Environmental Science Technology - AS

Enhanced Comprehensive Academic Program Review 2016-17

Associate in Science Degree:
Environmental Science Technology

Academic Effectiveness and Assessment
St. Petersburg College

March 2017

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Enhanced Comprehensive Academic Program Review Produced by

Environmental Science Technology – AS 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

As the world around us grows more complex, so too does our need to take care of it. Gain the scientific background of how humans impact the environment and how society tries to keep it in check through environmental regulation and compliance. An Associate in Science degree in Environmental Science Technology provides students with a choice of three specializations: sustainability, water resource management or environmental resources and energy management. In addition, students gain a knowledge of green practices, the ability to help organizations meet environmental standards, and knowledge of how to manage air and water pollution remediation.

Degree Offered

An Associate in Science Degree in Environmental Science Technology is offered at SPC.

Program Performance

- *Actual Course Enrollment* decreased in 2015 (694) from the previous year (868).
- *Unduplicated Headcount* decreased in 2015 (519) from the previous year (686).
- *SSH Enrollment* decreased in 2015 (2,064) from the previous year (2,594).
- Comparisons between the Fall semesters indicated that the *Percent Full Metric* increased in Fall 2016 (63.7%) from Fall 2015 (62.2%).
- The *course success rate* decreased in 2015 (81.7%) from the previous year (82.4%).
- *Grade Distribution* indicated that the majority of students (81%) received an 'A', 'B' or 'C' during 2015.
- The Environmental Science Technology – AS program has identified the following *Industry Certification:* FL DEP Sediment and Erosion Control. Annual attainment goals for this industry are provided within the body of this document.
- *Internship Enrollment* for EVR 2949 remained the same between Fall 2015 and Spring 2016 (7), decreased in Summer 2016 (2), and increased in Fall 2016 (3).
- *Program Plans Taken by Plan* revealed that less than half of the students who were enrolled in the program during fall 2014, and had not graduated, remained in the program by fall 2015. By fall 2016, less than a quarter of the original (fall 2014) ENVSC-AS 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 Environmental Science Technology - AS program increased in 2015 (15) from the previous year (6).
- *Fulltime Faculty* taught 48.8% of the ECHs in 2015-16 as compared to 49.4% in 2014-15. Adjunct Faculty taught 51.2% of the ECHs in 2015-16 as compared to 50.6% in 2014-15.

- The highest semester for Adjunct ECHs was Spring 2012-13 in which adjunct faculty taught 100.0% of the program's course load. The three-semester average for adjuncts (51.2%) is not consistent with the College's general 55/45 Fulltime/Adjunct Faculty Ratio guideline.

Occupation Profile

- Two *occupation descriptions,* Environmental science and protection technicians, including health and Environmental scientists and specialists, including health were located in the Florida Department of Economic Opportunity (DEO) website for the Environmental Science Technology – AS program.
- The *2016 median hourly earnings* for Environmental science and protection technicians, including health was $18.33 in Florida. There were no county data available for this occupation. The *2016 median hourly earnings* for Environmental scientists and specialists, including health was $24.30 in Florida and $29.04 in Pinellas County.
- *Employment trend information* for Environmental science and protection technicians, including health showed an average annual increase (9.8%) for the period between 2016 and 2024 across the state. *Employment trend information* for Environmental scientists and specialists, including health showed an average annual increase (11.0% - 17.0%) for the period between 2016 and 2024 across the state and county.
- The *major employers* of the Environmental Science Technology – AS graduates are the City of St. Petersburg Water Department, the City of Clearwater – Water Department, the City of Largo Environmental Service, and Value Environmental Service.
- *Total Placement* in the Environmental Science Technology – AS program decreased in 2014-15 (80%) from the previous year (90%).
- *State Graduates data* were not available for the Environmental Science Technology program in 2014-15, with the exception of the Placement Rate.

Academics

- The *2015-16 Academic Program Assessment Report* indicated that the desired results were met for all four Program Learning Outcomes (PLOs) assessed in the Environmental Science Technology – AS Program.
- The *2015-16 Academic Program Assessment Follow-Up Report* has not yet been completed.

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 Environmental Science Technology – AS program; specifically, as they relate to faculty engagement, preparation and organization, and course instruction.
- Six *Recent Alumni surveys* were provided to the 2014-15 graduates of the Environmental Science Technology – AS program. One response was received

from an A.S. graduate. Since a single response cannot accurately represent the entire program, Alumni survey results will not be reported.

- *Labor Insight/Jobs* reports indicated the majority of workforce openings during the past six months, for Environmental were in Tampa, FL. The top skills listed in the openings were environmental science and cleaning; and the top industry sector was `Professional, scientific and technical services.'

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

Environmental science is a growing field with employment opportunities in many different industries from the profit and nonprofit sectors. The environmental science program at SPC has been in existence for less than ten years and has continued to provide technicians that add employees to a growing industry. While the number of graduates declined in 2014, in 2015 the number of graduates increased. In addition, the number of students enrolled in environmental science in 2015 increased compared to the previous year.

It is important that the program seriously consider how best to attract, retain, and graduate a greater number of students. The department will continue to explore options that will strengthen the existing program. In particular, the number of industry certifications such as RCRA or the FEMA IS-700a has increased in recent years. We see tremendous opportunities to build on SPCs strengths in environment and sustainability to create new opportunities for innovation in scholarship, learning and engagement.

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://www.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.

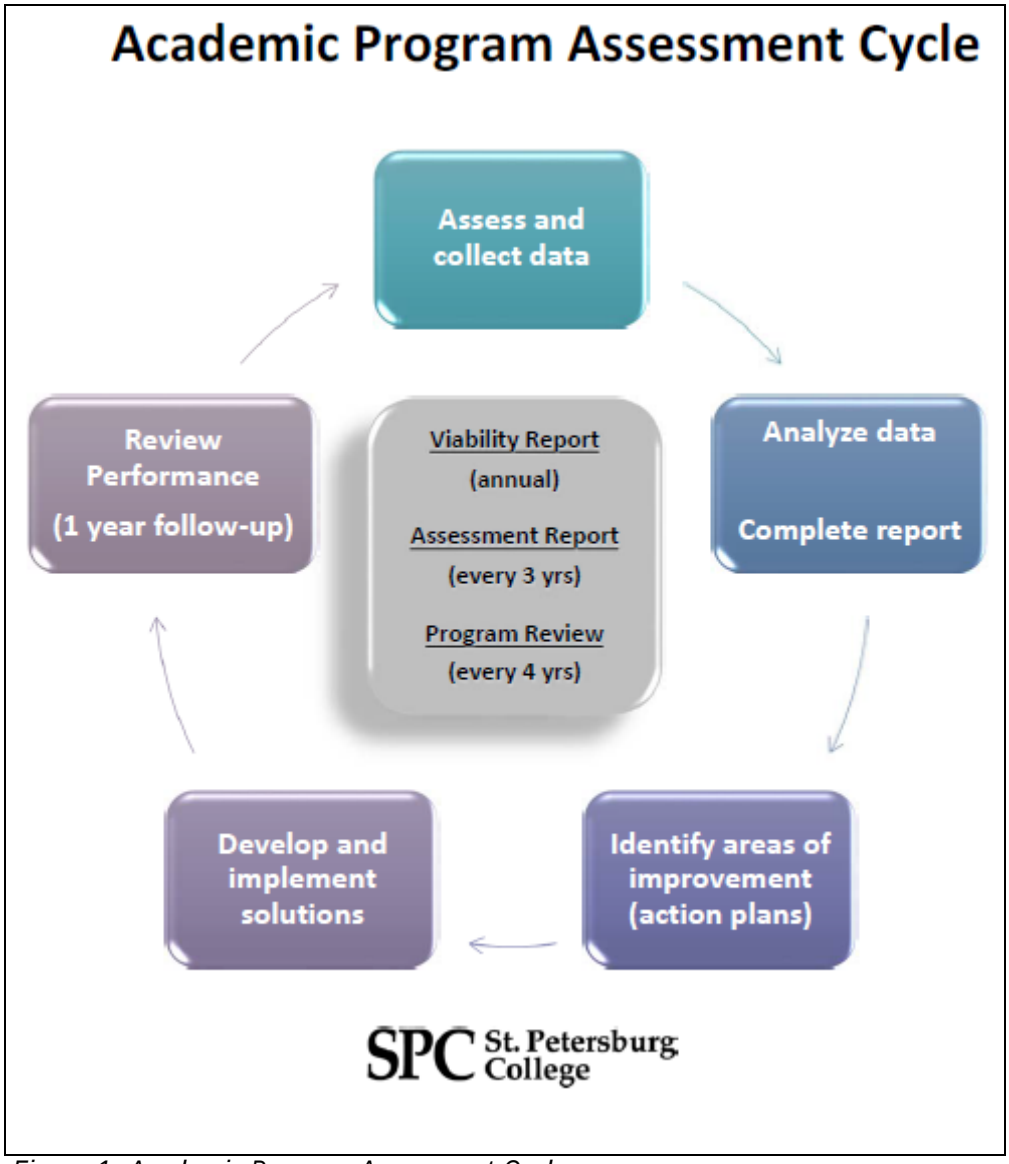


Figure 1: Academic Program Assessment Cycle

Program Description

As the world around us grows more complex, so too does our need to take care of it. Gain the scientific background of how humans impact the environment and how society tries to keep it in check through environmental regulation and compliance. An Associate in Science degree in Environmental Science Technology provides students with a choice of three specializations: sustainability, water resource management or environmental resources and energy management. In addition, students gain a knowledge of green practices, the ability to help organizations meet environmental standards, and knowledge of how to manage air and water pollution remediation.

