Technology Development and Management - BAS

Enhanced Comprehensive Academic Program Review 2018-19

Bachelor of Applied Science Degree:
Technology Development and Management

Academic Effectiveness and Assessment
St. Petersburg College

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Enhanced Comprehensive Academic Program Review Produced by

Technology Development and Management – BAS Program

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Executive Summary

Introduction

The program review process at St. Petersburg College (SPC) is a collaborative effort designed to continuously measure and improve the quality of educational services provided to the community.

Program Description

SPC's Technology Development and Management bachelor's degree gives students a solid credential in the evolving field of technology management. Student will receive a balance of technology and management education to make then a front-runner in today's competitive environment. Through state-of-the-art delivery systems, SPC helps students achieve their goals as a manager, improve productivity in their organization or become a strong and effective leader. As part of the program, students have a choice of learning environments between fully online or blended courses (which consists of a combination of online and classroom settings). Students will also be exposed to the most current technology and learning tools.

Degree Offered

A Bachelor of Applied Science Degree in Technology Development and Management is offered at SPC.

Program Performance

- *Actual Course Enrollment* increased in 2017 (2,022) from the previous year (1,980).
- *Unduplicated Headcount* decreased in 2017 (976) from the previous year (977).
- *SSH Enrollment* increased in 2017 (6,066) from the previous year (5,940).
- Comparisons between the Fall semesters indicated that the *Percent Full Metric* increased in Fall 2018 (85.1%) from Fall 2017 (82.2%).
- The *course success rate* increased in 2017 (89.0%) from the previous year (86.9%).
- *Grade Distribution* indicated that the majority of the students (86.8%) received an 'A', 'B' or 'C' during 2017.
- An *Industry Certification* or equivalent state or national exam has not been identified for the College of Computer and Information Technology: Technology Management, BAS program for evidence of certification attainment at the baccalaureate level.
- *Internship Enrollment* increased for ISM4915 between Fall 2017 (62), Spring 2018 (68) and Fall 2018 (70) and for CTS2940 between Summer 2018 (1) and Fall 2018 (2). *Internship Enrollment* decreased for COP2940 between Fall 2017 (3) and Summer 2018 (1). *Internship Enrollment* remained the same for CIS2940 in Fall 2017 and Spring 2018 (2) and for CNT2940 in Fall 2017, Spring 2018 and Summer 2018 (1). There were no comparison data for CGS2940.
- *Program Plans Taken by Plan* revealed that more than half of the students who were enrolled in the program during fall 2016, and had not graduated, remained in the program by fall 2017. By fall 2018, one-quarter of the original (fall 2016)

TMGT-BAS students remained in the program. This measure does not display the number of students who graduated during any given term.

- The number of *program graduates* in the Technology Development and Management - BAS program increased in 2017 (129) from the previous year (93).
- *Fulltime Faculty* taught 79.3% of the ECHs in 2017-18 as compared to 73.2% in 2016-17. Adjunct Faculty taught 20.7% of the ECHs in 2017-18 as compared to 26.8% in 2016-17.
- The highest semester for Adjunct ECHs was Fall 2015-16 in which adjunct faculty taught 35.9% of the program's course load. The three-semester average for adjuncts (20.7%) is consistent with the College's general 55/45 Fulltime/Adjunct Faculty Ratio guideline.

Occupation Profile

- Eight *occupation descriptions,* Computer and information systems managers; Computer systems analysts; Information security analysts; Network and computer systems administrators; Computer programmers; Industrial production managers; Software developers, applications; and Software developers, system software were located in the Florida Department of Economic Opportunity (DEO) website for the Technology Development and Management – BAS program.
- The *2017 median hourly earnings* for Computer and information systems managers was $62.89 in Florida and $65.45 in Pinellas County. The *2017 median hourly earnings* for Computer systems analysts was $39.24 in Florida and $41.57 in Pinellas County. The *2017 median hourly earnings* for Information security analysts was $39.72 in Florida and $41.35 in Pinellas County. The *2017 median hourly earnings* for Network and computer systems administrators was $37.87 in Florida and $37.67 in Pinellas County. The *2017 median hourly earnings* for Computer programmers was $34.79 in Florida and $37.78 in Pinellas County. The *2017 median hourly earnings* for Industrial production managers was $42.29 in Florida and $46.37 in Pinellas County. The *2017 median hourly earnings* for Software developers, applications was $41.79 in Florida and $42.98 in Pinellas County. The *2017 median hourly earnings* for Software developers, system software was $47.22 in Florida and $44.64 in Pinellas County.
- *Employment trend information* for Computer and information systems managers showed an average annual increase (18.1% - 20.2%) for the period between 2017 and 2025 across the state and county. *Employment trend information* for Computer systems analysts showed an average annual increase (21.6% - 25.0%) for the period between 2017 and 2025 across the state and county. *Employment trend information* for Information security analysts showed an average annual increase (19.9% - 20.0%) for the period between 2017 and 2025 across the state and county. *Employment trend information* for Network and computer systems administrators showed an average annual increase (11.4% - 11.7%) for the period between 2017 and 2025 across the state and county. *Employment trend information* for Computer programmers showed an average annual decrease (-1.1% - -2.1%) for the period between 2017 and 2025 across the state and county. *Employment trend information* for Industrial production managers showed an average annual increase (4.5% - 6.2%) for the period between 2017 and 2025 across the state and county. *Employment trend information* for Software

developers, applications showed an average annual increase (17.1% - 19.4%) for the period between 2017 and 2025 across the state and county. *Employment trend information* for Software developers, system software showed an average annual increase (14.9% - 16.1%) for the period between 2017 and 2025 across the state and county.

- The *major employers* of the Technology Development and Management – BAS graduates are the Florida Department of Health - Hillsborough County, Tech Data, Raymond James, Charter Communications, Nielsen Media, and the City of St. Petersburg.
- *Total Placement* in the Technology Development and Management – BAS program increased in 2016-17 (76%) from the previous year (70%).

Academics

- The *2015-16 Academic Program Assessment Report* indicated that the desired results were met for all three Program Learning Outcomes (PLOs) assessed in the Technology Development and Management – BAS Program.

- The *2015-16 Academic Program Assessment Follow-Up Report* was completed in July 2017. The lone action item was completed, and the results published in the 2015-16 follow-up report. The next assessment report is scheduled to be completed during the 2018-19 academic year.

Stakeholder Perceptions

- All the individual average content area scores for the *Student Survey of Instruction (SSI)* were above the traditional threshold (an average of 5.0) used by the College for evaluating seven-point satisfaction scales. These results suggest general overall satisfaction with the courses within the Technology Development and Management – BAS program; specifically, as they relate to faculty engagement, preparation and organization, and course instruction.

- Seventy-seven *Recent Alumni surveys* were provided to the 2016-17 graduates of the College of Computer and Information Technology: Technology Development, B.A.S. program. Seventeen percent of the graduates responded to the survey (13 of the 77). Not all respondents answer every survey question; therefore, the percentages listed below represent the responses to each survey question in relation to the total number of responses received for each question.
  Notable results include:
  - 25.0% of recent graduate survey respondents indicated their main goal in completing a degree or certificate at SPC was to "Change career fields"; 25.0% selected "Earn more money"; another 25.0% selected "Continue my education"; 8.3% stated "Get a promotion"; another 8.3% stated "Obtain employment"; while the remaining 8.3% selected "Other".
  - 25.0% of recent graduate survey respondents indicated that SPC did "Exceptionally well" in helping them meet their goal; 41.7% selected "Very well"; while the remaining 33.3% stated "Adequately".

- 100.0% of recent graduate survey respondents would recommend SPC's Technology Development and Management - BAS program to another.

- One *Employer survey* was sent out to an employer based on the permission provided by recent graduates in the 2016-17 recent graduate survey. One survey respondent provided an evaluation of the graduates' college preparation. Since a single response cannot accurately represent the entire program, employer survey results about college preparation will not be reported.

Dean's Perspective: Issues, Trends, and Recent Successes

The College of Computer and Information Technology (CCIT) offers a Bachelors in Applied Science (BAS) program in Technology Development and Management. The program is offered with four sub plans. These are Cybersecurity, Software Development, Data Science, and Project Management. Project Management is offered through a collaboration with the College of Business. Cybersecurity remains the most popular sub plan with an average of 44% of BAS students selecting that sub plan.

Enrollment growth has been steady in the program. Growth has slowed in recent years. This is to be expected as the program matures and the economy remains strong. Enrollment growth has averaged 5.5% over the past two years and unduplicated headcount has remained virtually the same over this time. The program graduated 129 students in 2017 which represented a 38% increase over the prior year.

The employment market for technical positions remains strong. There are 3.7 million technology job postings currently in the U.S. and 159,000 in Florida according to CyberStates. Job growth in the technology sector is expected to grow by 22% through 2020 according to the Bureau of Labor Statistics (BLS). Linkedin reports that there are 2000+ jobs openings posted in the Tampa Bay area. The market for cyber security positions is especially strong. The U.S. Department of Labor designates Florida as the fourth-largest cyber employment market behind only California, Virginia, and Texas ("CareerOneStop," 2015) and projects a 28% increase in employment of information security analysts through 2026 ("Occupational Outlook Handbook," 2018). A Florida Center for Cybersecurity report states: "Even when compared with other high-demand IT jobs, demand for cybersecurity jobs (in Tampa Bay) is growing more than three times faster. Business leaders say they can't hire skilled cybersecurity workers fast enough." (State University System, 2013).

Several developments with the BAS program are:

- CCIT has incorporated the Information Technology Infrastructure Library (ITIL) certification into the program. Sufficient funding was provided to enable 10 students to sit for future certification exams. This will be the first industry certification to be officially offered through the program.

- Through a grant from JP Morgan Chase & Company, CCIT offered Techcamp through the New Skills at Work Program. This bootcamp style program focused on the skills identified by employers as critical for success on the job. Interestingly, employers consistently mention "soft skills" as requirements for positions in

technology. This program helps develop these skills. Companies that participated included Tampa Bay Tech, PSCU, Melitta USA, JPMorgan Chase, ValPak, Arbitration Forum, Bealls, Raymond James, Nextech, Tribridge, and Tech Data. Eight percent of the students who participated were placed in either internships or career positions.

- CCIT continues to oversee the Florida Apprenticeships in the 21st Century grant. This program has focused on developing a model for apprenticeships that will reduce the risk of hiring new employees by creating a path to full employment that includes appropriate training.

- The CCIT Capstone course was modified to require students to arrange to interview two senior, information technology professionals. Students must identify a senior technology professional, schedule and conduct an interview. They are then required to interview a second individual that reports to the senior employee. This change encourages students to become more familiar with the local job market and employees. It also provides an opportunity for students to practice interview skills that are essential when seeking employment.

- CCIT has entered into several partnerships that will provide curriculum materials and training opportunities for students. CCIT has joined the Palo Alto Cybersecurity Academy. Through this program CCIT will gain access to Palo Alto course materials as well as pre-packaged labs that will run on the department's Netlab server. CCIT has also begun the process of joining the Amazon Web Services (AWS) Academy program. This program will also provide course material and lab exercise that will help prepare students for future employment in the growing cloud computing space.

- CCIT BAS Faculty sponsored a research project through the Bridge to Baccalaureate program. This project will enable CCIT to sponsor a cybersecurity capture-the-flag competition. This project was accepted for presentation at a national conference in the year ahead.

- CCIT continues to sponsor the Tech Community and has organized events that have enabled students to interact with area employers. CCIT has also created a community hub within the learning management system that serves as a resource for faculty.

- CCIT has been awarded a grant from the Department of Education to develop new cyber programming. The grant award was for $84,540 and will fund the development of nine new courses. CCIT will first offer a new sub plan and will be making a proposal to the state to offer a new BAS program in Cyber Security within the next two years.

Recommendations/Action Plan

Program Recommendations and action plans are compiled by the Dean and Program Administrators, and are located at the end of the document.

SPC Mission Statement

The mission of St. Petersburg College is to promote student success and enrich our communities through education, career development and self-discovery. St. Petersburg College fulfills its mission led by an outstanding, diverse faculty and staff and enhanced by advanced technologies, distance learning, international education opportunities, innovative teaching techniques, comprehensive library and other information resources, continuous institutional self-evaluation, a climate for student success, and an enduring commitment to excellence.

Introduction

In a holistic approach, the effectiveness of any educational institution is the aggregate value of the education it provides to the community it serves. For over eighty-five years, St. Petersburg College (SPC) has provided a wide range of educational opportunities and services to a demographically diverse student body producing tens of thousands of alumni who have been on the forefront of building this county, state, and beyond. This is due, in large part, to the College's institutional effectiveness.

Institutional Effectiveness

Institutional Effectiveness is the integrated, systematic, explicit, and documented process of measuring performance against the SPC mission for the purposes of continuous improvement of academic programs, administrative services, and educational support services offered by the College.

Operationally, the institutional effectiveness process ensures that the stated purposes of the College are accomplished. In other words did the institution successfully execute its mission, goals, and objectives? At SPC, the Department of Academic Effectiveness works with all departments and units to establish measurable statements of intent that are used to analyze effectiveness and to guide continuous quality improvement efforts. Each of St. Petersburg College's units is required to participate in the institutional effectiveness process.

The bottom-line from SPC's institutional effectiveness process is improvement. Once SPC has identified what it is going to do then it acts through the process of teaching, researching, and managing to accomplish

its desired outcomes. The level of success of SPC's actions is then evaluated. A straightforward assessment process requires a realistic consideration of the intended outcomes that the institution has set and a frank evaluation of the evidence that the institution is achieving that intent.

There is no single right or best way to measure success, improvement, or quality. Nevertheless, objectives must be established, data related to those objectives must be collected and analyzed, and the results of those findings must be used to improve the institution in the future. The educational assessment is a critical component of St. Petersburg College's institutional effectiveness process.

Educational Assessment

Educational programs use a variety of assessment methods to improve their effectiveness. Assessment and evaluation measures are used at various levels throughout the institution to provide provosts, deans, program managers, and faculty vital information on how successful our efforts have been.

While the focus of a particular educational assessment area may change, the assessment strategies remain consistent and integrated to the fullest extent possible. The focus of Associate in Arts degrees is students continuing on to four-year degree programs. The Associate in Science programs are targeted towards students seeking employable skills, which does not require but may include continuing on to a four-year program. The General Education based assessments focus on the general learning outcomes from all degree programs, while Program Review looks at the viability of the specific programs.

