union fully supports the proposal by Pensacola State College to offer a Bachelor of Applied Science in Cybersecurity.

Our community has a need for such graduates. Indications of this need include a Job Fair held in June of this year by Homeland Security. Along with the federal need for such graduates, numerous private and public agencies in our area seek skilled graduates in this field.

Pensacola State College is proposing a workforce-oriented degree that will prepare students to graduate with several of the industry-requested certifications in hand.

Pen Air Federal Credit Union would welcome the addition of certified skilled, hands-on ready graduates to our candidate pool.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink that reads "Shirley S. Harris".

Shirley S. Harris

Vice President of Accounting and Finance  
Pen Air Federal Credit Union



September 14, 2015

**Scott Ginnetti**  
Board Chairman

**Susan Nelms**  
Executive Director

Ms. Madeline M. Pumariega, Chancellor  
Florida College System  
325 West Gaines Street, Room 1544  
Tallahassee, FL 32399-0400

Dear Chancellor Pumariega:

CareerSource Escarosa (Escarosa) fully supports the proposal by Pensacola State College to offer a Bachelor of Applied Science in Cybersecurity.

Our community has a need for such graduates. Indications of this need include a Job Fair held in June of this year by the Department of Homeland Security. Along with the federal need for such graduates, numerous private and public agencies in our area seek skilled graduates in this field.

Pensacola State College is proposing a workforce-oriented degree that will prepare students to graduate with several of the industry-requested certifications in hand.

Escarosa would welcome the addition of certified skilled, hands-on ready graduates to our candidate pool.

Thank you for your consideration.

Sincerely,

A handwritten signature in blue ink, appearing to read "Susan Nelms", is written over a light blue horizontal line.

Susan Nelms  
Executive Director

A decorative graphic consisting of several overlapping triangles in shades of green, blue, orange, and red, located in the bottom left corner of the page.

[www.careersourceescarosa.com](http://www.careersourceescarosa.com)  
3670- 2A North L Street  
Pensacola, FL 32505  
p: 850.473.0939 | f: 850.473.0935



economic  
development  
alliance

September 15, 2015

Ms. Madeline M. Pumariega, Chancellor  
Florida College System  
325 West Gaines Street, Room 1544  
Tallahassee, Florida 32399-0400

Dear Chancellor Pumariega,

The FloridaWest Economic Development Alliance fully supports the proposal by Pensacola State College to offer a Bachelor of Applied Science in Cybersecurity.

We have recognized that our community has a need for such graduates. Indications of this need include a Job Fair held in June of this year by the Department of Homeland Security, who has plans to host another job fair in the near future. Along with the federal need for such graduates, numerous private and public agencies in our area seek skilled graduates in this field.

Pensacola State College is proposing a workforce-oriented degree that will prepare students to graduate with several of the industry-requested certifications in hand.

FloridaWest would welcome the addition of certified skilled, hands-on ready graduates to our candidate pool.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott Luth", is written over a white rectangular area.

Scott Luth  
CEO  
FloridaWest Economic Development Alliance

T: 850.898.2201  
Info@floridawesteda.com  
floridawesteda.com

117 West Garden Street  
Pensacola, Florida 32502



September 16, 2015

Ms. Madeline M. Pumariega, Chancellor  
Florida College System  
325 West Gaines Street, Room 1544  
Tallahassee, Florida 32399-0400

Dear Chancellor Pumariega,

Santa Rosa County Economic Development fully supports the proposal by Pensacola State College to offer a Bachelor of Applied Science in Cybersecurity.

Our community has a need for such graduates. Indications of this need include a Job Fair held in June of this year by Homeland Security. Along with the federal need for such graduates, numerous private and public agencies in our area seek skilled graduates in this field.

Pensacola State College is proposing a workforce-oriented degree that will prepare students to graduate with several of the industry-requested certifications in hand.

The Santa Rosa Economic Development Office would welcome the addition of certified skilled, hands-on ready graduates to our candidate pool.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink that reads "Shannon Ogletree".