Degree Offered

An Associate in Science Degree in Environmental Science Technology is offered at SPC.

For a complete listing of all courses within the Environmental Science Technology Program, please see Appendix A.

Accreditation

No accreditation information is on file for the Environmental Science Technology program.

Program Learning Outcomes

1. The student will scientifically interpret and apply the concepts, principles and theories that constitute aspects of environmental science.
2. The student will evaluate environmental risks and develop plans to address their effects using current methodology and technology.
3. The student will evaluate the role of environmental policies, laws and management practices on the changes in a local ecosystem over a defined period of time.
4. The student will systematically apply field testing and field measurement collection practices in an ecosystem.

Measure Descriptions

The CAPR reports include twenty-three 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 2016. 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:** 2012, 2013, 2014, 2015
- **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:** 2012, 2013, 2014, 2015
- **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:** 2012, 2013, 2014, 2015
- **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:** 2015-16 Fall, Spring, Summer; 2016-17 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:** 2012, 2013, 2014, 2015
- **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:** 2012, 2013, 2014, 2015
- **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:** 2015-16 Fall, Spring, Summer; 2016-17 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:** 2014-15 Fall
- **Enroll History Acad Term Desc (must be same as above):** 2014-15 Fall
- **Student Term History Academic Plan:** Applicable Program plan
- **Comparison Filters**
  Academic Year - Term Desc - Multi: 2014-15 Fall, Spring, Summer; 2015-16 Fall, Spring, Summer; 2016-17 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:** 2012, 2013, 2014, 2015
- **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 2017)*

Measure #13: *Capital Expenditures (will be available by December 2017)*

Measure #14: *State and County Trends and Wage Information*
Employment trend information is reported by state and county. Jobs (2016) refers to the average annual job openings due to growth and net replacement; % Change (2016-2024) 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 2017)***

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.

Measure #23: *Labor Insight/Jobs*
Labor Insight/Jobs provides a variety of reports which are based on current workforce openings. Reports are available by occupations, top titles, education and experience, top skills, top industry sectors, top employers, salary distributions, and job counts. Filters allow the user to select a timeframe, geographic location, and job title. A license is required to access Burning Glass at *http://laborinsight.burning-glass.com/*

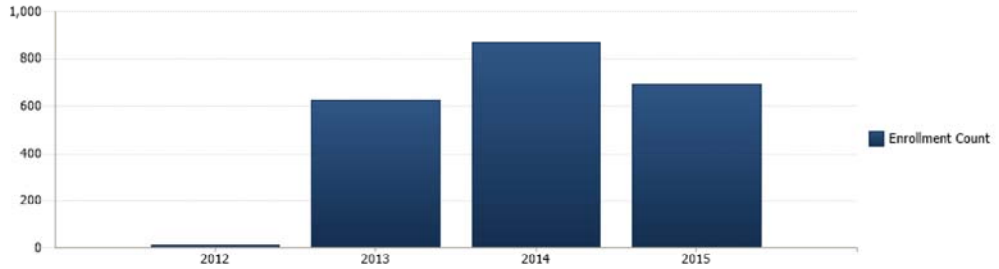
Program Performance

CAPR > Enrollment

Enrollment | Performance | Percent Full | Graduates | Grade Distribution | Course Groups | Program Plans Taken by Plan

Enrollment Count Graph

Student Term Career - Program - Plan - Subplan: **UGRD**, Class College School Dept - Academic Group Desc - Academic Organization - Subjec...



Enrollment Count

Student Term Career - Program - Plan - Subplan: **UGRD**, Class College School Dept - Academic Group Desc - Academic Organization - Subjec...

Term Academic Year - Term Desc	Enrollment Count
2012	14
2013	627
2014	868
2015	694

Student System Cube Refresh

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CAPR Process Document

CAPR Process Document

Academic Year - Term Desc - Multi: 2012, 2013, 2014, 2015

Campus Description: All

Academic Plan - Multi: All

College - Group - Acad Org - Subject: ENVSCI-LD

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

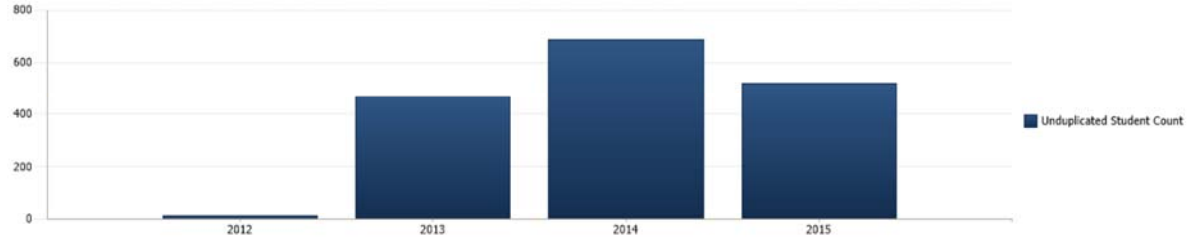
Course Group: All

Academic Program Viability Report > Enrollment

Enrollment | Performance | Percent Full | Graduates | Course Groups

Unduplicated Student Count Graph

Class Academic Career: **UGRD**, Student Term Career Desc - Program Desc - Plan Desc - Subplan Desc: **Undergraduate**, Class College School Dept - Academic Group Desc - Academic Organization...



Unduplicated Student Count

Class Academic Career: **UGRD**, Student Term Career Desc - Program Desc - Plan Desc - Subplan Desc: **Undergraduate**, Class College School Dept - Academic Group Desc - Academic Organization...

Term Academic Year - Term Desc	Unduplicated Student Count
2012	13
2013	470
2014	686
2015	519

Student System Cube Refresh

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Academic Year - Term Desc - Multi: 2012, 2013, 2014, 2015

Campus Description: All

Career - Program - Plan - Subplan - Multi: Undergraduate

College - Group - Acad Org - Subject: ENVSCI-LD

Course Instructional Method: All

Student Type (FTIC): All

Age Group: All

Ethnic Group: All

Gender: All

Custom Cohort: All

Student Group: All

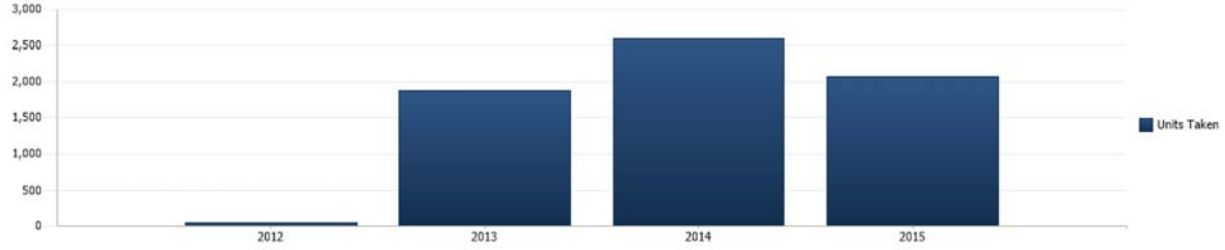
Course Group: All

Academic Program Viability Report > Enrollment

Enrollment | Performance | Percent Full | Graduates | Course Groups

SSH Enrollment Graph

Class Academic Career: **UGRD**, Student Term Career Desc - Program Desc - Plan Desc - Subplan Desc: **Undergraduate**, Class College School Dept - Academic Group Desc - Academic Organizatio...



SSH Enrollment

Class Academic Career: **UGRD**, Student Term Career Desc - Program Desc - Plan Desc - Subplan Desc: **Undergraduate**, Class College School Dept - Academic Group Desc - Academic Organizatio...