The individual reports unique by their individual nature are nevertheless written to address how the assessments and their associated action plans have improved learning in their program. The College has developed an Educational Assessment Website http://web.spcollege.edu/edoutcomes/ to serve as repository for all SPC's educational outcomes reports and to systematically manage our assessment efforts.

Program Review Process

The program review process at St. Petersburg College is a collaborative effort to continuously measure and improve the quality of educational services provided to the community. The procedures described below go far beyond the "periodic review of existing programs" required by the Florida College System, and exceed the necessary guidelines within the Southern Association of Community Colleges and Schools Commission on Colleges (SACSCOC) review procedures.

State guidelines require institutions to conduct program reviews every seven years as mandated in chapter 1001.03(13) of the Florida Statutes, the State Board of Education (formerly the Florida Board of Education) must provide for the review of all academic programs.

> *(13) …CYCLIC REVIEW OF POSTSECONDARY ACADEMIC PROGRAMS.--The State Board of Education shall provide for the cyclic review of all academic programs in Florida College System institutions at least every 7 years. Program reviews shall document how individual academic programs are achieving stated student learning and program objectives within the context of the institution's mission. The results of the program reviews shall inform strategic planning, program development, and budgeting decisions at the institutional level.*

In addition, Rule 6A-14.060 (5) states that each community college shall:

> *(5) …Develop a comprehensive, long-range program plan, including program and service priorities. Statements of expected outcomes shall be published, and facilities shall be used efficiently to achieve such outcomes. Periodic evaluations of programs and services shall use placement and follow-up data, shall determine whether expected outcomes are achieved, and shall be the basis for necessary improvements.*

The recommended program review timeline at SPC is four years and is aligned with the long-standing three-year academic program assessment cycle, producing a coherent and integrated review process. Figure 1

represents the relationship between program assessment, program review, and the viability report processes that comprise the academic program assessment cycle.

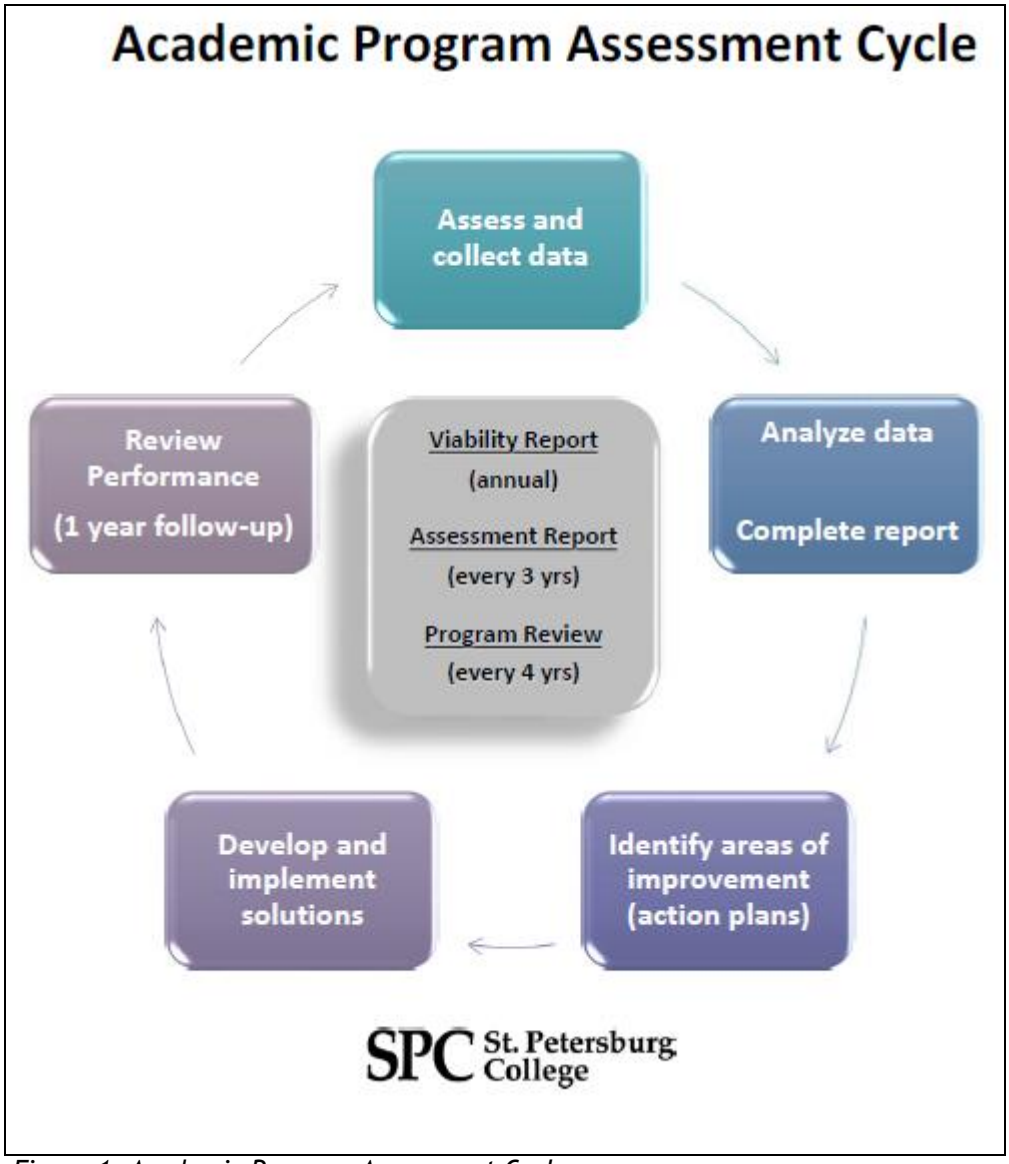


Figure 1: Academic Program Assessment Cycle

Program Description

SPC's Technology Development and Management bachelor's degree gives students a solid credential in the evolving field of technology management. Student will receive a balance of technology and management education to make then a front-runner in today's competitive environment. Through state-of-the-art delivery systems, SPC helps students achieve their goals as a manager, improve productivity in their organization or become a strong and effective leader. As part of the program, students have a choice of learning environments between fully online or blended courses (which consists of a combination of online and classroom settings). Students will also be exposed to the most current technology and learning tools.

Degree Offered

A Bachelor of Applied Science Degree in Technology Development and Management is offered at SPC.

For a complete listing of all courses within the Technology Development and Management Program, please see Appendix A.

Accreditation

There is no accreditation information on file for the Technology Development and Management – BAS program.

Program Learning Outcomes

1. Recommend contemporary technology resources that promote effective company management.
2. Using industry standard frameworks, evaluate technical problems and plans to identify solutions that enhance the profitability of an organization.
3. Develop value-added information technology projects that improve strategic processes across an organization.

Measure Descriptions

The CAPR reports include twenty-two measures designed to provide an overview of all the various elements pertaining to the program. The source of the information for nine of the first ten measures is the Program Review CAPR Dashboard in the SPC Pulse/Business Intelligence system. Sources for the remaining measures can be found within their measure description. Measures obtained from SPC Pulse/Business Intelligence were extracted in fall 2018. Each measure is described in detail below.

Measure #1: *Actual Course Enrollment (Enrollment Count)*

Actual Course Enrollment is the sum of actual student enrollment for the courses within the specified Academic Organization during the selected academic years. This number is a duplicated headcount of students enrolled in the program's courses, and does not reflect the actual number of students enrolled in the program or its associated certificates (if applicable). The filters for the Actual Course Enrollment measure are as follows:

- **Academic Year - Term Desc - Multi:** 2014, 2015, 2016, 2017
- **Academic Plan - Multi:** Undergraduate
- **College - Group - Acad Org - Subject:** Academic Organization
- **All other filters:** All

Measure #2: *Unduplicated Headcount*

Unduplicated Headcount is the total number of unduplicated students enrolled in courses within the specified Academic Organization during the selected academic years. The filters for the Unduplicated Headcount measure are as follows:

- **Academic Year - Term Desc - Multi:** 2014, 2015, 2016, 2017
- **Academic Plan - Multi:** Undergraduate
- **College - Group - Acad Org - Subject:** Academic Organization
- **All other filters:** All

Measure #3: *SSH Enrollment*

Student Semester Hours (SSH) Enrollment is defined as the total number of student semester hours in the specified Academic Organization during the selected academic years. The filters for the SSH Enrollment measure are as follows:

- **Academic Year - Term Desc - Multi:** 2014, 2015, 2016, 2017
- **Academic Plan - Multi:** Undergraduate
- **College - Group - Acad Org - Subject:** Academic Organization
- **All other filters:** All

Measure #4: *Percent Full*

The Percent Full metric is the actual enrollment count of the specified Academic Organization divided by the Standard Course Load (SCL) for the selected academic terms. The filters for the Percent Full metric are as follows:

- **Academic Year - Term Desc - Multi:** 2017-18 Fall, Spring, Summer; 2018-19 Fall
- **College - Group - Acad Org - Subject:** Academic Organization
- **Class Status:** Active, Full, Stop Further Enrollment
- **All other filters:** All

Measure #5: *Course Success (Performance)*

The Performance measure is defined as the number of students successfully completing a course with a grade of A, B, or C (success rate), divided by the total number of students enrolled in courses within the Academic Organization during the selected academic years. The filters for the Performance measure are as follows:

- **Academic Year - Term Desc - Multi:** 2014, 2015, 2016, 2017
- **Academic Plan - Multi:** Undergraduate
- **College - Group - Acad Org - Subject:** Academic Organization
- **All other filters:** All

Measure #6: *Grade Distribution*

The Grade Distribution measure reports the number of students receiving an A, B, C, D, F, N, W, or WF in courses within the academic program plan during the selected academic years. The filters for the Grade Distribution measure are as follows:

- **Academic Year - Term Desc - Multi:** 2014, 2015, 2016, 2017
- **Academic Plan - Multi:** Program Plan
- **All other filters:** All

Measure #7: *Industry Certification Attainment*

The Industry Certification Attainment measure reports the number of students in the program plan that have attained an industry certification or have passed a licensing exam. *Source: SPC Factbook, Table 9; Workforce database of student certifications.*

Measure #8: *Internship Enrollment (Course Groups)*
The Internship Enrollment measure reports the number of students enrolled in clinical, practicum, or internship courses within the program plan during the selected academic years. The filters for the Internship Enrollment measure are as follows:

- **Academic Year - Term Desc - Multi:** 2017-18 Fall, Spring, Summer; 2018-19 Fall
- **Academic Plan - Multi:** Program Plan
- **All other filters:** All

Measure #9: *Program Plans Taken by Plan*
The Program Plans Taken by Plan measure reports the number of students in the specified program plan in a selected cohort (by Term) that have continued in the plan, and the number of students that have since transferred to other plans, for the selected academic terms or years. The filters for the Program Plans Taken by Plan measure are as follows:

- **Student Cohort Student Term History Academic Year-Term Desc:** 2016-17 Fall
- **Enroll History Acad Term Desc (must be same as above):** 2016-17 Fall
- **Student Term History Academic Plan:** Applicable Program plan
- **Comparison Filters**
  Academic Year - Term Desc - Multi: 2016-17 Fall, Spring, Summer; 2017-18 Fall, Spring, Summer; 2018-19 Fall
- **All other filters:** All

Measure #10: *Graduates*
The Graduates measure depicts the total number of graduates within specified program plan(s) associated with the Academic Organization, for the selected academic years. The filters for the Graduates measure are as follows:

- **Academic Year - Term Desc - Multi:** 2014, 2015, 2016, 2017
- **Graduation Degree Plan Subplan - Multi:** All Applicable Program Plans
- **All other filters:** All

Measure #11: *Faculty/Adjunct Ratio*
The Faculty/Adjunct Ratio measure reports the number and percentage of program equated credit hours (ECHs) taught by the individual faculty classifications. *Source: PeopleSoft Student Administration System: Faculty/Adjunct Ratio Report (S_FACRAT).*

Measure #12: *Revenue and Expenses (will be available by December 2019)*

Measure #13: *Capital Expenditures (will be available by December 2019)*

Measure #14: *State and County Trends and Wage Information*
Employment trend information is reported by state and county. Jobs (2017) refers to the average annual job openings due to growth and net replacement; % Change (2017-2025) depicts the percent change in the number of annual job openings during the eight-year period; and Median Earnings refers to the average earnings for the specified job title. *Source: Florida Department of Economic Opportunity (DEO) http://www.floridajobs.org/labor-market-information/data-center/statistical-programs/employment-projections*

Measure #15: *Major Employers*
Major employers consist of the primary local employers of SPC graduates. These names are obtained from the Recent Alumni Survey Report and Program Administrators.

Measure #16: *Total Placement*
Total Placement is the percentage of students who have enlisted in the military, are continuing their education, or are employed in their field within the first year of graduation. *Source: FETPIP Florida College System Vocational Reports http://www.fldoe.org/accountability/fl-edu-training-placement-info-program/fl-college-system-vocational-reports.stml*.

Measure #17: *State Graduates Outcomes*
State graduates outcomes provide reference data for the employment trend data. Specifically, data on former students and program participants who have graduated, exited or completed a public or training program within the State of Florida are documented. *Source: FETPIP Florida College System Vocational Reports http://www.fldoe.org/accountability/fl-edu-training-placement-info-program/fl-college-system-vocational-reports.stml*.

Measure #18: *Educational Outcomes*
End-of-program assessment data that are reported in the program's most recent Academic Program Assessment Report (APAR) are summarized and reported with

the program's learning outcomes, means of assessment, and information about the program's next assessment report.

Measure #19: *Three-Year Course Review* ***(will be available by December 2019)***

Measure #20: *Student Survey of Instruction*
The Student Survey of Instruction (SSI) is electronically distributed to all students enrolled in traditional classroom sections, lab courses and self-paced or directed individual study, and online courses at the College. The purpose of the SSI is to acquire information on student perception of the quality of courses, faculty, and instruction, and to provide feedback information for improvement.

Measure #21: *Recent Alumni Survey*
Recent alumni surveys are administered to measure alumni satisfaction with SPC's education programs. The Recent Alumni Survey collects information related to career preparation, preparation for continuing education, and the current employment information and educational status of former students. Recent Alumni are surveyed six months after they graduate from SPC.