Shannon Ogletree, CEEdC  
Director

**Sheriff**



**WENDELL HALL**

---

---

**SANTA ROSA COUNTY SHERIFF'S OFFICE**

P. O. BOX 7129

MILTON, FLORIDA 32572

PHONE (850) 983-1216

FAX (850) 983-1129

E-mail: [whall@srso.net](mailto:whall@srso.net)

September 14, 2015

**Ms. Madeline M. Pumariega, Chancellor**  
**Florida College System**  
325 West Gaines Street, Room 1544  
Tallahassee, Florida 32399-0400

Dear Chancellor Pumariega:

The Santa Rosa County Sheriff's Office fully supports the proposal by Pensacola State College to offer a Bachelor of Applied Science in Cybersecurity. Our community has a need for such graduates. Indications of this need include a Job Fair held in June of this year by Homeland Security. Along with the federal need for such graduates, numerous private and public agencies in our area seek skilled graduates in this field.

Pensacola State College is proposing a workforce-oriented degree that will prepare students to graduate with several of the industry-requested certifications in hand. Our agency would welcome the addition of certified skilled, hands-on ready graduates to our candidate pool.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Wendell Hall".

**Wendell Hall**  
Sheriff

One Energy Place  
Pensacola, FL 32520-0850  
850.444.6821



September 16, 2015

Ms. Madeline M. Pumariega, Chancellor  
Florida College System  
325 West Gaines Street, Room 1544  
Tallahassee, Florida 32399-0400

Dear Chancellor Pumariega,

I am pleased to write this letter in support of the proposal by Pensacola State College to offer a Bachelor of Applied Science in Cybersecurity. Gulf Power, a regional electric utility serving Northwest Florida, has long been a partner with Pensacola State College and a key stakeholder in economic and workforce development in the region. Our community has a growing need for graduates in the cybersecurity field. This has recently been demonstrated through a workforce supply and demand study commissioned by the Greater Pensacola Chamber and FloridaWest (the economic development agency) and through recent job fairs held by Department of Homeland Security. The Pensacola area is becoming a hub for cyber, and we need to greatly increase the pipeline of talent prepared for this industry.

We applaud Pensacola State College's effort to create a workforce-oriented degree in cybersecurity that will contribute to the workforce demand in this growing industry and prepare students for these wonderful career opportunities.

Please give this application strong consideration and know that we at Gulf Power stand ready to assist with implementation should the degree program be approved.

Sincerely,

A handwritten signature in black ink that reads "Jennifer Grove". The signature is written in a cursive, flowing style.

Jennifer Grove  
Community Development Manager  
Gulf Power Company



September 16, 2015

Ms. Madeline M. Pumariega, Chancellor  
Florida College System  
325 West Gaines Street, Room 1544  
Tallahassee, Florida 32399-0400

Dear Chancellor Pumariega,

West Florida Hospital fully supports the proposal by Pensacola State College to offer a Bachelor of Applied Science in Cybersecurity. Our community has a need for such graduates. Indications of this need include a Job Fair held in June of this year by Homeland Security. Along with the federal need for such graduates, numerous private and public agencies in our area seek skilled graduates in this field.

Pensacola State College is proposing a workforce-oriented degree that will prepare students to graduate with several of the industry-requested certifications in hand. West Florida Hospital would welcome the addition of certified skilled, hands-on ready graduates to our candidate pool. Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read 'B. Baumgardner'.

Brian P. Baumgardner  
President & Chief Executive Officer

BP:em

West Florida  
HOSPITAL

West Florida  
REHABILITATION  
INSTITUTE

West Florida  
PAVILION



September 18, 2015

Ms. Madeline M. Pumariega, Chancellor  
Florida College System  
325 West Gaines Street, Room 1544  
Tallahassee, Florida 32399-0400

Dear Chancellor Pumariega,

Please count AppRiver, LLC as an enthusiastic supporter of the proposal by Pensacola State College to offer a Bachelor of Applied Science in Cybersecurity. Our company was a pioneer in cloud-based email and Web security, so we understand the significant need for trained professionals to help protect the networks of businesses and governments. We also appreciate the intense effort necessary to educate them.

Our community is a natural host for this type of program, given the presence of the military, the Department of Homeland Security and numerous private and public agencies in our area seek skilled graduates in this field.

Pensacola State College is proposing a workforce-oriented degree that will prepare students to graduate with several of the industry-requested certifications in hand. We have worked with the College on several occasions and we have a great deal of respect for the quality of their instructors and curriculum.

AppRiver would welcome the presence of more trained cybersecurity professionals to help support the growth we expect in the years to come. Florida will welcome the high-paying jobs this growth will generate.

Sincerely,

Scott Cutler  
Chief Operating Officer