Term Academic Year - Term Desc	Units Taken
2012	41
2013	1,869
2014	2,594
2015	2,064

Student System Cube Refresh

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Academic Year - Term Desc - Multi: 2012, 2013, 2014, 2015

Campus Description: All

Career - Program - Plan - Subplan - Multi: Undergraduate

College - Group - Acad Org - Subject: ENVSCI-LD

Course Instructional Method: All

Student Type (FTIC): All

Age Group: All

Ethnic Group: All

Gender: All

Custom Cohort: All

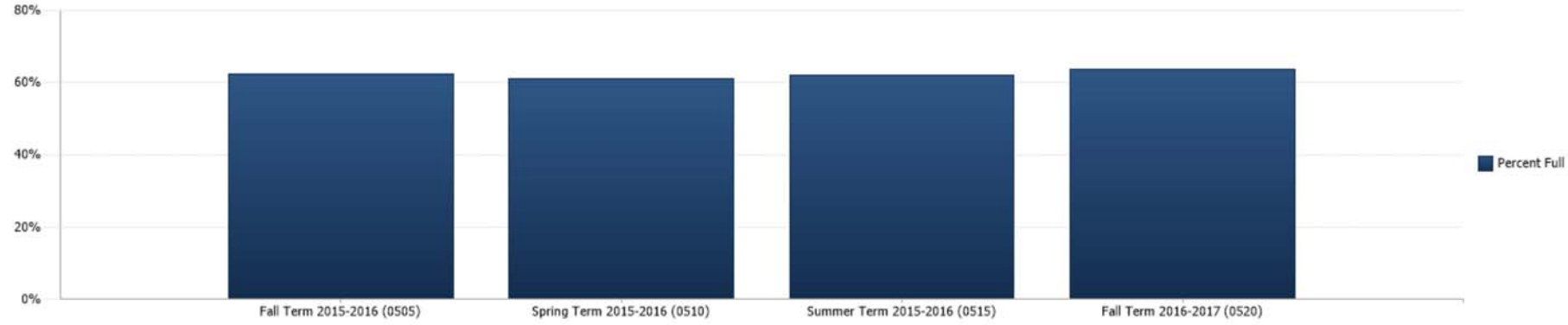
Student Group: All

Course Group: All

Academic Program Viability Report > Percent Full

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: **ENVSCI-LD**



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: **ENVSCI-LD**, Filter empty rows and columns

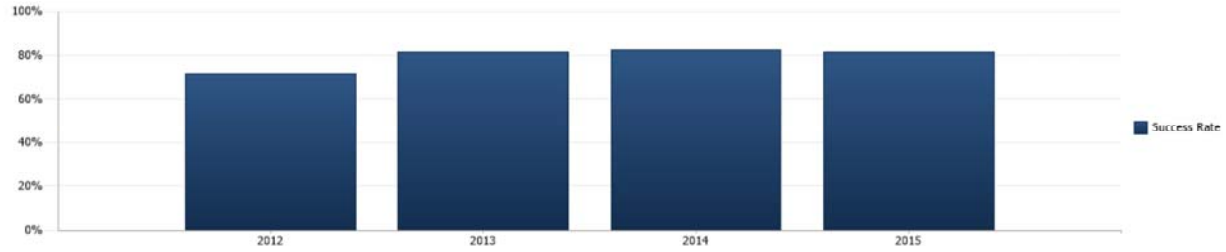
		All				
Term Academic Year - Term Desc	Measures		Blended	Face-to-Face	Independent Study	Online
Fall Term 2015-2016 (0505)	Enrollment Count	371	11	124		236
Fall Term 2015-2016 (0505)	Standard Course Load	596	34	295		267
Fall Term 2015-2016 (0505)	Percent Full	62.2%	32.4%	42.0%		88.4%
Spring Term 2015-2016 (0510)	Enrollment Count	251		87	12	152
Spring Term 2015-2016 (0510)	Standard Course Load	411		174	74	163
Spring Term 2015-2016 (0510)	Percent Full	61.1%		50.0%	16.2%	93.3%
Summer Term 2015-2016 (0515)	Enrollment Count	72		16	2	54
Summer Term 2015-2016 (0515)	Standard Course Load	116		48	20	48
Summer Term 2015-2016 (0515)	Percent Full	62.1%		33.3%	10.0%	112.5%
Fall Term 2016-2017 (0520)	Enrollment Count	286	18	107	5	156
Fall Term 2016-2017 (0520)	Standard Course Load	449	34	211	25	179
Fall Term 2016-2017 (0520)	Percent Full	63.7%	52.9%	50.7%	20.0%	87.2%

Academic Program Viability Report > Performance

Enrollment | Performance | Percent Full | Graduates | Course Groups

Success Rate Graph

Grade Success Rate Grading Basis: **Y**, Class Academic Career: **UGRD**, Student Term Career Desc - Program Desc - Plan Desc - Subplan Desc: **Undergraduate**, Grade Success Rate Grade Input: **Y**, Cla...



Performance

Grade Success Rate Grading Basis: **Y**, Class Academic Career: **UGRD**, Student Term Career Desc - Program Desc - Plan Desc - Subplan Desc: **Undergraduate**, Grade Success Rate Grade Input: **Y**, Cla...

Term Academic Year - Term Desc	Enrollment Count	Success Rate	Withdrawal Rate	F Rate	WF Rate
2012	14	71.4%	21.4%	0.0%	0.0%
2013	627	81.3%	5.6%	7.2%	3.5%
2014	866	82.4%	4.0%	4.5%	3.6%
2015	694	81.7%	5.8%	6.1%	2.4%

Student System Cube Refresh

Last Refresh: 9/9/2016 10:31:34 AM

Academic Year - Term Desc - Multi: 2012, 2013, 2014, 2015

Campus Description: All

Career - Program - Plan - Subplan - Multi: Undergraduate

College - Group - Acad Org - Subject: ENVSCI-LD

Course Instructional Method: All

Student Type (FTIC): All

Age Group: All

Ethnic Group: All

Gender: All

Student Group: All

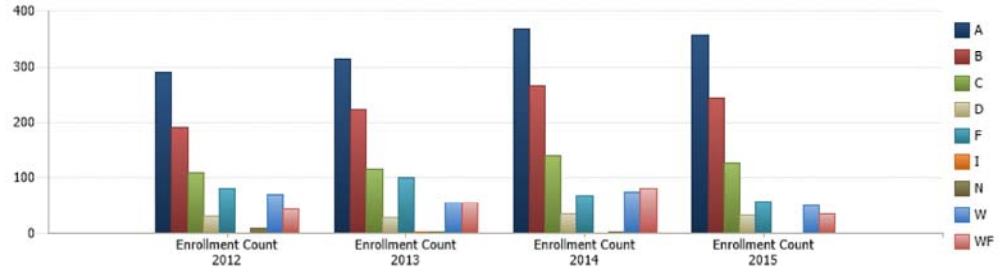
Course Group: All

CAPR > Grade Distribution

Enrollment | Performance | Percent Full | Graduates | Grade Distribution | Course Groups | Program Plans Taken by Plan

Student Grade Distribution Graph

Student Term Career - Program - Plan - Subplan: **UGRD**, Academic Plan: **ENVSC-AS**, Grade Success Rate Grading Basis: **Y**, Grade Success Rate...



Student Grade Distribution

Student Term Career - Program - Plan - Subplan: **UGRD**, Academic Plan: **ENVSC-AS**, Grade Success Rate Grading Basis: **Y**, Grade Success Rate...