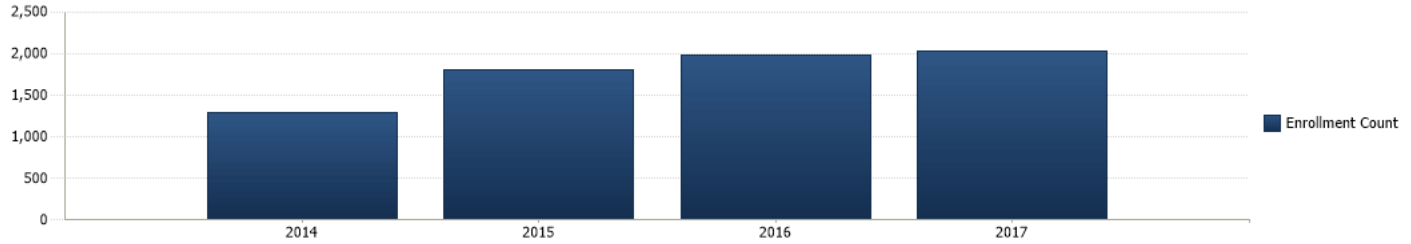
Measure #22: *Employer Survey*
Employer surveys are used to measure employer satisfaction with SPC graduates. Employers evaluate graduates from Bachelor of Science/Bachelor of Applied Science (BS/BAS), Associate in Science/Associate in Applied Science (AA/AS), and certificate programs. Surveys are sent to employers of recent graduates annually each spring semester.

Program Performance

CAPR > Enrollment

Enrollment Count Graph

Student Term Career - Program - Plan - Subplan: **UGRD**, Class College School Dept - Academic Group Desc - Academic Organization - Subject Catalog Nbr: **TMGT-UD**, Class Acade...



Enrollment Count

Student Term Career - Program - Plan - Subplan: **UGRD**, Class College School Dept - Academic Group Desc - Academic Organization - Subject Catalog Nbr: **TMGT-UD**, Class Acade...

Term Academic Year - Term Desc	Enrollment Count
2014	1,290
2015	1,812
2016	1,980
2017	2,022

Student System Cube Refresh

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CAPR Process Document

CAPR Process Document

Academic Year - Term Desc - Multi: 2014, 2015, 2016, 2017

Campus Description: All

Academic Plan - Multi: All

College - Group - Acad Org - Subject: TMGT-UD

Course Instructional Method: All

Student Type (FTIC): All

Class Academic Group: All

Age Group: All

Ethnic Group: All

Gender: All

Custom Cohort: All

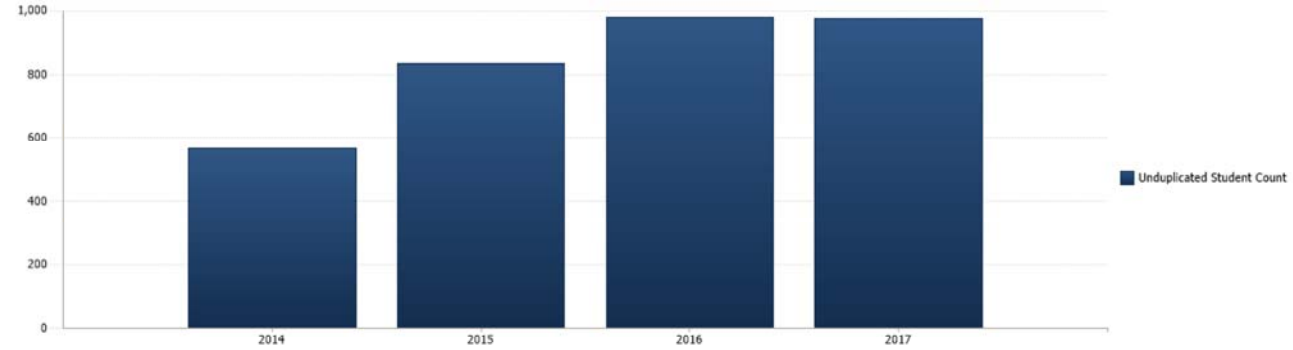
Student Group: All

Academic Program Viability Report > Enrollment

Enrollment | Performance | Percent Full | Graduates | Course Groups

Unduplicated Student Count Graph

Class College School Dept - Academic Group Desc - Academic Organization - Subject Catalog Nbr: **TMGT-UD**, Student Term Career Desc - Program Desc - Plan Desc - Subplan Desc: **Undergraduate**, Cla...



Unduplicated Student Count

Class College School Dept - Academic Group Desc - Academic Organization - Subject Catalog Nbr: **TMGT-UD**, Student Term Career Desc - Program Desc - Plan Desc - Subplan Desc: **Undergraduate**, Cla...

Term Academic Year - Term Desc	Unduplicated Student Count
2014	566
2015	833
2016	977
2017	976

Student System Cube Refresh

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Viability Report Process Document

Viability Report Process Document

Academic Year - Term Desc - Multi: 2014, 2015, 2016, 2017

Campus Description: All

Career - Program - Plan - Subplan - Multi: Undergraduate

College - Group - Acad Org - Subject: TMGT-UD

Course Instructional Method: All

Student Type (FTIC): All

Age Group: All

Ethnic Group: All

Gender: All

Custom Cohort: All

Student Group: All

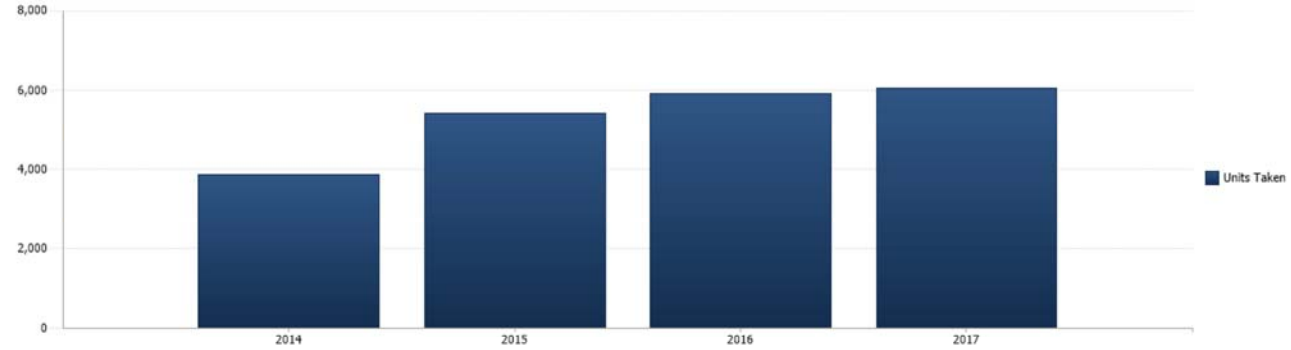
Course Group: All

Academic Program Viability Report > Enrollment

Enrollment | Performance | Percent Full | Graduates | Course Groups

SSH Enrollment Graph

Class College School Dept - Academic Group Desc - Academic Organization - Subject Catalog Nbr: **TMGT-UD**, Student Term Career Desc - Program Desc - Plan Desc - Subplan Desc: **Undergraduate**, Cla...



SSH Enrollment

Class College School Dept - Academic Group Desc - Academic Organization - Subject Catalog Nbr: **TMGT-UD**, Student Term Career Desc - Program Desc - Plan Desc - Subplan Desc: **Undergraduate**, Cla...

Term Academic Year - Term Desc	Units Taken
2014	3,870
2015	5,436
2016	5,940
2017	6,066

Student System Cube Refresh

Last Refresh: 9/13/2018 5:49:09 AM

Viability Report Process Document

Viability Report Process Document

Academic Year - Term Desc - Multi: 2014, 2015, 2016, 2017

Campus Description: All

Career - Program - Plan - Subplan - Multi: Undergraduate

College - Group - Acad Org - Subject: TMGT-UD

Course Instructional Method: All

Student Type (FTIC): All

Age Group: All

Ethnic Group: All

Gender: All

Custom Cohort: All

Student Group: All

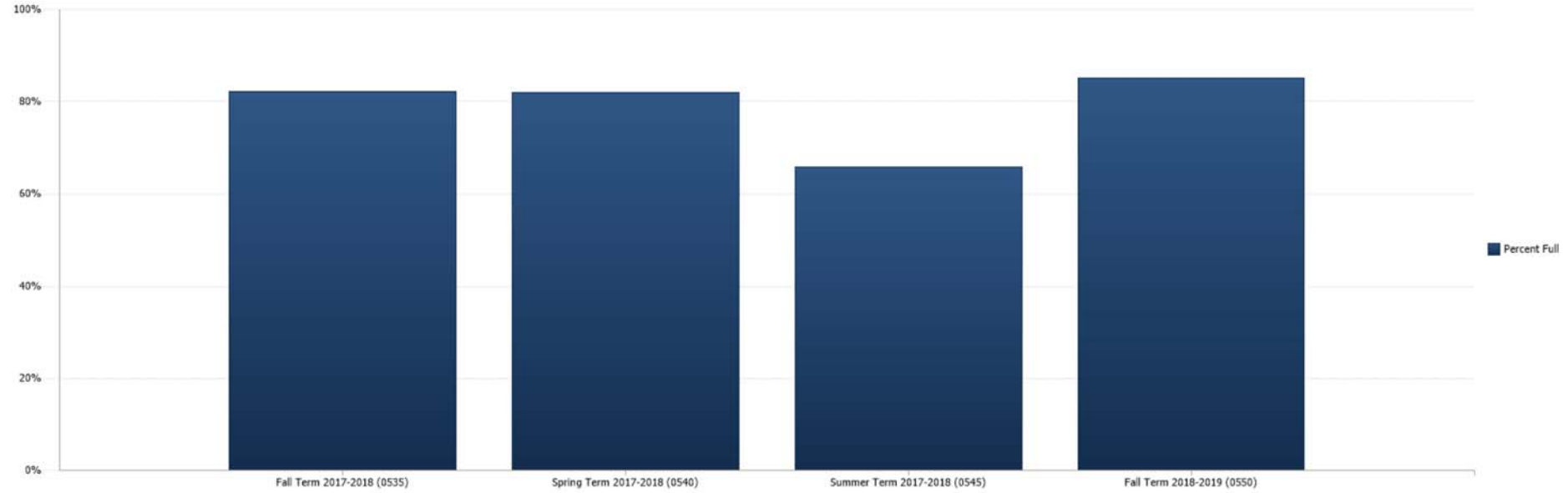
Course Group: All

Academic Program Viability Report > Percent Full

Enrollment | Performance | Percent Full | Graduates | Course Groups

Percent Full Metric Graph

Class Status: **Active**, **Full**, **Stop Further Enrollment**, Class Academic Group: **LD**, **UD**, Class College School Dept - Academic Group Desc - Academic Organization - Subject Catalog Nbr: **TMGT-UD**



Percent Full Metric by Instructional Method

Class Status: **Active**, **Full**, **Stop Further Enrollment**, Class Academic Group: **LD**, **UD**, Class College School Dept - Academic Group Desc - Academic Organization - Subject Catalog Nbr: **TMGT-UD**, Filter empty rows and columns

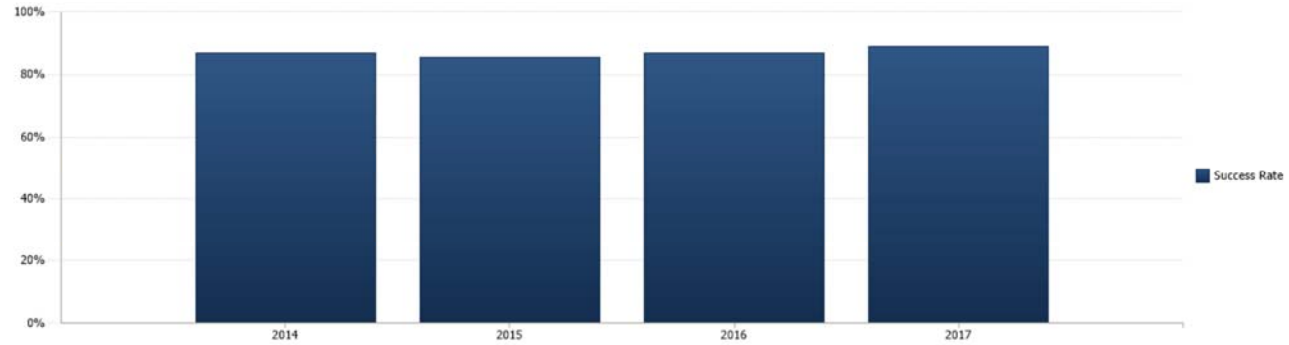
		All		
Term Academic Year - Term Desc	Measures		Blended	Online
Fall Term 2017-2018 (0535)	Enrollment Count	908	14	894
Fall Term 2017-2018 (0535)	Standard Course Load	1,104	48	1,056
Fall Term 2017-2018 (0535)	Percent Full	82.2%	29.2%	84.7%
Spring Term 2017-2018 (0540)	Enrollment Count	846	23	823
Spring Term 2017-2018 (0540)	Standard Course Load	1,032	24	1,008
Spring Term 2017-2018 (0540)	Percent Full	82.0%	95.8%	81.6%
Summer Term 2017-2018 (0545)	Enrollment Count	268		268
Summer Term 2017-2018 (0545)	Standard Course Load	408		408
Summer Term 2017-2018 (0545)	Percent Full	65.7%		65.7%
Fall Term 2018-2019 (0550)	Enrollment Count	858	6	852
Fall Term 2018-2019 (0550)	Standard Course Load	1,008	24	984
Fall Term 2018-2019 (0550)	Percent Full	85.1%	25.0%	86.6%

Academic Program Viability Report > Performance

Enrollment | Performance | Percent Full | Graduates | Course Groups

Success Rate Graph

Student Term Career Desc - Program Desc - Plan Desc - Subplan Desc: **Undergraduate**, Grade Success Rate Grading Basis: **Y**, Class College School Dept - Academic Group Desc - Academic Organization...



Performance

Student Term Career Desc - Program Desc - Plan Desc - Subplan Desc: **Undergraduate**, Grade Success Rate Grading Basis: **Y**, Class College School Dept - Academic Group Desc - Academic Organization...