	Enrollment Count									
	All									
Term Academic Year - Term Desc		A	B	C	D	F	I	N	W	WF
2012	824	290	191	108	32	81		9	69	44
2013	895	315	223	115	28	100	1	4	54	55
2014	1,034	368	266	140	36	68		2	74	80
2015	902	357	244	126	33	57			50	35

Student System Cube Refresh

Last Refresh: 4/12/2017 5:43:25 AM

CAPR Process Document

CAPR Process Document

Academic Year - Term Desc - Multi: 2012, 2013, 2014, 2015

Campus Description: All

Academic Plan - Multi: ENVSC-AS

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

Certifications Environmental Science Technology AS	Earned 2013 - 14	Earned 2014 -15	Goal 2015 -16	Earned 2015-16
FL DEP Sediment and Erosion Control		11	11	0

View: **Course Groups**
Date: **10/3/2016**
Dashboard: **Course Groups**
Parameter: **Fall Term 2015-2016 (0505),Spring Term 2015-2016 (0510),Summer Term 2015-2016 (0515),Fall Term 2016-2017 (0520),All,Undergraduate,ENVSCI-LD,All,All,All,All,All,All**

	Fall Term 2015-2016 (0505)		Spring Term 2015-2016 (0510)		Summer Term 2015-2016 (0515)		Fall Term 2016-2017 (0520)	
Class Course Group - Subject Catalog Nbr	Unduplicated Student Count	Number of Classes	Unduplicated Student Count	Number of Classes	Unduplicated Student Count	Number of Classes	Unduplicated Student Count	Number of Classes
EVR2949	7	1	7	1	2	1	3	1

CAPR > Program Plans Taken by Plan

Program Plans Taken by Plan

Student Enrollment History Class Academic Career: **UGRD**, Class Academic Career: **UGRD**, Student Enrollment History Academic Year - Term Desc: **Fall Term 2014-2015 (0490)**, Student Term History Academic Plan: **ENVSC-AS**, Student Term History Academic Year - Term Desc...

	Fall Term 2014-2015 (0490)	Spring Term 2014-2015 (0495)	Summer Term 2014-2015 (0500)	Fall Term 2015-2016 (0505)	Spring Term 2015-2016 (0510)	Summer Term 2015-2016 (0515)	Fall Term 2016-2017 (0520)
Academic Plan	Unduplicated Student Count	Unduplicated Student Count	Unduplicated Student Count	Unduplicated Student Count	Unduplicated Student Count	Unduplicated Student Count	Unduplicated Student Count
All	128	100	51	78	64	36	53
ENVSC-AS	128	87	39	54	33	19	23
GEN-AA		4	6	7	7	3	7
-				1	1		
BIO-TR		2	2	2	3	2	2
FIRE-AS				1	1		1
BACCAPP-NO						1	
BIOLOGY-BS				1	2	2	2
BUS-AS		1					
BUS-TR				1	1		1
CIT-AS							1
COMPNET-AS		1	1	1	1	1	
CRIM-TR		1	1	1	1	1	
CST-AS				1			
EDU-TR				1	2	1	2
ENGINE-TR							1
ENRCH-NO		1	1	1			

Student System Cube Refresh

Last Refresh: 4/12/2017 5:43:25 AM

CAPR Process Document

CAPR Process Document

Cohort Selection Filters

Student Term History Academic Year-Term Desc: Fall Term 2014-2015 (0490)

Enroll History Acad Term Desc (must be same as above): Fall Term 2014-2015 (0490)

Student Term History Academic Plan: ENVSC-AS

Student Term History FTIC: All

Student Term History Enrollment Type: All

Student Term History Total Cumulative Units: All

Cohort Selection Filters

Student Enroll History Instructional Modality: All

Student Term History Part Full Time: All

Student Term History Age Group: All

Ethnic Group: All

Gender: All

Custom Cohort: All

Comparison Filters

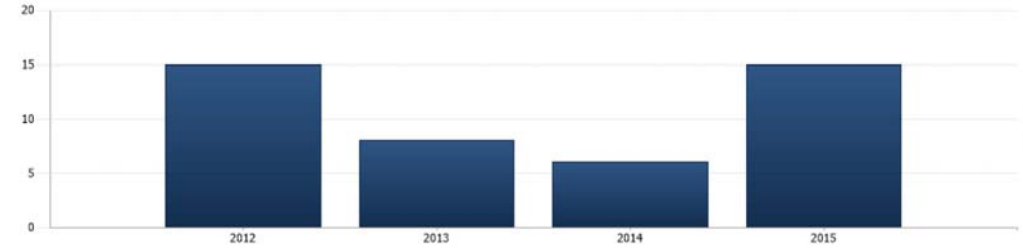
Academic Year - Term Desc - Multi: Fall Term 2014-2015 (0490), Spring Term 2...

Academic Program Viability Report > Graduates

Enrollment | Performance | Percent Full | Graduates | Course Groups

Overall Graduates Trend

No background selections exist



Overall Graduates Count

No background selections exist

Graduation Degree - Plan - Sub Plan	Measures	2012	2013	2014	2015
ENVSC-AS	Graduation Data Count	15	8	6	15

Student System Cube Refresh

Last Refresh: 9/9/2016 10:31:34 AM

Academic Year - Term Desc - Multi: 2012, 2013, 2014, 2015

Graduation Degree Plan Subplan - Multi: ENVSC-AS

Age Group: All

Gender: All

Ethnic Group: All

Custom Cohort: All

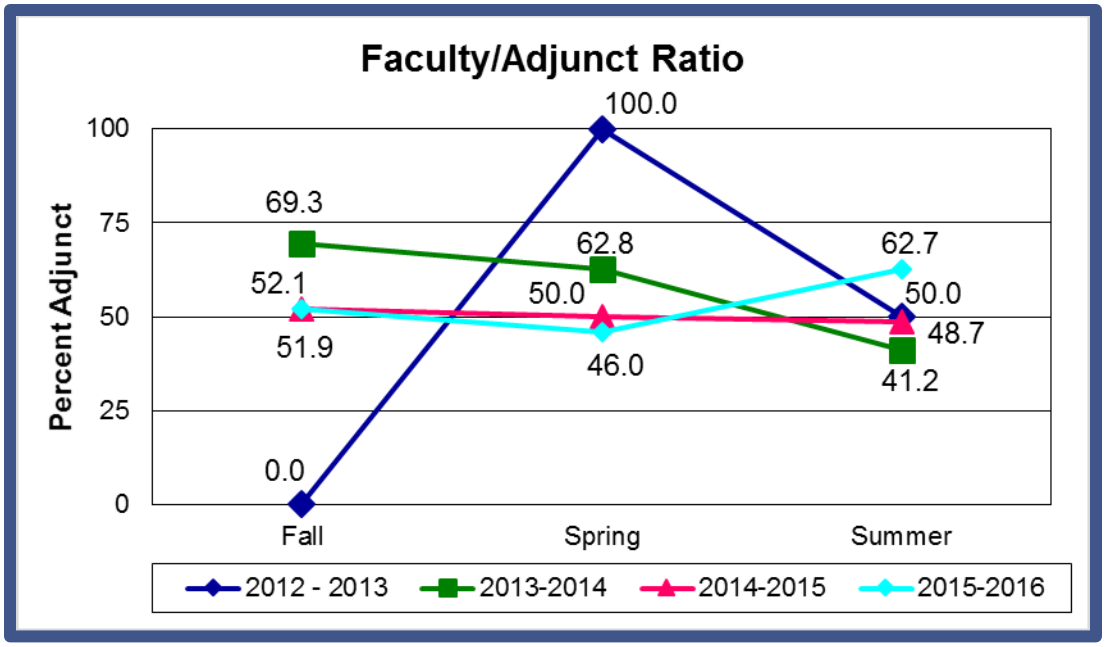
Student Group: All

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 2012-2013	0.0	0.0%	0.0	0.0%	0.0	0.0%
Spring 2012-2013	0.0	0.0%	0.0	0.0%	3.0	100.0%
Summer 2012-2013	0.3	50.0%	0.0	0.0%	0.3	50.0%
2012-2013 Total	0.3	7.1%	0.0	0.0%	3.3	92.9%
Fall 2013-2014	13.5	30.7%	0.0	0.0%	30.5	69.3%
Spring 2013-2014	16.0	37.2%	0.0	0.0%	27.0	62.8%
Summer 2013-2014	10.0	58.8%	0.0	0.0%	7.0	41.2%
2013-2014 Total	39.5	38.0%	0.0	0.0%	64.5	62.0%
Fall 2014-2015	23.0	47.9%	0.0	0.0%	25.0	52.1%
Spring 2014-2015	25.0	50.0%	0.0	0.0%	25.0	50.0%
Summer 2014-2015	10.0	51.3%	0.0	0.0%	9.5	48.7%
2014-2015 Total	58.0	49.4%	0.0	0.0%	59.5	50.6%
Fall 2015-2016	25.0	48.1%	0.0	0.0%	27.0	51.9%
Spring 2015-2016	23.5	54.0%	0.0	0.0%	20.0	46.0%
Summer 2015-2016	6.3	37.3%	0.0	0.0%	10.5	62.7%
2015-2016 Total	54.8	48.8%	0.0	0.0%	57.5	51.2%

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 Environmental science and protection technicians, including health (194091) used by the DEO is shown below:

Performs laboratory and field tests to monitor the environment and investigate sources of pollution, including those that affect health. Under direction of an environmental scientist or specialist, may collect samples of gases, soil, water, and other materials for testing and take corrective actions as assigned.

The occupation description for Environmental scientists and specialists, including health (192041) used by the DEO is shown below:

Conduct research or perform investigation for the purpose of identifying, abating, or eliminating sources of pollutants or hazards that affect either the environment or the health of the population. Utilizing knowledge of various scientific disciplines may collect, synthesize, study, report, and take action based on data derived from measurements or observations of air, food, soil, water, and other sources. Exclude "Zoologists and Wildlife Biologists" (191023), Conservation Scientists (191031), "Forest and Conservation Technicians" (194093), Fish and Game Wardens (333031), and Forest and Conservation Workers" (454011).

State and County Trends and Wage Information

The distribution of 2016 wage information for Environmental science and protection technicians, including health and Environmental scientists and specialists, including health is located in the table below. The median hourly earnings for Environmental science and protection technicians, including health was $18.33 in Florida. There were no county data available for this occupation. The median hourly earnings for Environmental scientists and specialists, including health was $24.30 in Florida and $29.04 in Pinellas County.

Employment trend information for occupations related to Environmental Science Technology are also provided in the tables. An average annual increase in employment for Environmental science and protection technicians, including health (9.8%) is shown for the period between 2016 and 2024, across the state and county. An average annual increase in employment for Environmental scientists and specialists, including health

(11.0% - 17.0%) is shown for the period between 2016 and 2024, across the state and county.

Employment Data

Growth for Environmental science and protection technicians, including health

	Jobs (2016)	% Change (2016-2024)	Median Earnings
Florida	1,521	9.8%	$18.33/hr
Pinellas County	N/A	N/A	N/A

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

Growth for Environmental scientists and specialists, including health

	Jobs (2016)	% Change (2016-2024)	Median Earnings
Florida	5,743	11.0%	$24.30/hr
Pinellas County	295	17.0%	$29.04/hr

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

Major Employers

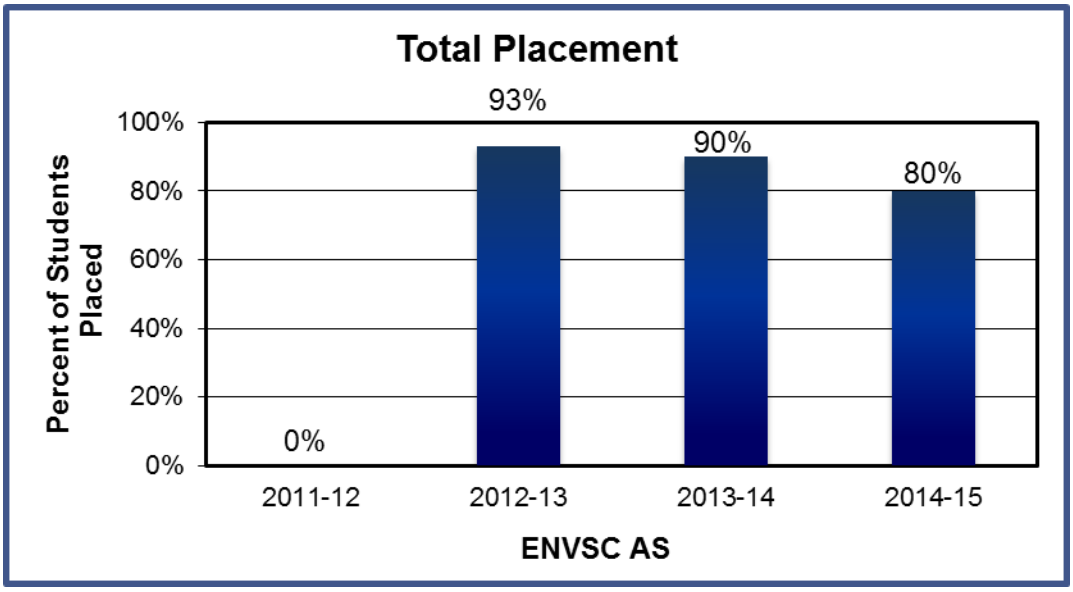
Graduates of SPC's Environmental Science Technology – AS program are employed in various areas related to their field. The primary local employers of these graduates are the City of St. Petersburg Water Department, the City of Clearwater – Water Department, the City of Largo Environmental Service, and Value Environmental Service, as depicted in the table below.

Major Employers

Employers of Environmental Science Technology - AS Graduates
City of St. Petersburg Water Department
City of Clearwater-Water Department
City of Largo Environmental Service
Value Environmental Service

Source: Recent Alumni Survey reports and program administrator records

2015-16 Placement Data



ENVSC AS		
	Pool Count	**Percent Placed**
2011-12	0	0%
2012-13	14	93%
2013-14	10	90%
2014-15	N/A	80%

Source: FETPIP Follow-up Outcomes http://www.fldoe.org/fetpip/ccs.asp

Academics

Educational Outcomes

As part of SPC quality improvement efforts, academic assessments are conducted on each AAS/AS/BS/BAS program every three years to evaluate the quality of the program's educational outcomes. The Environmental Science Technology – AS 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 four PLOs is listed below:

1. The student will scientifically interpret and apply the concepts, principles and theories that constitute aspects of environmental science.
2. The student will evaluate environmental risks and develop plans to address their effects using current methodology and technology.
3. The student will evaluate the role of environmental policies, laws and management practices on the changes in a local ecosystem over a defined period of time.
4. The student will systematically apply field testing and field measurement collection practices in an ecosystem.

Means of Assessment

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

The Environmental Science Technology (AS) program used the results of an evaluation (PLOs 1 and 2), a final project (PLO 3), and a field notebook (PLO 4). The criteria for success stated that students should be rated as having "met standards" or "exceeded standards" on the supervisor's completed evaluation and having scored 70% or better on the final project and the field notebook.

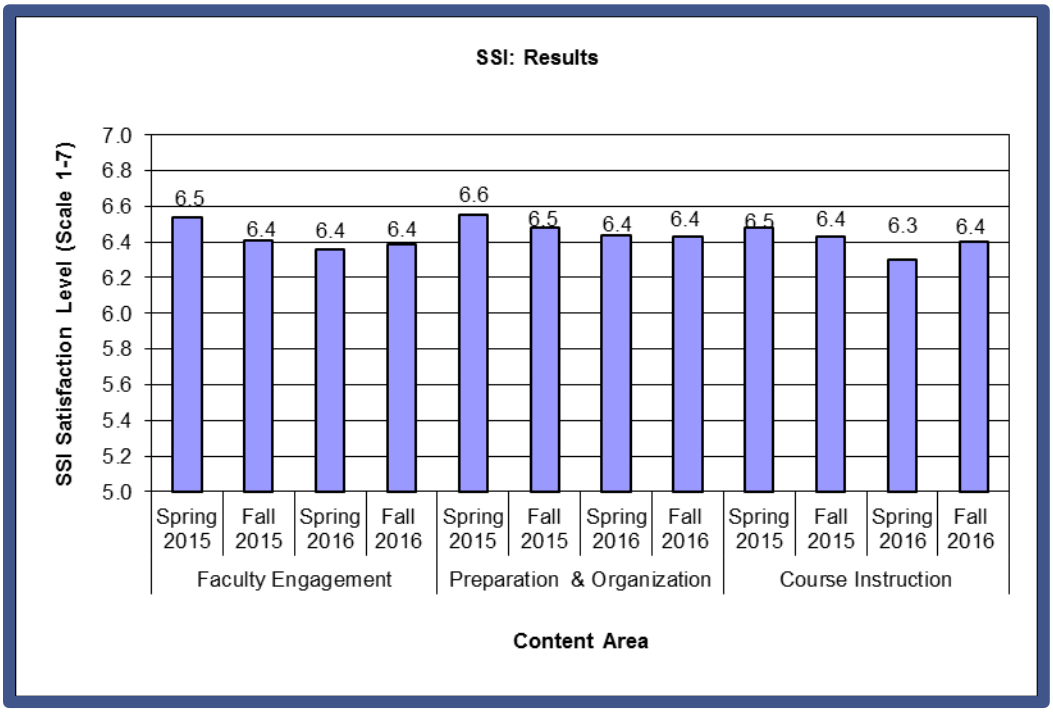
Data were collected during Fall 2013 through Spring 2016. The students whom were assessed either met or exceeded the standards of the evaluation and achieved a score of 70% or better on the final project and field notebook; thereby meeting the criteria for success for all four PLOs.

The 2015-16 follow-up report draft has not yet been approved.

For the complete 2015-16 Environmental Science Technology Program Assessment Report, please see Appendix B.