Term Academic Year - Term Desc	Enrollment Count	Success Rate	Withdrawal Rate	F Rate	WF Rate
2014	1,290	86.7%	5.4%	3.3%	2.9%
2015	1,812	85.5%	5.6%	3.8%	3.6%
2016	1,980	86.9%	5.3%	3.1%	3.6%
2017	2,022	89.0%	4.2%	3.4%	2.4%

Student System Cube Refresh

Last Refresh: 9/13/2018 5:49:09 AM

Viability Report Process Document

Viability Report Process Document

Academic Year - Term Desc - Multi: 2014, 2015, 2016, 2017

Campus Description: All

Career - Program - Plan - Subplan - Multi: Undergraduate

College - Group - Acad Org - Subject: TMGT-UD

Course Instructional Method: All

Student Type (FTIC): All

Age Group: All

Ethnic Group: All

Gender: All

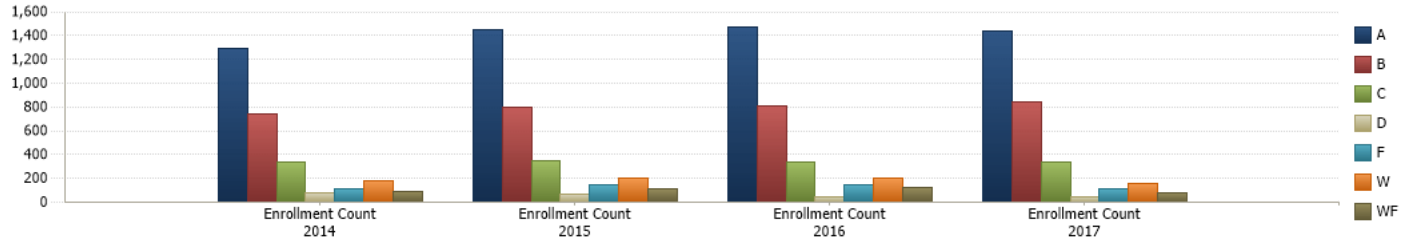
Student Group: All

Course Group: All

CAPR > Grade Distribution

Student Grade Distribution Graph

Student Term Career - Program - Plan - Subplan: **UGRD**, Academic Plan: **TMGT-BAS**, Grade Success Rate Grading Basis: **Y**, Grade Success Rate Grade Input: **Y**, Class Academic Caree...



Student Grade Distribution

Student Term Career - Program - Plan - Subplan: **UGRD**, Academic Plan: **TMGT-BAS**, Grade Success Rate Grading Basis: **Y**, Grade Success Rate Grade Input: **Y**, Class Academic Caree...

	Enrollment Count							
	All							
Term Academic Year - Term Desc		A	B	C	D	F	W	WF
2014	2,829	1,297	737	338	74	111	184	88
2015	3,130	1,452	802	347	70	143	201	115
2016	3,131	1,472	805	339	48	141	207	119
2017	3,017	1,434	846	338	42	116	161	80

Student System Cube Refresh

Last Refresh: 2/6/2019 6:15:10 AM

CAPR Process Document

CAPR Process Document

Academic Year - Term Desc - Multi: 2014, 2015, 2016, 2017

Campus Description: All

Academic Plan - Multi: TMGT-BAS

Course Instructional Method: All

Student Type (FTIC): All

Class Academic Group: All

Age Group: All

Ethnic Group: All

Gender: All

Student Group: All

Course Group: All

Industry Certification Attainment

An industry certification or equivalent state or national exam has not been identified for the College of Computer and Information Technology: Technology Management, BAS program for evidence of certification attainment at the baccalaureate level.

View: **Course Groups**
Date: **9/19/2018**
Dashboard: **Course Groups**
Parameter: **Fall Term 2017-2018 (0535),Spring Term 2017-2018 (0540),Summer Term 2017-2018 (0545),Fall Term 2018-2019 (0550),All,Tech Development & Management,All,All,All,All,All,All,All**

Class Course Group - Subject Catalog Nbr	Fall Term 2017-2018 (0535)		Spring Term 2017-2018 (0540)		Summer Term 2017-2018 (0545)		Fall Term 2018-2019 (0550)	
	Unduplicated Student Count	Number of Classes	Unduplicated Student Count	Number of Classes	Unduplicated Student Count	Number of Classes	Unduplicated Student Count	Number of Classes
CGS2940	1	1						
CIS2940	2	1	2	1				
CNT2940	1	1	1	1	1	1		
COP2940	3	1			1	1	1	1
CTS2940					1	1	2	1
ISM4915	62	3	68	4			70	3

View: **Program Plans Taken by Plan**
Date: **2/6/2019**
Dashboard: **Program Plans Taken by Plan**
Parameter: **Fall Term 2016-2017 (0520),Fall Term 2016-2017 (0520),TMGT-BAS,All,All,All,All,All,All,All,All,Fall Term 2016-2017 (0520),Spring Term 2016-2017 (0525),Summer Term 2016-2017 (0530),Fall Term 2017-2018 (0535),Spring Term 2017-2018 (0540),Summer Term 2017-2018 (0545),Fall Term 2018-2019 (0550),All**

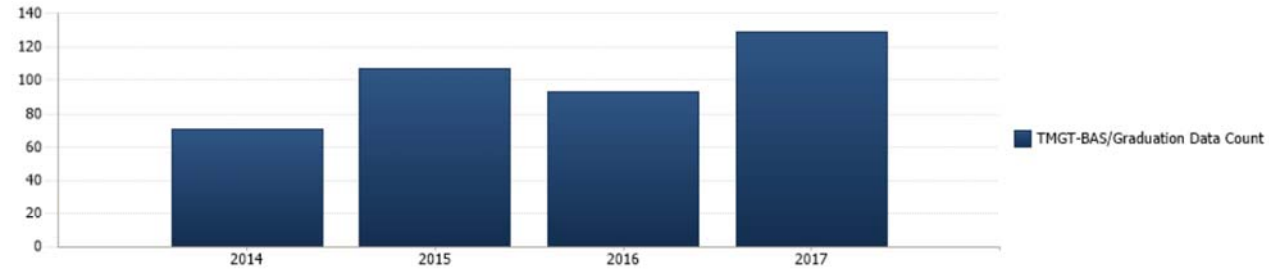
	Fall Term 2016-2017 (0520)	Spring Term 2016-2017 (0525)	Summer Term 2016-2017 (0530)	Fall Term 2017-2018 (0535)	Spring Term 2017-2018 (0540)	Summer Term 2017-2018 (0545)	Fall Term 2018-2019 (0550)
Academic Plan	Unduplicated Student Count	Unduplicated Student Count	Unduplicated Student Count	Unduplicated Student Count	Unduplicated Student Count	Unduplicated Student Count	Unduplicated Student Count
All	415	341	151	254	181	67	119
GEN-AA		1	1		1		1
TMGT-BAS	415	334	144	245	167	59	107
CWPA-AS		1	1	1	3	1	1
COMPNET-AS				1	1		
ITSC-AS				1	1	1	1
WEBSDM-AS			1				
ENRCH-NO		2		1	4	1	1
APLS-CT		1	1	1			
BMET-AS		1	1	1	1	1	
BUS-AS						1	1
BUS-BS				1	1		1
CCNA-CT							1
CIT-AS							1
CJPSS-AS							1
ELEDR-BS				1	1	1	1
EMS-AS						1	1
MCITPS-CT						1	
MGTORG-BAS		1	1	1			1
WEBDS-CT			1		1		

Academic Program Viability Report > Graduates

Enrollment | Performance | Percent Full | Graduates | Course Groups

Overall Graduates Trend

No background selections exist, Filter empty series and bottom axis items



Overall Graduates Count

No background selections exist, Filter empty rows and columns

Graduation Degree - Plan - Sub Plan	Measures	2014	2015	2016	2017
TMGT-BAS	Graduation Data Count	71	107	93	129

Student System Cube Refresh

Last Refresh: 8/31/2018 5:48:04 AM

Viability Report Process Document

Viability Report Process Document

Academic Year - Term Desc - Multi: 2014, 2015, 2016, 2017

Graduation Degree Plan Subplan - Multi: TMGT-BAS

Age Group: All

Gender: All

Ethnic Group: All

Custom Cohort: All

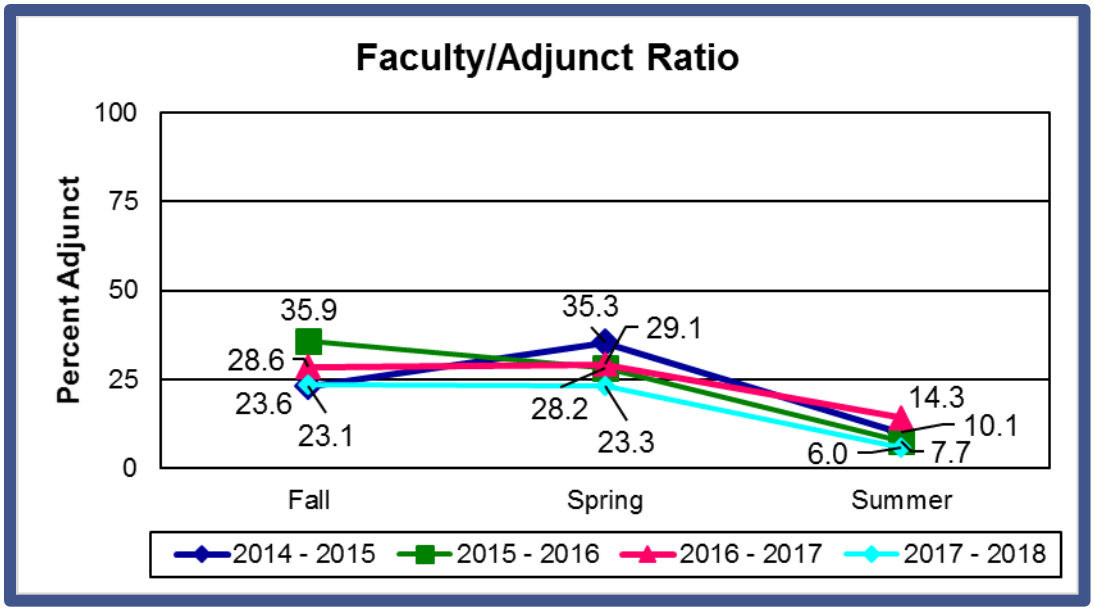
Student Group: All

Faculty/Adjunct Ratio

Equated Credit Hours by Faculty Classification

	Fulltime Faculty		Percent of Load Faculty		Adjunct Faculty	
	Number of ECHs	% of Classes Taught	Number of ECHs	% of Classes Taught	Number of ECHs	% of Classes Taught
Fall 2014-2015	60.0	76.9%	0.0	0.0%	18.0	23.1%
Spring 2014-2015	60.6	64.7%	0.0	0.0%	33.0	35.3%
Summer 2014-2015	30.0	89.9%	0.0	0.0%	3.4	10.1%
2014-2015 Total	150.6	73.5%	0.0	0.0%	54.4	26.5%
Fall 2015-2016	75.0	64.1%	0.0	0.0%	42.0	35.9%
Spring 2015-2016	84.0	71.8%	0.0	0.0%	33.0	28.2%
Summer 2015-2016	36.0	92.3%	0.0	0.0%	3.0	7.7%
2015-2016 Total	195.0	71.4%	0.0	0.0%	78.0	28.6%
Fall 2016-2017	90.0	71.4%	0.0	0.0%	36.0	28.6%
Spring 2016-2017	90.0	70.9%	0.0	0.0%	37.0	29.1%
Summer 2016-2017	36.0	85.7%	0.0	0.0%	6.0	14.3%
2016-2017 Total	216.0	73.2%	0.0	0.0%	79.0	26.8%
Fall 2017-2018	107.0	76.4%	0.0	0.0%	33.0	23.6%
Spring 2017-2018	99.0	76.7%	0.0	0.0%	30.0	23.3%
Summer 2017-2018	47.3	94.0%	0.0	0.0%	3.0	6.0%
2017-2018 Total	253.3	79.3%	0.0	0.0%	66.0	20.7%

Source: PeopleSoft Student Administration System: Faculty/Adjunct Ratio Report (S_FACRAT).



Source: PeopleSoft Student Administration System: Faculty/Adjunct Ratio Report (S_FACRAT).

Occupation Profile

Occupation Descriptions

The occupation description for Computer and information systems managers (11-3021) used by the DEO is shown below:

> *Plan, direct, or coordinate activities in such fields as electronic data processing, information systems, systems analysis, and computer programming.*

The occupation description for Computer systems analysts (15-1121) used by the DEO is shown below:

> *Analyze science, engineering, business, and other data processing problems to implement and improve computer systems.*

The occupation description for Information security analysts (15-1122) used by the DEO is shown below:

> *Plan, implement, upgrade, or monitor security measures for the protection of computer networks and information. May ensure appropriate security controls are in place that will safeguard digital files and vital electronic infrastructure. May respond to computer security breaches and viruses.*

The occupation description for Network and computer systems administrators (15-1142) used by the DEO is shown below:

> *Install, configure, and support an organization's local area network (LAN), wide area network (WAN), and Internet systems or a segment of a network system.*

The occupation description for Computer programmers (15-1131) used by the DEO is shown below:

> *Create, modify, and test the code, forms, and script that allow computer applications to run.*

The occupation description for Industrial production managers (11-3051) used by the DEO is shown below:

Plan, direct, or coordinate the work activities and resources necessary for manufacturing products in accordance with cost, quality, and quantity specifications.

The occupation description for Software developers, applications (15-1132) used by the DEO is shown below:

Develop, create, and modify general computer applications software or specialized utility programs.

The occupation description for Software developers, system software (15-1133) used by the DEO is shown below:

Research, design, develop, and test operating systems-level software, compilers, and network distribution software for medical, industrial, military, communications, aerospace, business, scientific, and general computing applications.

State and County Trends and Wage Information

The distribution of 2017 wage information for Computer and information systems managers; Computer systems analysts; Information security analysts; Network and computer systems administrators; Computer programmers; Industrial production managers; Software developers, applications; and Software developers, system software are located in the tables below. The median hourly earnings for Computer and information systems managers was $62.89 in Florida and $65.45 in Pinellas County. The median hourly earnings for Computer systems analysts was $39.24 in Florida and $41.57 in Pinellas County. The median hourly earnings for Information security analysts was $39.72 in Florida and $41.35 in Pinellas County. The median hourly earnings for Network and computer systems administrators was $37.87 in Florida and $37.67 in Pinellas County. The median hourly earnings for Computer programmers was $34.79 in Florida and $37.78 in Pinellas County. The median hourly earnings for Industrial production managers was $42.29 in Florida and $46.37 in Pinellas County. The median hourly earnings for Software developers, applications was $41.79 in Florida and $42.98 in Pinellas County. The median hourly earnings for Software developers, system software was $47.22 in Florida and $44.64 in Pinellas County.

Employment trend information for occupations related to Technology Development and Management – BAS are also provided in the tables. An average annual increase in employment for Computer and information systems managers (18.1% - 20.2%) is shown for the period between 2017 and 2025, across the state and county. An average annual increase in employment for Computer systems analysts (21.6% - 25.0%) is shown for the period between 2017 and 2025, across the state and county. An average annual increase in employment for Information security analysts (19.9% - 20.0%) is shown for the period between 2017 and 2025, across the state and county. An average annual increase in employment for Network and computer systems administrators (11.4% - 11.7%) is shown for the period between 2017 and 2025, across the state and county. An average annual decrease in employment for Computer programmers (-1.1% - -2.1%) is shown for the period between 2017 and 2025, across the state and county. An average annual increase in employment for Industrial production managers (4.5% - 6.2%) is shown for the period between 2017 and 2025, across the state and county. An average annual increase in employment for Software developers, applications (17.1% - 19.4%) is shown for the period between 2017 and 2025, across the state and county. An average annual increase in employment for Software developers, system software (14.9% - 16.1%) is shown for the period between 2017 and 2025, across the state and county.

Employment Data

Growth for Computer and information systems managers

	Jobs (2017)	% Change (2017-2025)	Median Earnings
Florida	12,257	18.1%	$62.89/hr
Pinellas County	832	20.2%	$65.45/hr

Source: Florida Department of Economic Opportunity (DEO) http://www.floridajobs.org/labor-market-information/data-center/statistical-programs/employment-projections

Growth for Computer systems analysts

	Jobs (2017)	% Change (2017-2025)	Median Earnings
Florida	19,586	21.6%	$39.24/hr
Pinellas County	1,216	25.0%	$41.57/hr

Source: Florida Department of Economic Opportunity (DEO) http://www.floridajobs.org/labor-market-information/data-center/statistical-programs/employment-projections

Growth for Information security analysts

	Jobs (2017)	% Change (2017-2025)	Median Earnings
Florida	4,989	20.0%	$39.72/hr
Pinellas County	357	19.9%	$41.35/hr

Source: Florida Department of Economic Opportunity (DEO) http://www.floridajobs.org/labor-market-information/data-center/statistical-programs/employment-projections

Growth for Network and computer systems administrators

	Jobs (2017)	% Change (2017-2025)	Median Earnings
Florida	18,587	11.4%	$37.87/hr
Pinellas County	1,317	11.7%	$37.67/hr

Source: Florida Department of Economic Opportunity (DEO) http://www.floridajobs.org/labor-market-information/data-center/statistical-programs/employment-projections

Growth for Computer programmers

	Jobs (2017)	% Change (2017-2025)	Median Earnings
Florida	13,506	-2.1%	$34.79/hr
Pinellas County	853	-1.1%	$37.78/hr

Source: Florida Department of Economic Opportunity (DEO) http://www.floridajobs.org/labor-market-information/data-center/statistical-programs/employment-projections

Growth for Industrial production managers

	Jobs (2017)	% Change (2017-2025)	Median Earnings
Florida	5,051	4.5%	$49.29/hr
Pinellas County	417	6.2%	$46.37/hr

Source: Florida Department of Economic Opportunity (DEO) http://www.floridajobs.org/labor-market-information/data-center/statistical-programs/employment-projections

Growth for Software developers, applications

	Jobs (2017)	% Change (2017-2025)	Median Earnings
Florida	35,812	19.4%	$41.79/hr
Pinellas County	2,558	17.1%	$42.98/hr

Source: Florida Department of Economic Opportunity (DEO) http://www.floridajobs.org/labor-market-information/data-center/statistical-programs/employment-projections

Growth for Software developers, system software

	Jobs (2017)	% Change (2017-2025)	Median Earnings
Florida	16,588	16.1%	$47.22/hr
Pinellas County	1,402	14.9%	$44.64/hr

Source: Florida Department of Economic Opportunity (DEO) http://www.floridajobs.org/labor-market-information/data-center/statistical-programs/employment-projections

Major Employers

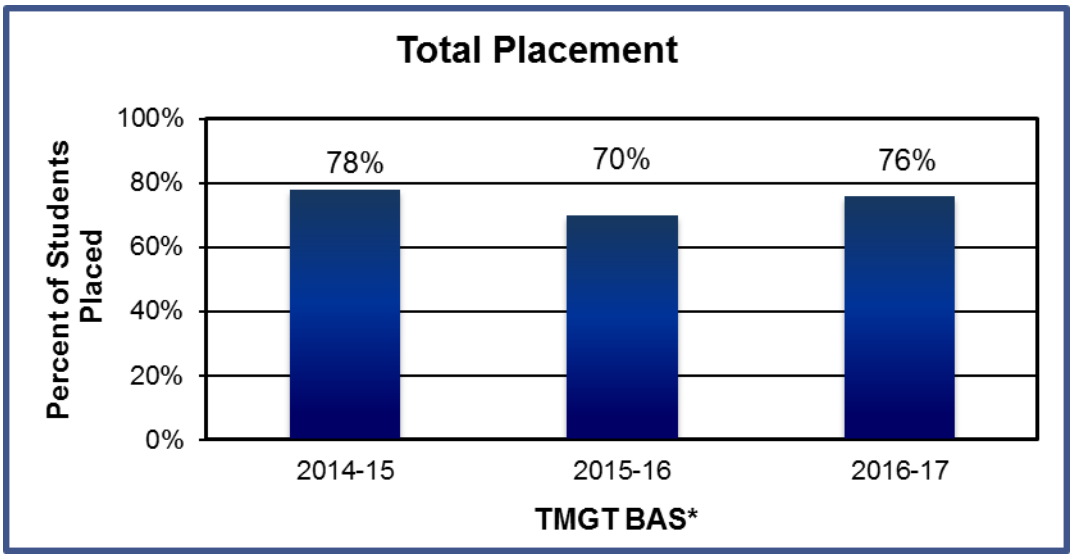
Graduates of SPC's Technology Development and Management – BAS program are employed in various areas related to their field. The primary local employers of these graduates are Florida Department of Health - Hillsborough County, Tech Data, Raymond James, Charter Communications, Nielson Media, and the City of St. Petersburg as depicted in the table below.

Major Employers

Employers of Technology Development and Management - BAS Graduates
Florida Department of Health - Hillsborough County
Tech Data
Raymond James
Charter Communications
Nielson Media
City of St. Petersburg

Source: Recent Alumni Survey reports and program administrator records

2018-19 Placement Data



TMGT BAS		
	Pool Count	**Percent Placed**
2014-15	54	78%
2015-16	76	70%
2016-17	71	76%

Source: Florida College System Reports [*http://www.fldoe.org/accountability/fl-edu-training-placement-info-program/fl-college-system-reports.stml*](http://www.fldoe.org/accountability/fl-edu-training-placement-info-program/fl-college-system-reports.stml)

*Refers to graduates found to be employed full-time or part-time.

Academics

Educational Outcomes

As part of SPC quality improvement efforts, academic assessments are conducted on each AS/BS/BAS program every three years to evaluate the quality of the program's educational outcomes. The Technology Development and Management – BAS program was evaluated through an Academic Program Assessment Report (APAR).

Each of the Program Learning Outcomes (PLOs) was evaluated during the 2015-16 assessment. Each of the three PLOs is listed below:

1. Recommend contemporary technology resources that promote effective company management.
2. Using industry standard frameworks, evaluate technical problems and plans to identify solutions that enhance the profitability of an organization.
3. Develop value-added information technology projects that improve strategic processes across an organization.

Means of Assessment

The purpose of the End of Program assessment is to make summative interpretations for program improvement.

The Technology Development and Management (BAS) program used the results of a case study assigned in a senior capstone course (ISM 4915) for which students had a submit a final paper and give a presentation. The criteria for success stated students should attain a minimum score of 9 on the case study for PLOs 1 and 2; whereas, students were expected to attain a minimum score of 12 on the case study for PLO 3.

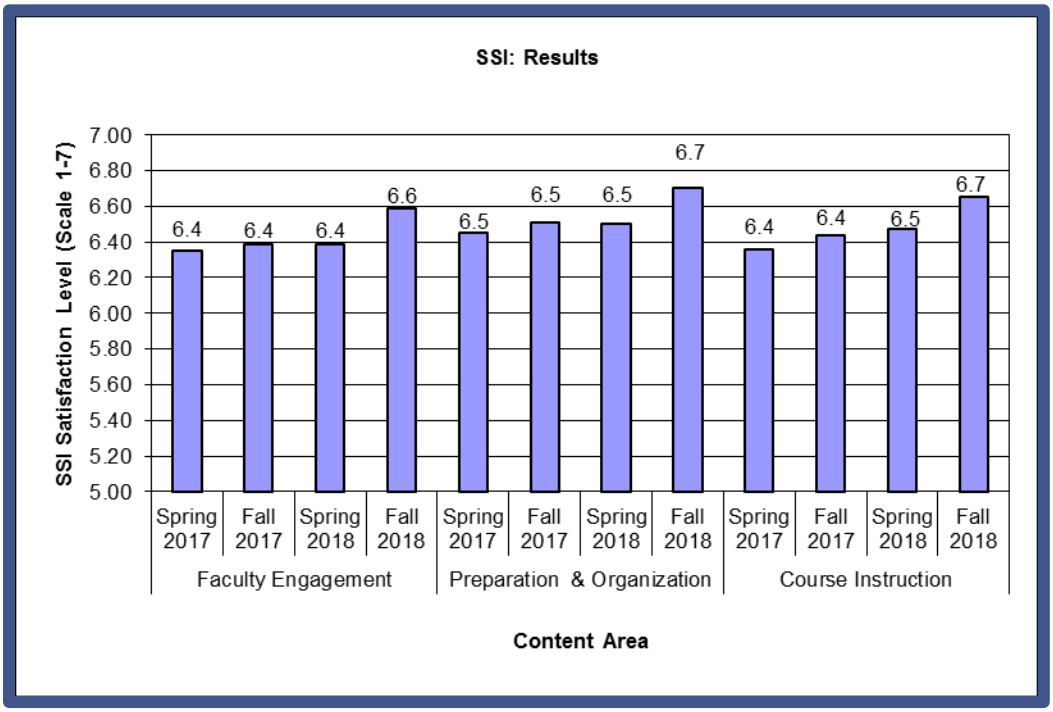
Data were collected during 2014-15 and 2015-16. The students whom were assessed achieved a minimum score of 9 on the case study and met the criteria for success for PLOs 1 and 2. For PLO 3, the students whom were assessed achieved a minimum score of 12 and met the criteria for success.

The 2015-16 follow-up report was completed in July 2017. The lone action item was completed, and the results published in the 2015-16 follow-up report. The next assessment report is scheduled to be completed during the 2018-19 academic year.

For the complete 2015-16 Technology Development and Management, BAS Program Assessment Report, please see Appendix B.

Stakeholder Perceptions

Student Survey of Instruction (SSI)



Source: St. Petersburg College Student Survey of Instruction database

College of Computer and Information Technology: Technology Management, B.A.S.

2017-18 Alumni Survey Report

Survey of 2016-17 Graduates

- *B.A.S. Degree: Technology Management*

Alumni Survey Information

Graduates are sent one survey to complete, even in cases where they may have earned multiple degrees within the same year. In these cases, the reported number of surveys sent and responses received are counted once per degree or certificate awarded to the student.

Seventy-seven Alumni Surveys were provided to the 2016-17 graduates of the College of Computer and Information Technology: Technology Management, B.A.S. program. Responses were received from 13 B.A.S. graduates.

Seventeen percent (13/77) of the graduates surveyed responded to the survey. After receiving permission from the respondents to contact their employers, one employer survey was sent out. Not all respondents answer every survey question; therefore, the percentages listed below represent the responses to each survey question in relation to the total number of responses received for each question.

Notable results include:

- 100% (10/10) of recent graduate survey respondents, who were employed, were employed full-time.
- 100% (10/10) of recent graduate survey respondents had a current position related to their studies.
- 25.0% (3/12) of recent graduate survey respondents indicated their main goal in completing a degree or certificate at SPC was to *"Change career fields"*; 25.0% (3/12) *"Earn more money"*; 25.0% (3/12) *"Continue my education"*; 8.3% (1/12) *"Get a promotion"*; 8.3% (1/12) *"Obtain employment"*; 8.3% (1/12) *"Other"*.
- 54.5% (6/11) of recent graduate survey respondents indicated that their SPC degree allowed them to *"Change career fields"*; 36.4% (4/11) *"Earn more money"*; 36.4% (4/11) *"Continue my education"*; 27.3% (3/11) *"Get a promotion"*; 18.2% (2/11) *"Meet certification/training needs"*; 9.1% (1/11) *"Obtain employment"*; and 9.1% (1/11) *"Other"*. [Note: The total may exceed 100% as this question allows multiple responses]
- 25.0% (3/12) of recent graduate survey respondents indicated that SPC did "*Exceptionally well"* in helping them meet their goal; 41.7% (5/12) *"Very well"*; and 33.3% (4/12) *"Adequately"*.
- 66.7% (6/9) of recent graduate survey respondents indicated that they earned $25.00 or more per hour ($52,000 or more annually); 11.1% (1/9) earned $20.00-$24.99 per hour ($42,000-$51,999 annually); 11.1% (1/9) earned $15.00-$19.99

per hour ($31,000-$41,999 annually); and 11.1% (1/9) earned $10.00-$14.99 per hour ($21,000-$30,999 annually).

- 8.3% (1/12) of recent graduate survey respondents indicated they are continuing their education.
- 100% (12/12) of recent graduate survey respondents would recommend SPC's College of Computer and Information Technology: Technology Management, B.A.S. program to another.
- 27.3% (3/11) indicated that they had taken an internship or co-op opportunity. Of those who indicated they took this opportunity, 33.3% (1/3) indicated it helped them obtain a job in their field.
- 37.5% (3/8) said there were additional skills they would like to have acquired in the College of Computer and Information Technology: Technology Management, B.A.S. program.
- 50.0% (5/10) indicated that their salary increased after completing the College of Computer and Information Technology: Technology Management, B.A.S. program, while 50.0% (5/10) indicated that it remained the same.
- An evaluation of College of Computer and Information Technology: Technology Management, B.A.S. graduates' general education outcomes is displayed in Table 1. Graduates indicated satisfaction with their college preparation in the area of general education outcomes. Seven outcomes received mean scores between 4.5 and 4.6, seventeen received mean scores between 4.0 and 4.4, and one received a mean score of 3.8.