Stakeholder Perceptions

Student Survey of Instruction (SSI)



Source: St. Petersburg College Student Survey of Instruction database

St. Petersburg College
SPC

Environmental Science Technology

2015-16 Alumni Survey Report

Survey of 2014-15 Graduates

- *A.S. Degree: Environmental Science Technology*

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.

Six Alumni Surveys were provided to the 2014-15 graduates of the Environmental Science Technology program. One response was received from an A.S. graduate. Since a single response cannot accurately represent the entire program, alumni survey results will not be reported.

Environmental Science Technology

2015-16 Employer Survey Report

Employer Survey of 2014-15 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.

Employer Surveys are sent out based on the permission provided by recent graduates in the 2014-15 recent graduate survey. Since permission was not received from recent graduates, there is no Employer Survey information available.

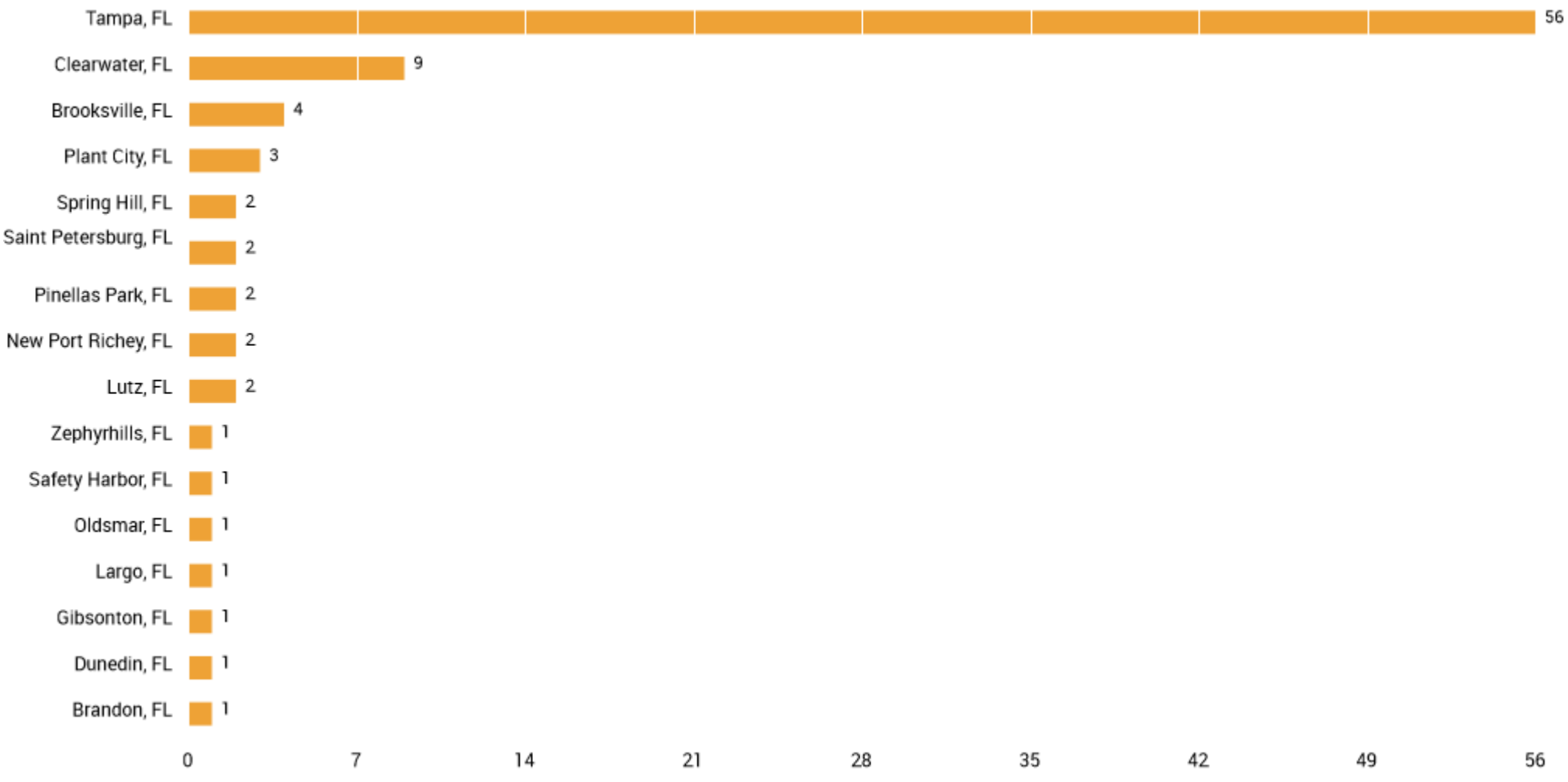
Source: Labor Insight Jobs (Burning Glass Technologies)

Top Cities

Dec. 15, 2016 - Mar. 14, 2017 (Data not available after Mar. 12, 2017)
There are 89 postings available with the current filters applied.
There are 0 unspecified or unclassified postings.

Active Selections

Last 90 days AND (MSA : Tampa-St. Petersburg-Clearwater, FL (Metropolitan Statistical Area)) AND (Title with : Environmental)



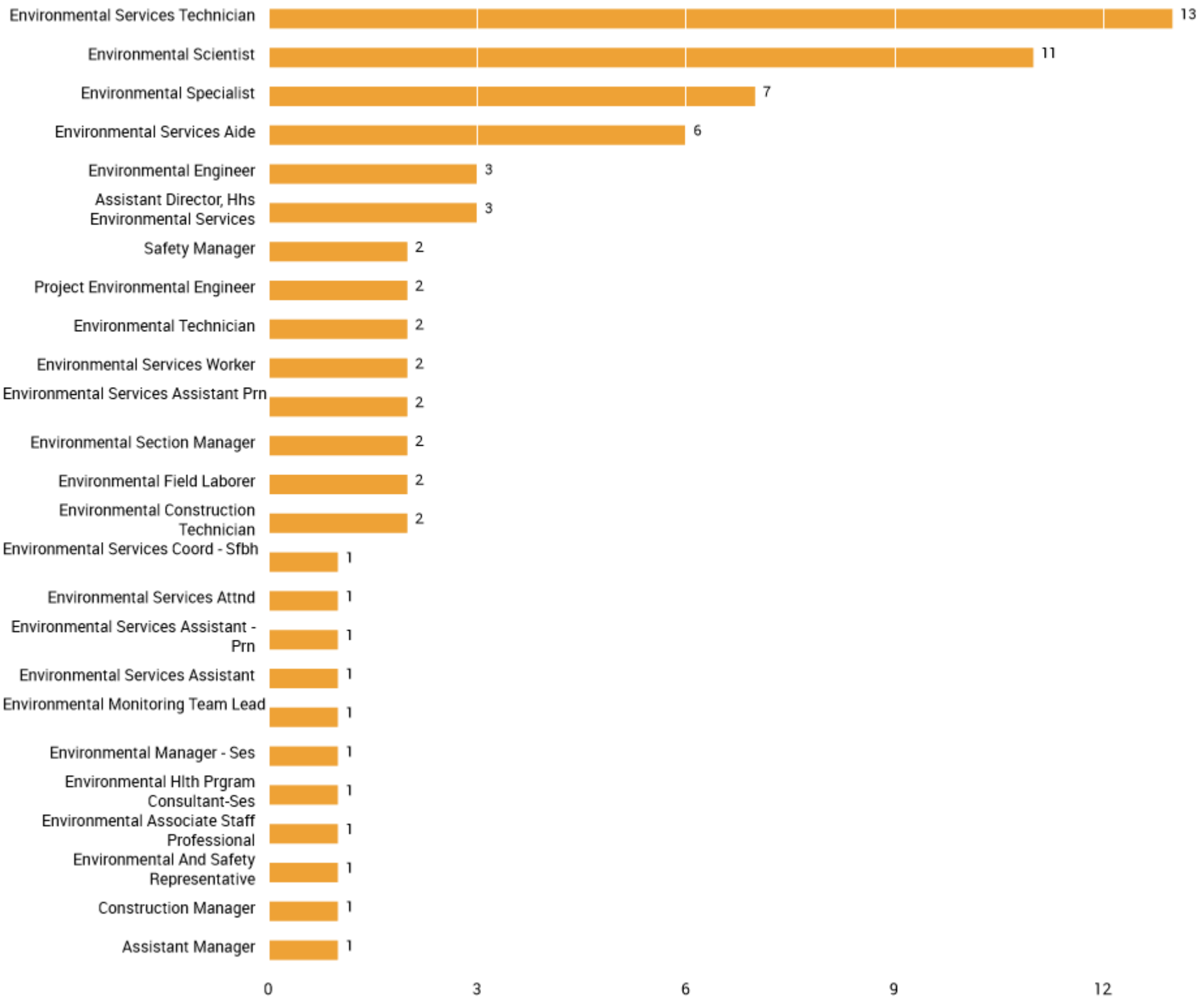
Source: Labor Insight Jobs (Burning Glass Technologies)

Top Titles

Dec. 15, 2016 - Mar. 14, 2017 (Data not available after Mar. 12, 2017)
There are 89 postings available with the current filters applied.
There are 0 unspecified or unclassified postings.