Table 1
College Preparation Ratings for Recent Technology Management, B.A.S. Program Graduates

General Education Outcomes (Five point rating scale with five being the highest)	*Item Ratings*		
	N	*Mean*	*SD*
Communicating clearly and effectively with others through:			
Speaking	12	4.1	0.8
Listening	12	4.2	0.8
Reading	12	4.3	0.8
Writing	12	4.2	0.7
Your use of mathematical and computational skills:			
Comfortable with mathematical calculations	12	4.1	0.5
Using computational skills appropriately	12	4.2	0.6
Accurately interpreting mathematical data	12	4.0	0.6
Using the following forms of technology:			
Email	12	4.5	0.8
Word Processing	12	4.5	0.8

General Education Outcomes (Five point rating scale with five being the highest)	Item Ratings		
	N	Mean	SD
Spreadsheets	12	4.3	0.8
Databases	11	3.8	0.8
Internet Research	12	4.6	0.5
Thinking logically and critically to solve problems:			
Gathering and assessing relevant information	12	4.3	0.6
Inquiring about and interpreting information	12	4.3	0.5
Organizing and evaluating information	12	4.1	0.5
Analyzing and explaining information to others	12	4.2	0.6
Using information to solve problems	12	4.2	0.6
Working effectively with others in a variety of settings:			
Participating as a team player (e.g., group projects)	11	4.4	0.8
Working well with individuals from diverse backgrounds	11	4.5	0.7
Using ethical courses of action	11	4.4	0.8
Demonstrating leadership skills	11	4.3	0.8
Appreciating the importance of lifelong learning:			
Showing an interest in career development	11	4.5	0.7
Being open to new ideas and challenges	11	4.4	0.7
Willingness to take on new responsibilities	11	4.5	0.7
Pursuing additional educational opportunities	11	4.5	0.8

College of Computer and Information Technology: Technology Management, B.A.S.

2017-18 Employer Survey Report

Employer Survey of 2016-17 Graduates

Employer Survey Information

Although employers are surveyed one time per graduate, some graduates may have earned multiple awards. Therefore, the number of surveys administered and responses received are reported for each degree or certificate the student was awarded.

One employer survey was sent out to an employer based on the permission provided by recent graduates in the 2016-17 recent graduate survey. One survey respondent provided an evaluation of the graduates' college preparation. Since a single response cannot accurately represent the entire program, employer survey results about college preparation will not be reported.

Program Action Plan

Program: Technology Development and Management, BAS

Date Completed: May 2019

Prepared By: John Duff, Ph.D.

I. Action Plan Items:

	Action Item	Measure Addressed	Completion Date	Responsible Party
1	Create new Software Assurance Sub Plan	Enrollment	Fall 2019	Baccalaureate Academic Chair – Dr. John Duff
2	Create Cyber Defense and Risk Mitigation Sub Plan	Enrollment	Spring 2020	Baccalaureate Academic Chair – Dr. John Duff
3	Submit proposal for new BAS in Cyber Security	Enrollment	Summer 2019	Baccalaureate Academic Chair – Dr. John Duff

II. Special Resources Needed:

Cyber security continues to be a growth area. As CCIT creates new sub plans and courses in this area it will be challenging for current faculty to develop all of the new courses. CCIT will seek to include qualified Adjunct instructors to assist in this effort.

III. Area(s) of Concern/Improvement:

Enrollment in the current BAS program has begun to level. This is due to the maturity of the program and the fact that the College of Business has removed ISM3011 as an elective course in COB Bachelors programs. This change will be reflected in the CCIT BAS enrollment numbers in the coming year.

Cyber security continues to be a growth area. CCIT is developing two new sub plans in the current BAS program to address this need. A portion of this work is funded by a DOE grant. CCIT will be delivering a proposal to the state to offer a new BAS degree in Cyber Security.

References

Rule 6A-14.060(5). *Florida Administrative Code, Accountability Standards.* Retrieved February 2018, from the Division of Community Colleges Web site: https://www.flrules.org/gateway/ruleno.asp?id=6A-14.060

Contact Information

Please address any questions or comments regarding this evaluation to:

Maggie Tymms, M.A.
Director, Institutional Effectiveness
St. Petersburg College, P.O. Box 13489, St. Petersburg, FL 33733
(727) 341-3195
tymms.magaly@spcollege.edu

Appendices

PROGRAM OF STUDY

College of Computer & Information Technology

Technology Development and Management Bachelor of Applied Science

TMGT-BAS

Effective Catalog Term: Fall 2017 (0535) through Present (CIP# 1101110991)

The requirements below may not reflect degree requirements for continuing students. Continuing students should visit **My SPC** and view **My Learning Plan** to see specific degree requirements for their effective Catalog term.

Program Leadership Information

John Duff, Baccalaureate Academic Chair
Duff.John@spcollege.edu
727-341-7176

Dr. James Stewart, Dean of Technology
stewart.james@spcollege.edu

Program Summary

The Technology Development and Management bachelor's degree gives you a solid credential in the evolving field of technology management. You will receive a balance of technology and management education to make you a front-runner in today's competitive environment. You will also have the opportunity to specialize in one of four fields: Data Analytics, Cybersecurity, Software Development or Project Management. Through state-of-the-art delivery systems, we help you to achieve your goals as a manager, improve productivity in your organization and become a strong and effective leader.

The **Academic Pathway** is a tool for students that lists the following items:
• the recommended order in which to take the program courses
• suggested course when more than one option exists
• which semester each course is typically offered
• if the course has a prerequisite
• courses that may lead to a certificate (if offered in the program)

If you are starting the program this term, click here to access the recommended Academic Pathway.

If you have already started the program, click here for the archived Academic Pathways.

Please verify the Academic Pathway lists your correct starting semester.

Admission Rules

Admission to the Bachelor of Applied Science in Technology Development and Management degree program (TMGT-BAS) requires:

60 credits from a regionally accredited institution, including:
- 15 credits of transferable general education courses
- ENC1101- Composition I or equivalent
- a college Math Course: MAT 1033, MAT1100, STA 2023, STA 2023H OR any MAC, MGF, MTG, MAS math prefix

21 Technical Credits:
From current listing of acceptable certificates OR from classes that begin with the following prefixes

CAP, CEN, CET*, CGS, CIS, CNT, COP, CTS with a Grade C or better.

*CET 1114C cannot be used to satisfy this requirement

Please note that total program hours may vary. Consult an advisor for any additional questions.

Graduation Rules

GRADE OF “C” OR BETTER REQUIRED IN ALL COURSES

NOTE: If you have not completed two years of the same foreign language in high school or 8 credits in college, you will need to complete 8 credits of foreign language before completing the B.A.S. program.

ADMISSIONS COURSES **60 credits in a related discipline with at least 15 General Education credits**	**Credits**
Total Credits	**60**

GENERAL EDUCATION COURSES **Additional General Education Courses**	**Credits**
Enhanced World View Requirements*	
A. Communications *	9
B. Humanities/Fine Arts*	6
C. Mathematics	6
D. Natural & Physical Sciences	6 - 7
E. Social & Behavioral Sciences*	6
F. Ethics	3
G. Computer/Information Literacy Competency (see catalog for details)	
Total Credits	**15**

MAJOR CORE COURSES **(30 credits) Grade of "C" or better required**		**Credits**
BUL 3564	Legal Aspects of Managing Technology	3
GEB 3213	Business Communication for Professional Effectiveness	3
MAN 3303	Management & Leadership Practices	3
MAN 3503	Managerial Risk Analysis and Decision Making	3
ISM 3011	Management Information Systems	3
ISM 3232	Applied Systems Analysis	3
ISM 4113	Software Design Methodologies	3
ISM 4212	Database Design & Administration	3
ISM 4361	IT Services Management	3
ISM 4915	Senior Capstone Project	3
Total Credits		**30**

AND

Select ONE of the following Subplans:

SUBPLAN CORE COURSES SUBPLAN: DATA ANALYTICS (DATAANALYT) (15 Credits) Grade of "C" or better required		Credits
ISM 4545	Data Analytics Technologies	3
ISM 4547	Data Analytics Management	3
ISM 4548	Web Analytics	3
CTS 4454	Business Intelligence and Data Mining	3
CAP 4770	Principles of Data Mining	3

SUBPLAN CORE COURSES SUBPLAN: CYBERSECURITY (ISA) ((15 credits) grade of "C" or better required		Credits
ISM 4323	Security Essentials	3
ISM 4320	Core Security Principles	3
ISM 4324	Applications in Information Security	3
ISM 4330	Information Security Policy Administration and Management	3
ISM 4321	Strategic Cyber Security Enforcement	3

SUBPLAN CORE COURSES SUBPLAN: SOFTWARE DEVELOPMENT (SFTDEV) (15 credits) Grade of "C" or better required		Credits
COP 4504	Advanced Software Programming	3
COP 3035	Intermediate Computer Programming	3
CEN 4031	Advanced Program Development Frameworks	3
COP 4533	Algorithmic Design and Development	3
CEN 4722	Human Computer Interfaces	3

SUBPLAN CORE COURSES SUBPLAN: PROJECT MANAGEMENT (PM) (15 credits) Grade of "C" or better required		Credits
MAN 4583	Project Management	3
MAN 4741	Innovation, Change and Agile Projects	3
MAN 4881	Authority Influence and Projects	3
MAN 4883 **	Project Management Methodology in Specialization	1 - 3
MAN 4885	Complex and Advanced Projects	3

Total Credits	**120**

**A range of specialization courses in project management application areas and content expertise areas will provide students with specific skills for their industry and advanced topics relating to project management practice. Students will have to select three advanced topics from a set of 4 or more offerings each year.

PID 681

Program Assessment Report

Program: Technology Development and Management, BAS
Option: Technology Development and Management, BAS
Report Year: 2015-16

Drafted by Sharon Setterlind on Sep 19, 2016

Data Files

- TDM BAS Combined Assessement Data Spring 2017.xlsx
- TDM BAS Combined Assessment Data 2015-16.xlsx
- TDM BAS Assessment Data Spring 2016 Total.xlsx
- TDM BAS Assessment Rubric.xlsx
- TDM BAS Assessment Data Fall 2015 Total.xlsx
- TDM BAS Assessment Data Fall 2014 Total.xlsx
- TDM BAS Assessment Data Spring 2015 Total.xlsx

Overall Introduction

In support of the mission of St. Petersburg College, faculty committees established thirteen value statements. Three of these value statements are:

- Student Focus: We believe students are the heart of SPC! All SPC resources, decisions, and efforts are aligned to transform students' lives to empower them to finish what they start!
- Academic Excellence: We promote academic excellence through interactive, innovative, and inquiry-centered teaching and learning.
- Culture of Inquiry: We encourage a data-driven environment that allows for open, honest dialogue about who we are, what we do, and how we continue to improve student success.

It is the intent of St. Petersburg College to incorporate continuous improvement practices in all areas. Assessment reports provide comparisons of present and past results which are used to identify topics where improvement is possible. SPC has traditionally used past results as a vital tool in achieving its commitment to continuous improvement.

Program Learning Outcomes

#1: Recommend contemporary technology resources that promote effective company management.

I. Use of Past Results

Students in the Spring 2013 capstone course displayed a nearly perfect score for learning outcome 1. This is due largely to the way the assignment is completed. By that, it is meant that student groups complete a practice case on which a plethora of feedback is provided. In addition, each of the four main sections of the final paper are handed in at different points during the term and again a plethora of feedback is provided to be incorporated into the final paper. In addition, a strong set of resources and out of class support are available for the student.

II. Methodology

Means of Assessment: Students in the senior capstone course, ISM 4915, complete a case study from the textbook. The case studies assigned reflect real-world problems that address real world information technology issues. Students are formed into groups and each group operates as a consultancy firm brought in to address the case study. The group collaborates throughout the semester on their team charter, case study, and presentation. The goal of the group consultancy is to identify, analyze, and finally recommend a solution for their chosen case study. A major piece of the required recommendations is improvement to the technology processes and operations reflected

by the situation in the case study. The teams will be evaluated on the quality of their recommendations toward this improvement. The Capstone final paper and presentation are worth 50% of the final grade for the Capstone course.

Date(s) of Administration: 2014-15, 2015-16

Assessment Instrument: The paper consists of four sections. PLO #1 is worth 18 points, and is scored on the following scale:

Performance Measure	Needs Improvement (1)	Satisfactory (2)	Outstanding (3)
Final Case Study	Student does not analyze and identify the major problem therein, and did not propose at least three solutions to that problem. Student did not propose solutions that provided an analyzation of evaluating technical feasibility, financial impact, and impact on the business. The student did not provide application of the material learned over the breadth of the degree.	Student analyzes and identifies the major problem therein, with limited understanding and did not propose at least three solutions to that problem. Each proposed solution was limited also in its analyzation of evaluating technical feasibility, financial impact, and impact on the business. This analysis provided application of the material learned over the breadth of the degree in a limited capacity.	Student analyzes and identifies the major problem therein, and proposed at least three solutions to that problem. Each proposed solution analyzed evaluating technical feasibility, financial impact, and impact on the business. This analysis provided application of the material learned over the breadth of the degree.
Final Case Study Presentation	Student does not demonstrate a basic understanding of the case study, and the purpose of the analysis is not stated. Case study review not focused. Presentation confusing and not centered on topic. Case study review does not use appropriate visual aids. Limited understanding and usage of formal written language. Numerous grammar and spelling errors. Limited vocabulary. Difficulty conveying meaning. Extremely nervous. Poor response to questions.	Student has Limited understanding of the case study. Does not use theories or scholarly examples to demonstrate understanding. Supporting materials are correctly referenced. Case study review has focus. Presenters have poor transition. Content present, but not presented in a logical manner. Visual aids partially support presentation content Visual aids have few illustrations. Occasional usage of awkward sentences and poor sentence structure. Occasional grammar problems, poor word usage and spelling errors. Effective vocabulary. Overuse of words, conjunctions, and transitions. Overstated ideas. Moderately nervous. Adequate response to questions (prepared for most questions).	Complete understanding of the case study. Utilizes theories and scholarly examples to demonstrate understanding; information is relevant. Supporting materials are relevant to the subject and the assignment meets the final objectives. Case study review completely focused. Presenters transition correctly. Introduction clearly states one problem, one chosen solution is stated, supported, and is logical form. Conclusion sums up the presentation. Visual aids support the presentation content and have interest and focus attention. Demonstration of correct written and spoken language. There are no grammar, spelling, or punctuation errors. Appropriate word selection, concise wording and conjunctions are not overused. Composed and comfortable. Student responds with in-depth understanding and can defend position.

Population: Students enrolled in senior capstone course, ISM 4915

III. Criteria for Success

Students are considered to have successfully demonstrated PLO #1 if a score of 9 or higher is achieved out of the total 18 available points (50%).

IV. Summary of Assessment Findings

Results via Face-to-Face

The senior capstone course, ISM 4915 is taught exclusively online and does not include face-to-face sections.

Results via Distance Delivery (Online, Blended, etc)

PLO 1: Case Study Scores				
Year	N	Score	N Met Criteria	% Meeting Criteria
2014-15	71	91.3%	69	97.2%
2015-16	112	92.5%	112	100%

PLO 1: Case Study Presentation Scores				
Year	N	Score	N Met Criteria	% Meeting Criteria
2014-15	71	83.4%	69	97.0%
2015-16	112	83.4%	103	92.0%

V. Discussion and Analysis of Assessment Findings

Case Study Project & Presentation scores clearly indicate that students are meeting the criteria for success in the Capstone course for the Technology Development and Management BAS. The results show that 97.2% of capstone students met the criteria in 2014-15 with 100% in 2015-16 for the cast study project. For the Case Study presentation, 97.0% of students met the criteria in 2014-15, with 92.0% reaching the goal in 2015-16. Students recommend contemporary technology resources that promote effective company management by:

Utilizing theories and scholarly examples to demonstrate understanding, and that the information is relevant. Provide supporting materials that are relevant to the subject.

Future data will be disaggregated by individual PLO.

VI. Action Plan and Timetable for Implementation

Based on the analysis of the results the following Action Plan Items have been selected for implementation:

- Align assessment instruments to individual PLOs so that future data can be reported by individual PLO. - / Aug 2017

#2: Using industry standard frameworks, evaluate technical problems and plans to identify solutions that enhance the profitability of an organization.

I. Use of Past Results

Students in the Spring 2013 capstone course displayed a nearly perfect score for learning outcome 2. This is due largely to the way the assignment is completed. By that, it is meant that student groups complete a practice case on which a plethora of feedback is provided. In addition, each of the four main sections of the final paper are handed in sat different points during the term and again a plethora of feedback is provided to be incorporated into the final paper. In addition, a strong set of resources and out of class support are available for the student

II. Methodology

Means of Assessment: Students in the senior capstone course, ISM 4915, complete a case study from the textbook. The case studies assigned reflect real-world problems that address real world information technology issues. Students are formed into groups and each group operates as a consultancy firm brought in to address the

case study. The group collaborates throughout the semester on their team charter, case study, and presentation. The goal of the group consultancy is to identify, analyze, and finally recommend a solution for their chosen case study. The information solutions design incorporated in the case study solution provided by the team requires them to have knowledge gleaned from prior coursework in areas such as systems analysis, network management, database management, and project management. The students are evaluated on the quality of their recommended design of information technology solutions to the problem presented in the case. The Capstone final paper and presentation are worth 50% of the final grade for the Capstone course.

Date(s) of Administration: 2014-15, 2015-16

Assessment Instrument: PLO #2 is worth 18 points, and is scored on the following scale:

Performance Measure	Needs Improvement (1)	Satisfactory (2)	Outstanding (3)
Final Case Study	Student does not analyze and identify the major problem therein, and did not propose at least three solutions to that problem. Student did not propose solutions that provided an analyzation of evaluating technical feasibility, financial impact, and impact on the business. The student did not provide application of the material learned over the breadth of the degree.	Student analyzes and identifies the major problem therein, with limited understanding and did not propose at least three solutions to that problem. Each proposed solution was limited also in its analyzation of evaluating technical feasibility, financial impact, and impact on the business. This analysis provided application of the material learned over the breadth of the degree in a limited capacity.	Student analyzes and identifies the major problem therein, and proposed at least three solutions to that problem. Each proposed solution analyzed evaluating technical feasibility, financial impact, and impact on the business. This analysis provided application of the material learned over the breadth of the degree.
Final Case Study Presentation	Student does not demonstrate a basic understanding of the case study, and the purpose of the analysis is not stated. Case study review not focused. Presentation confusing and not centered on topic. Case study review does not use appropriate visual aids. Limited understanding and usage of formal written language. Numerous grammar and spelling errors. Limited vocabulary. Difficulty conveying meaning. Extremely nervous. Poor response to questions.	Student has Limited understanding of the case study. Does not use theories or scholarly examples to demonstrate understanding. Supporting materials are correctly referenced. Case study review has focus. Presenters have poor transition. Content present, but not presented in a logical manner. Visual aids partially support presentation content Visual aids have few illustrations. Occasional usage of awkward sentences and poor sentence structure. Occasional grammar problems, poor word usage and spelling errors. Effective vocabulary. Overuse of words, conjunctions, and transitions. Overstated ideas. Moderately nervous. Adequate response to questions (prepared for most questions).	Complete understanding of the case study. Utilizes theories and scholarly examples to demonstrate understanding; information is relevant. Supporting materials are relevant to the subject and the assignment meets the final objectives. Case study review completely focused. Presenters transition correctly. Introduction clearly states one problem, one chosen solution is stated, supported, and is logical form. Conclusion sums up the presentation. Visual aids support the presentation content and have interest and focus attention. Demonstration of correct written and spoken language. There are no grammar, spelling, or punctuation errors. Appropriate word selection, concise wording and conjunctions are not overused. Composed and comfortable. Student responds with in-depth understanding and can defend position.

Population: Students enrolled in senior capstone course, ISM 4915

III. Criteria for Success

Students are considered to have successfully demonstrated PLO #2 if a score of 9 or higher is achieved out of the total 18 available points (50%).

IV. Summary of Assessment Findings

Results via Face-to-Face

The senior capstone course, ISM 4915 is taught exclusively online and does not include face-to-face sections.

Results via Distance Delivery (Online, Blended, etc)

PLO 2: Case Study Scores				
Year	N	Score	N Met Criteria	% Meeting Criteria
2014-15	71	91.3%	69	97.2%
2015-16	112	92.5%	112	100%

PLO 2: Case Study Presentation Scores				
Year	N	Score	N Met Criteria	% Meeting Criteria
2014-15	71	83.4%	69	97.0%
2015-16	112	83.4%	103	92.0%

V. Discussion and Analysis of Assessment Findings

Case Study Project & Presentation scores clearly indicate that students are meeting the criteria for success in the Capstone course for the Technology Development and Management BAS. The results show that 97.2% of capstone students met the criteria in 2014-15 with 100% in 2015-16 for the cast study project. For the Case Study presentation, 97.0% of students met the criteria in 2014-15, with 92.0% reaching the goal in 2015-16. Students evaluate technical problems and plans by:

Analyzing and identifying major problems and propose at least three solutions to that problem. Students propose for each solution a well thought out analyzed solution by evaluating technical feasibility, financial impact, and impact on the business. This analysis provides application of the material learned over the breadth of the degree. The student then presents one problem with one chosen solution, along with data to support the decision of the solution.

Future data will be disaggregated by individual PLO.

VI. Action Plan and Timetable for Implementation

Based on the analysis of the results the following Action Plan Items have been selected for implementation:

- Align assessment instruments to individual PLOs so that future data can be reported by individual PLO. - / Aug 2017

#3: Develop value-added information technology projects that improve strategic processes across an organization.

I. Use of Past Results

Students in the Spring 2013 capstone course displayed a nearly perfect score for learning outcome 3. This is due largely to the way the assignment is completed. By that, it is meant that student groups complete a practice case on which a plethora of feedback is provided. In addition, each of the four main sections of the final paper are handed in sat different points during the term and again a plethora of feedback is provided to be incorporated into the final paper. In addition, a strong set of resources and out of class support are available for the student.

II. Methodology

Means of Assessment: Students in the senior capstone course, ISM 4915, complete a case study from the textbook. The case studies assigned reflect real-world problems that address real world information technology issues. Students are formed into groups and each group operates as a consultancy firm brought in to address the case study. The group collaborates throughout the semester on their team charter, case study, and presentation. The goal of the group consultancy is to identify, analyze, and finally recommend a solution for their chosen case study. Significant requirement in providing the case study solution is to identify, quantify, and synthesize a workable solution to the information requirements presented by the case. The students are required to apply material learned in prior coursework such as systems analysis and design, programming, and network design among others. The Capstone final paper and presentation are worth 50% of the final grade for the Capstone course.

Date(s) of Administration: 2014-15, 2015-16

Assessment Instrument: PLO #3 will be measured as 24 points, and is scored on the following scale:

Performance Measure	Needs Improvement (1)	Satisfactory (2)	Outstanding (3)
Final Case Study	Student does not analyze and identify the major problem therein, and did not propose at least three solutions to that problem. Student did not propose solutions that provided an analyzation of evaluating technical feasibility, financial impact, and impact on the business. The student did not provide application of the material learned over the breadth of the degree.	Student analyzes and identifies the major problem therein, with limited understanding and did not propose at least three solutions to that problem. Each proposed solution was limited also in its analyzation of evaluating technical feasibility, financial impact, and impact on the business. This analysis provided application of the material learned over the breadth of the degree in a limited capacity.	Student analyzes and identifies the major problem therein, and proposed at least three solutions to that problem. Each proposed solution analyzed evaluating technical feasibility, financial impact, and impact on the business. This analysis provided application of the material learned over the breadth of the degree.
Final Case Study Presentation	Student does not demonstrate a basic understanding of the case study, and the purpose of the analysis is not stated. Case study review not focused. Presentation confusing and not centered on topic. Case study review does not use appropriate visual aids. Limited understanding and usage of formal written language. Numerous grammar and spelling errors. Limited vocabulary. Difficulty conveying meaning. Extremely nervous. Poor response to questions.	Student has Limited understanding of the case study. Does not use theories or scholarly examples to demonstrate understanding. Supporting materials are correctly referenced. Case study review has focus. Presenters have poor transition. Content present, but not presented in a logical manner. Visual aids partially support presentation content Visual aids have few illustrations. Occasional usage of awkward sentences and poor sentence structure. Occasional grammar problems, poor word usage and spelling errors. Effective vocabulary. Overuse of words, conjunctions, and transitions. Overstated ideas. Moderately nervous. Adequate response to questions (prepared for most questions).	Complete understanding of the case study. Utilizes theories and scholarly examples to demonstrate understanding; information is relevant. Supporting materials are relevant to the subject and the assignment meets the final objectives. Case study review completely focused. Presenters transition correctly. Introduction clearly states one problem, one chosen solution is stated, supported, and is logical form. Conclusion sums up the presentation. Visual aids support the presentation content and have interest and focus attention. Demonstration of correct written and spoken language. There are no grammar, spelling, or punctuation errors. Appropriate word selection, concise wording and conjunctions are not overused. Composed and comfortable. Student responds with in-depth understanding and can defend position.

Population: Students enrolled in senior capstone course, ISM 4915

III. Criteria for Success

Students are considered to have successfully demonstrated PLO #3 if a score of 12 or higher is achieved out of the total 24 available points (50%).

IV. Summary of Assessment Findings

Results via Face-to-Face

The senior capstone course, ISM 4915 is taught exclusively online and does not include face-to-face sections.

Results via Distance Delivery (Online, Blended, etc)

PLO 3: Case Study Scores				
Year	N	Score	N Met Criteria	% Meeting Criteria
2014-15	71	91.3%	69	97.2%
2015-16	112	92.5%	112	100%

PLO 3: Case Study Presentation Scores				
Year	N	Score	N Met Criteria	% Meeting Criteria
2014-15	71	83.4%	69	97.0%
2015-16	112	83.4%	103	92.0%

V. Discussion and Analysis of Assessment Findings

Case Study Project & Presentation scores clearly indicate that students are meeting the criteria for success in the Capstone course for the Technology Development and Management BAS. The results show that 97.2% of capstone students met the criteria in 2014-15 with 100% in 2015-16 for the cast study project. For the Case Study presentation, 97.0% of students met the criteria in 2014-15, with 92.0% reaching the goal in 2015-16. Students Develop value-added information technology projectst by:

Researching and developing a case study that demonstrates students' ability to identify, quantify, and synthesize a workable solution to the information requirements presented by the case.

Future data will be disaggregated by individual PLO.

VI. Action Plan and Timetable for Implementation

Based on the analysis of the results the following Action Plan Items have been selected for implementation:

- Align assessment instruments to individual PLOs so that future data can be reported by individual PLO.
  - / Aug 2017

Action Plan

Category	Action Plan Detail / Implications	For PLO	Responsible Party / Due Date
D. Improve Assessment Methodology			
D4.	**Improve method of data collection & analysis**		
	Align assessment instruments to individual PLOs so that future data can be reported by individual PLO.	#1, #2, #3	Aug 2017

Approvals

Program Administrators:
Sharon Setterlind - Dean
William Cross - Full-Time Faculty

Approved by Sharon Setterlind - Dean on Sep 19, 2016

Educational Outcomes Coordinators:
Joe Boyd - Assessment Coordinator
Magaly Tymms - Assessment Director

Approved by Joe Boyd - Assessment Coordinator on Oct 14, 2016

Dean:
Sharon Setterlind - Dean

Approved by Sharon Setterlind - Dean on Oct 15, 2016

Senior Vice President:
Anne Cooper - Senior VP Instruction and Academic Programs

Approved by Anne Cooper - Senior VP Instruction and Academic Programs on Oct 17, 2016

Program Assessment Followup Report

Program: Technology Development and Management, BAS
Option: Technology Development and Management, BAS
Report Year: 2015-16

Drafted by Sharon Setterlind on Jul 9, 2017

Data Files

- TDM BAS Combined Assessement Data Spring 2017.xlsx
- TDM BAS Combined Assessment Data 2015-16.xlsx
- TDM BAS Assessment Data Spring 2016 Total.xlsx
- TDM BAS Assessment Rubric.xlsx
- TDM BAS Assessment Data Fall 2015 Total.xlsx
- TDM BAS Assessment Data Fall 2014 Total.xlsx
- TDM BAS Assessment Data Spring 2015 Total.xlsx

Program Learning Outcomes

#1: Recommend contemporary technology resources that promote effective company management.