Active Selections

Last 90 days AND (MSA : Tampa-St. Petersburg-Clearwater, FL (Metropolitan Statistical Area)) AND (Title with : Environmental)



Source: Labor Insight Jobs (Burning Glass Technologies)

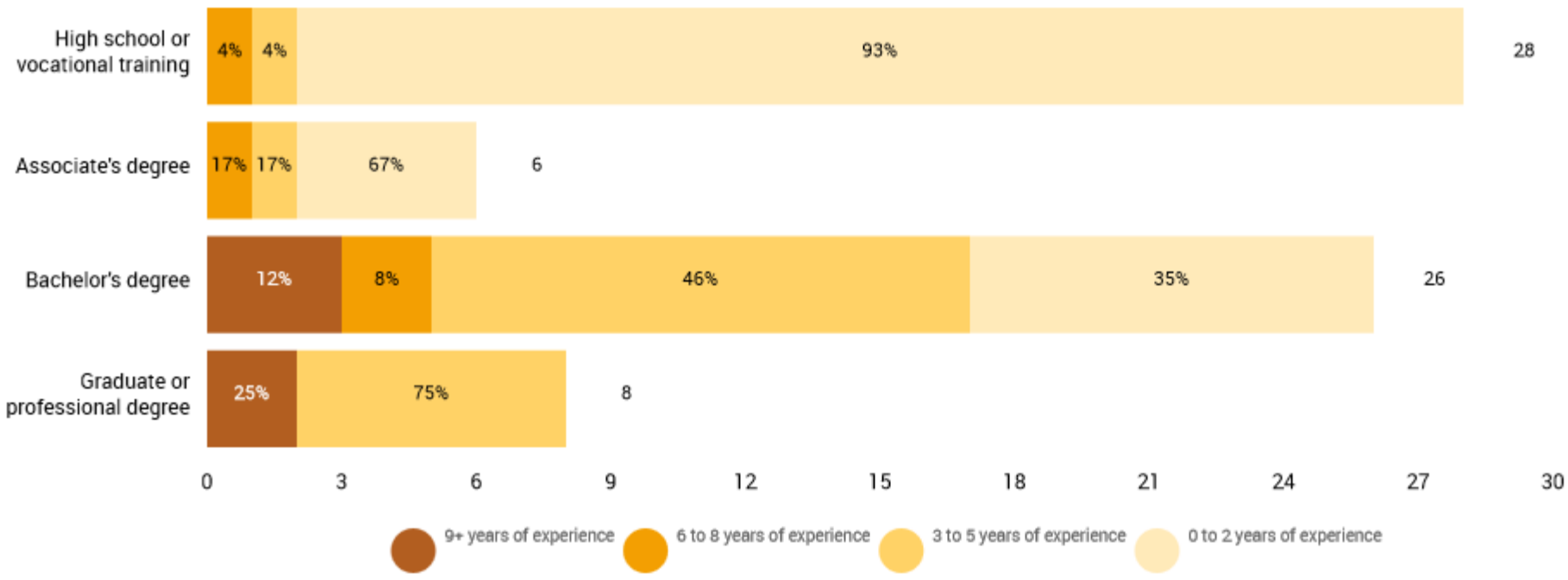
Education and Experience

This report provides information on both the preferred and minimum/required education levels listed in job postings. For this reason, a job posting may be counted in more than one of the educational categories shown below.

Dec. 15, 2016 - Mar. 14, 2017 (Data not available after Mar. 12, 2017)
There are 89 postings available with the current filters applied.
There are 34 unspecified or unclassified postings.

Active Selections

Last 90 days AND (MSA : Tampa-St. Petersburg-Clearwater, FL (Metropolitan Statistical Area)) AND (Title with : Environmental)



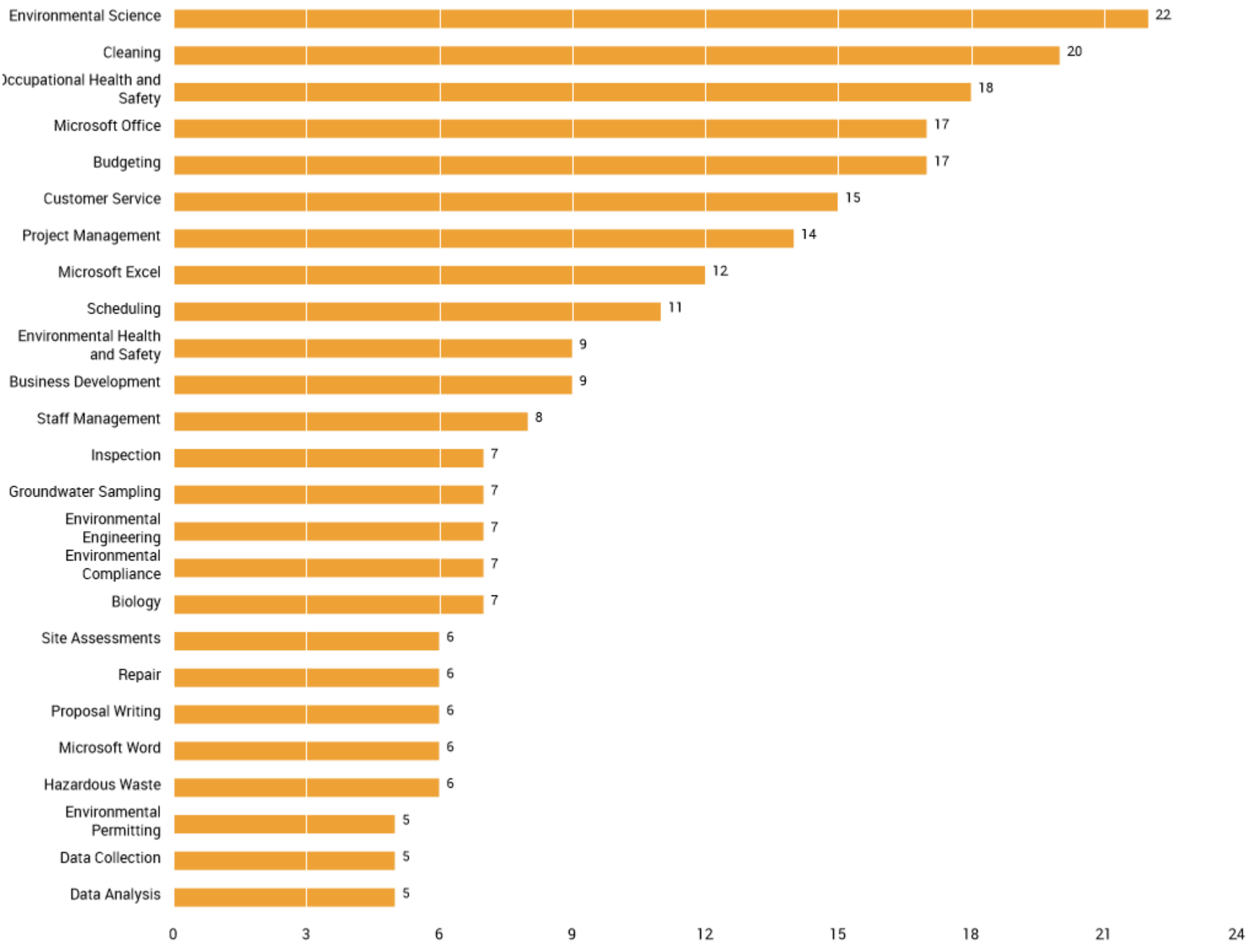
Source: Labor Insight Jobs (Burning Glass Technologies)

Top Skills

Dec. 15, 2016 - Mar. 14, 2017 (Data not available after Mar. 12, 2017)
There are 89 postings available with the current filters applied.
There are 13 unspecified or unclassified postings.