#2: Using industry standard frameworks, evaluate technical problems and plans to identify solutions that enhance the profitability of an organization.

#3: Develop value-added information technology projects that improve strategic processes across an organization.

Action Plan

Completed Action Items

Category	Action Plan Detail / Completion Explanation	For PLO	Responsible Party / Due Date
D. Improve Assessment Methodology			
D4. Improve method of data collection & analysis			
	Align assessment instruments to individual PLOs so that future data can be reported by individual PLO. **Explanation:** We revised the PLOs and rubric used for performance measures in the Technology Development and Management BAS Capstone course, and separated each PLO performance measure and assessment criteria to further identify student performance and progression through the overall program.	#1, #2, #3	Aug 2017

Incomplete Action Items

Category	Action Plan Detail / Explanation / Completion Plan	For PLO	Responsible Party / Due Date
There are no items to display			

Evaluation of the Impact of Action Plan Items on Program Quality

In the Fall 2016 CCIT completed a review of all programs in the department. As part of that review all assessment criteria was reviewed to further identify student's performance and progression throughout the entire Technology Development and Management BAS program. It was decided that the PLOs for the BAS required attention in that there needed to be more specific identification of the performance measures and the assessment criteria for that measure. The PLOs were revised and the faculty created a new rubric that separated out the assessment criteria for each measurement.

The newly created rubric will provide individual data on the program competencies that will allow for a more focused evaluation of assessment on student comprehension of the program level outcomes. This evaluation will then be used as a tool to identify areas where CCIT must concentrate efforts to ensure students are performing at an acceptable excellent to fair ranking on the assessment. This evaluation is reviewed by faculty after each Capstone course delivery during Fall and Spring semesters.

Approvals

Program Administrator:
Sharon Setterlind - Dean

Approved by Sharon Setterlind - Dean on Jul 9, 2017

Educational Outcomes Coordinators:
Joe Boyd - Assessment Coordinator
Magaly Tymms - Assessment Director

Approved by Magaly Tymms - Assessment Director on Jul 10, 2017

Dean:
Sharon Setterlind - Dean

Approved by Sharon Setterlind - Dean on Jul 10, 2017

Senior Vice President:
Anne Cooper - Senior VP Instruction and Academic Programs

Approved by Anne Cooper - Senior VP Instruction and Academic Programs on Jul 10, 2017

Appendix C: 2018 Advisory Committee Minutes and Recommendations

Advisory Board Meeting Minutes for February 2018 and September 2018 are provided within this Appendix.

For additional Advisory Board Committee Minutes and Recommendations, please refer to the following link: http://www.spcollege.edu/friends-partners/work-with-spc/advisory-committees

CCIT Advisory Committee Meeting
Wednesday, February 21, 2018

Members Present:
Dan Brown, James Farley, Tony Francisco, Muslim Gadiwalla, Chris Paul, Harold Shomaker

Members Absent:
Keith Archibald, Cindy Brown, Joseph Cuenco, Dan Doyle, Mayra Harley, Stephen Marcinek, Ryan Platt, Scott Talcott.

Other Attendees:
Susan Biszewski-Eber, Terri Dobson, John Long, Richard Smith.

Meeting called to order - 7:45 am

Approval of Minutes
Minutes from the October 25, 2017 Advisory Committee Meeting were approved unanimously.

Discussion
Due to low attendance at meeting a discussion took place about membership. Same members always attend meetings, show up for Capstone and help at events. A small amount of members were removed from membership for this year and it is looking like more will be removed next year.

Sharon had many inquiries because of her involvement in TBT from individuals who would like to become a member of this committee. Terri to contact Sharon for names.

Susan to contact Netwolves and Gina from Prxys to inquire about possible interest in becoming a member of this group.

Muslim and Chris to talk to Daniel at the event on Friday to see if he knows any TBT members who would be interested in membership.

James Farley would like to stay on as a committee member after he graduates. Can we add an alumni position?

Terri to find a new student to fill the gap that will be left by James. Also there was another student who graduated that we need to replace.

Apprenticeship Grant Update
There will be more money coming in for the Apprenticeship Grant.

IT companies are finally becoming more open to Apprenticeships, but are still not comfortable with mentoring. They are also not sure about the fast track intensive way the apprenticeship works. Susan is trying to help IT executives see that apprentices could help with the need they have to fill positions in their organizations that are hard to fill. Many organizations need to fill programming and cybersecurity openings in their companies and apprenticeships could fill that need. IT departments do not think the same way as the apprenticeship is aligned. Maybe the answer is to change the IT apprenticeship to trainee to better fit IT department thinking.

Susan is finding she had to change the companies she is looking at to start apprenticeships. Originally she was looking at Entrepreneurs and small start-ups, but has since realized larger companies like Vology, Agile Thought and Reliaquest are better fits.

Susan and John Duff will be meeting tomorrow with David Spindler from Tech Data. He is from the UK and most recently lived in Canada. Both countries use apprenticeships so he is ready to hire some for Tech Data.

Most of the work Netwolves does is with cybersecurity monitoring of medical equipment online. They hire our interns and are interested in developing a model where the intern would then become an apprentice.

Dave Massey at Bealls is looking for ecommerce technicians. In order to fill his need CCIT would maybe have to change the Web Development AS degree to fill that need.

Harper College has an apprenticeship program where the apprentice works for the company 40 hours a week. During that week they attend school 2 days. The company pays the school $2,500 a term for the student to attend. The student and company sign an agreement that states the company pays for schooling and in turn the student must stay at the company 3 years after graduation. This model has been recognized as a best practice.

Chris brought up a website called Synapse (uses a dating site type model, but for business). Good resource for students instead of google to find help for resumes, interviewing tips etc. Susan to review. Maybe add to website or TCC for students to use.

CCIT Department update

Sharon is retiring as of March 2nd. John is Acting Dean at this time while Sharon is on FMLA. On March 12th John will become Interim Dean. The position has not been posted as yet because Sharon was the only Dean for this department so the position description needs to be updated.

Question was asked will this committee continue once there is a new Dean? John answered the new Dean cannot decide that there will no longer be an Advisory Committee. Having the committee is required by the college.

Another question posed was about the Bachelor's Degree and the legislature limiting the percentage of Bachelor's Degrees to 18% of the total enrollment for the college. John answered the concern is that our courses are competing with universities in Florida.

Capstone Dates

April 16th, 17th, 18th 6:00 – 9:00 pm at Clearwater Campus in room ES 104. An invite has been sent and includes information on start time and a campus map to help everyone find the room.

Scholarships

Terri will send an email when the scholarship applications are available for review to ask for volunteers. If you already know you would like to volunteer to review scholarship applications please contact Terri.

New Skills at Work Grant

Some students grow up with role models who can give them advice on how to create a good resume and tips on interviewing. The reality is many students do not have a role model to help with these skills. The NSAW program Karen has created TechCamps (just to clarify this is different than the Xlab) helps students to network and close the skills gap.

Graduates of CCIT cannot find jobs, companies cannot find employees. There is a disconnect which the grant from JP Morgan Chase to partner with SPC is helping to fix. The grant is not only for SPC students, but includes students from USF and South University. The TechCamps students attend once a week for six weeks. The goal is to have each session led by a leader in the Technology field. For example Chris led a session on the Role of IT in an Organization. But NSAW needs more leaders for sessions. Karen needs more of the Advisory Committee members to step up.

There will be a Networking Event on Friday, February 23rd from 4:00 to 6:00 pm at Melitta.

Internships

Richard shared with the group that there are 60 internship applicants for summer term. Programming students are the hardest to place.

Richard also mentioned the Tech Career Summit and the need for companies to be involved. Daniel James Scott will be the Keynote speaker. It was mentioned that Richard should ask Daniel about posting on TBT. Richard will send Terri Information on the Tech Summit to forward to the committee.

Next Meeting

The next Advisory Committee Meeting date will be announced soon. Terri will send an invite as soon as the date has been decided.

Please let Terri know if you will be attending the Workforce Connections meeting on April 10th at 8:00 am. This is the big meeting with all the Advisory Committees it was postponed from September because of Hurricane Irma.

Meeting adjourned – 9:00 am

CCIT Advisory Committee Meeting
Wednesday, September 12, 2018

Members Present:
Keith Archibald, Cindy Brown, Tony Francisco, Dan Lueck, Chris Paul, Bruce Philipoom, Harold Schomaker

Members Absent:
Dan Brown, Joseph Cuenco, Dan Doyle, James Farley, Muslim Gadiwalla, Mayra Harley, Steve Marcinek, Daniel James Scott, Scott Talcott, Bill Waas

Other Attendees:
Susan Biszewski-Eber, Terri Dobson, John Duff, Dawn Ellis, Mike Gordon, Nathan Heinze, John Long, Jun Ma, Laura Malave, Therezita Ortiz, Rosaria Pipitone, Chrissy Risberg, Richard Smith, Dean Stewart, Darlene Westberg.

Meeting called to order - 7:40 am

Introductions

- New Dean of CCIT, Dr. James Stewart
- All in attendance introduced themselves
- Academic Chairs Dr. Stewart's leadership team - short bio in packet

Update on Enrollment

- Fall enrollment 6739 as of 9/11/2018
- 100% full in AS degree
- BAS - 150 students short of 100% full

State of Ongoing Advisory Committee Initiatives

- Interaction between CCIT and Advisory Committee very quiet last 12 months
- Committee energized and ready to be more involved and provide academic input
- Future committee involvement in the following areas:
    - Promoting the college
    - Mentoring
    - Volunteering
        - CCIT Career Events
        - Capstone
        - Scholarship Review
        - Additional Areas – TBD
- Many committee members are already involved in career events, capstone presentations and scholarship review.
    - Need more involvement.
- Possibly have execs available via various online technologies when necessary due to busy schedules.

Apprenticeship Grant Update

- Possible IT apprenticeships at two local companies Laser Spine Institute and PSCU.
- SPC will become a registered apprenticeship program.

- Apprentices will need extra coursework beyond an AS degree and Workforce will help.
- It may seem to some that Workforce is working against SPC, but Workforce courses are non-credit training whereas SPC courses are for credit education.

Internships

- There were 5-10 students who could not find internships so their internship is in the SPC Library not in industry.
- Dr. Stewart does not want CCIT students interning in the SPC Library.
  - Expecting 100% of Internships filled each term is unrealistic.
  - All students do not meet criteria of the top 10% to be placed in industry.
- Students have to complete the internship to receive their AS degree.
  - Some students have issues keeping them from an internship in industry:
    - Poor choices in their youth
    - Full-time job
- These situations should not keep them from completing their degree.

CCIT Cybersecurity Club Fund Raising

- TitanSec is the Cybersecurity club at SPC - Laura Malave is the Faculty Advisor.
  - Members of this club have competed in the Raymond James Capture the Flag competitions. The club has taken 3rd and 5th place.
- Dr. Stewart asked for Advisory members to sponsor students for these competitions.
  - Donations would go through the Foundation as a gift in kind.
  - Bruce asked what was needed, Raymond James able to help now.
  - Need is entry fees, travel and lodging for B-Sides and other competitions.

Handshake

- Handshake is a virtual job board for students and employers SPC launched this semester.
- Students set up an account and upload their resume, projects and GPA.
- Interested Employers can go to: https://spcollege.joinhandshake.com/employer_registrations/new to register an employer account.
  - Once employers set up their account they can add additional schools as needed.
  - Handshake can be used by employers to recruit employees and then filter applicants to narrow the pool of candidates.
- SPC use of Handshake
  - Notify students about open positions at area companies.
  - Notify students about job fairs.
  - Invite employers to events such as the CCIT Career Summit in October.

NSAW Grant

- The NSAW grant, it is a partnership between SPC and Tampa Bay Tech (TBT) to prepare students for life in the real employment world.
- The grant holds TechCamps to help students learn how to transition from college to work life.

    - These students get a jump on preparing resumes and interview skills.
    - Knowledge obtained helps students to bridge the gap between the skills local businesses are looking for and the skills students come out of college with.
    - The work Karen has done to hold these camps with the help of industry leaders has enabled CCIT to meet the criteria for the grant.
    - The grant was supposed to end on 8/31/2018, but has been extended to 12/31/2018.
    - Once the grant is over the program will be institutionalized into the college.
- Karen has also worked with Daniel James Scott from TBT to identify 20 companies that could assist with internships.
    - CCIT needs contacts to introduce SPC to companies.
    - Advisory members could be the communication conduit to facilitate these introductions.

Membership Requirements of Advisory Committee

- Chris will send out the most recent Advisory Committee Charter to the members of the group.
- SPC/CCIT needs more active involvement.
    - Some members need to be giving more than in the recent past.
- We as a group need to regain traction and then see where everyone can be involved.
    - Then there will be a "call to action".

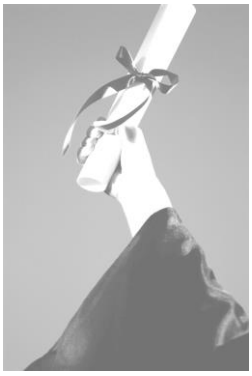
Miscellaneous Information

- John Duff and Laura Malave are working on grants for Cybersecurity.
- Dr. Stewart has been asked to speak in a news segment on technology.
    - He would like suggestions which program to speak about.
    - He has forgotten which station contacted him.
- BAS subplan changes:
    - Revisions to the Cybersecurity subplan.
    - Addition of a subplan for Cybersecurity Software Engineering.
- Meeting with Marketing to find out how to better use social media tools.
- Offer for CCIT staff to help committee members with specific problems.
    - Faculty would like to offer help as subject matter experts.
- Terry is working with Chrissy on a pilot which will train instructors how best to deal with students with a registered accommodation.

Next Meeting

The next Advisory Committee Meeting will be the big meeting with all the Advisory Committees and will be held on February 28th at 8:00 am at the EpiCenter. There will be a continental breakfast at the meeting. We will meet as a group following the large meeting at 9:10 am room TBD. I will send out an invite when I receive more information.

Meeting adjourned – 8:50 am



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