Active Selections

Last 90 days AND (MSA : Tampa-St. Petersburg-Clearwater, FL (Metropolitan Statistical Area)) AND (Title with : Environmental)



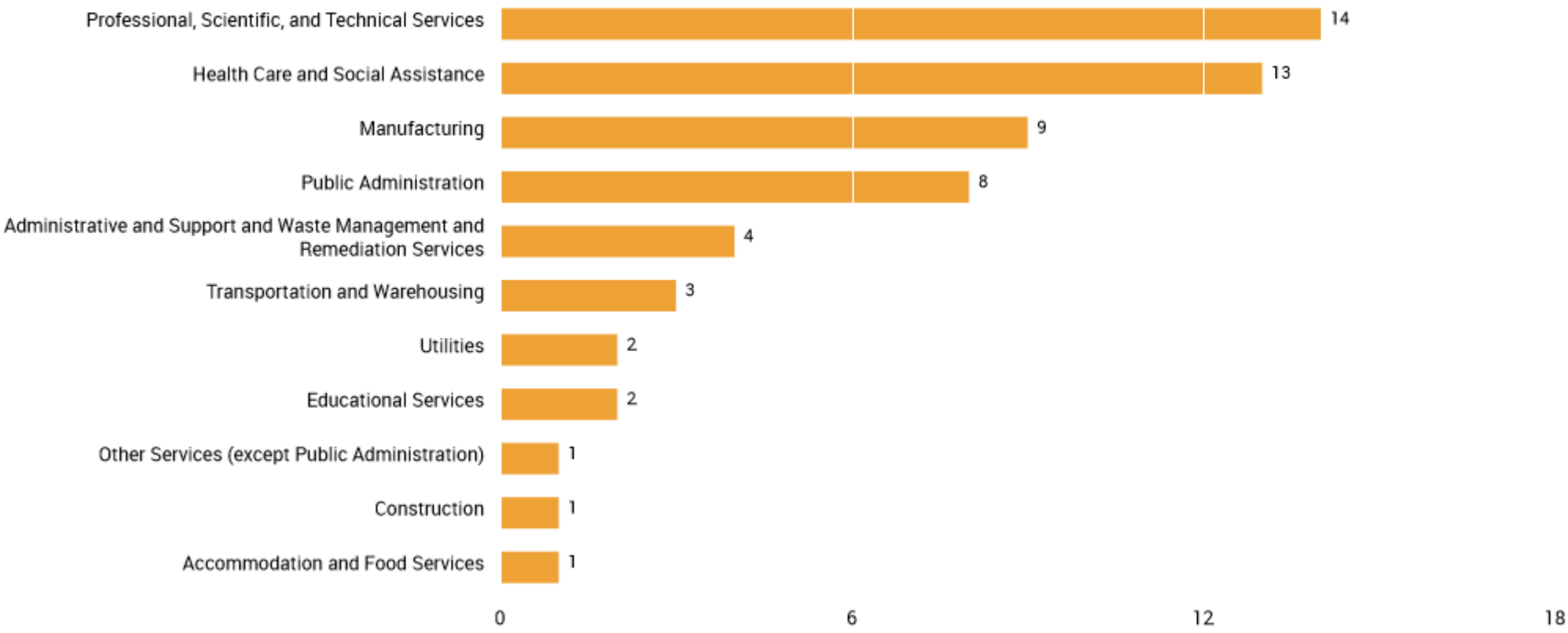
Source: Labor Insight Jobs (Burning Glass Technologies)

Top Industry Sectors

Dec. 15, 2016 - Mar. 14, 2017 (Data not available after Mar. 12, 2017)
There are 89 postings available with the current filters applied.
There are 31 unspecified or unclassified postings.

Active Selections

Last 90 days AND (MSA : Tampa-St. Petersburg-Clearwater, FL (Metropolitan Statistical Area)) AND (Title with : Environmental)



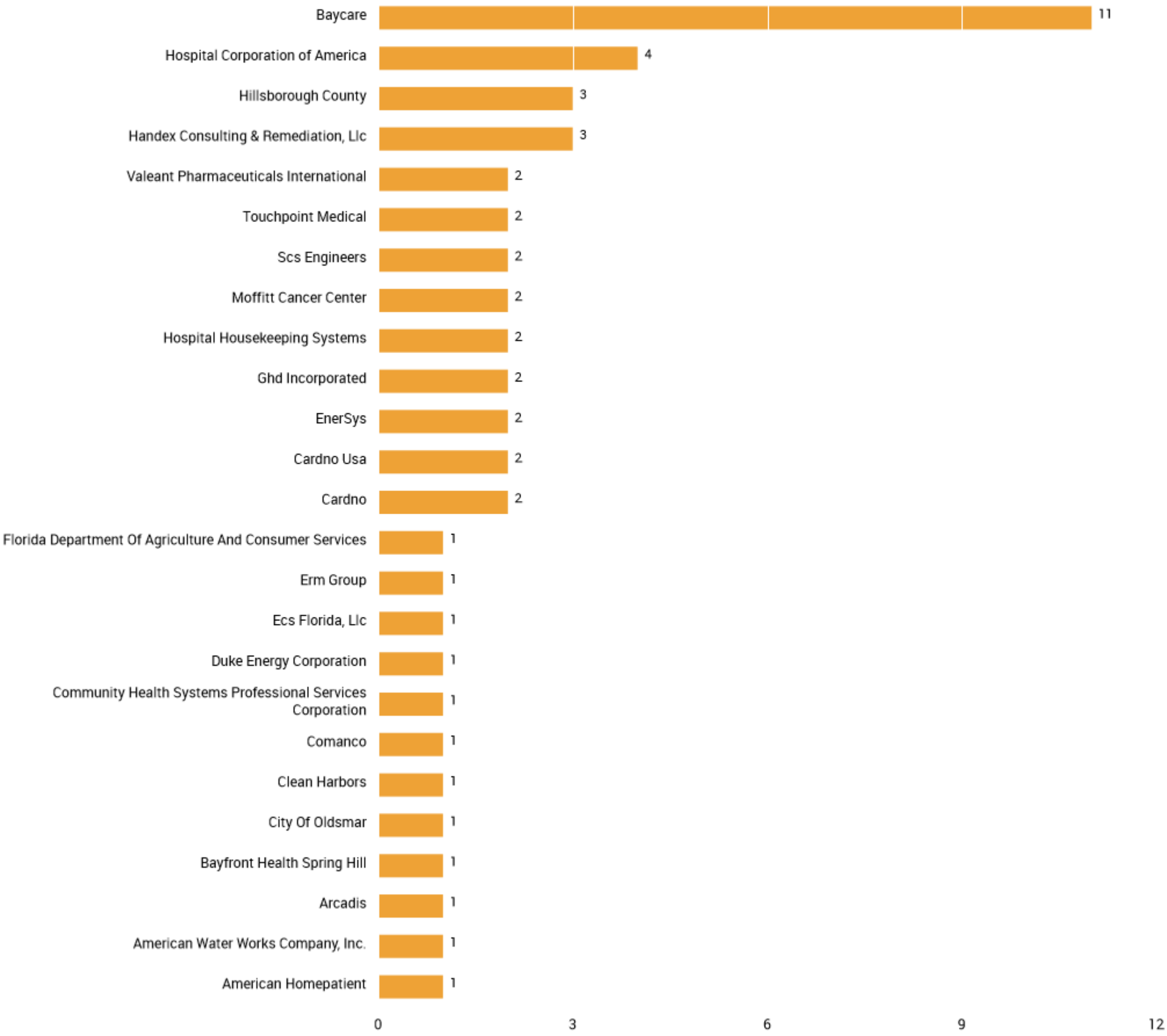
Source: Labor Insight Jobs (Burning Glass Technologies)

Top Employers

Dec. 15, 2016 - Mar. 14, 2017 (Data not available after Mar. 12, 2017)
There are 89 postings available with the current filters applied.
There are 15 unspecified or unclassified postings.

Active Selections

Last 90 days AND (MSA : Tampa-St. Petersburg-Clearwater, FL (Metropolitan Statistical Area)) AND (Title with : Environmental)



Source: Labor Insight Jobs (Burning Glass Technologies)

Salary Distribution

Note: 96% of records have been excluded because they do not include salary information. As a result, the chart below may not be representative of the full sample.

Mean real-time salary = N/A

Dec. 15, 2016 - Mar. 14, 2017 (Data not available after Mar. 12, 2017)
There are 89 postings available with the current filters applied.
There are 85 unspecified or unclassified postings.

Active Selections

Last 90 days AND (MSA : Tampa-St. Petersburg-Clearwater, FL (Metropolitan Statistical Area)) AND (Title with : Environmental)

***This report uses data from real-time job postings. Salary figures are prorated to reflect full-time, annual wage status. For additional salary data by occupation from the Bureau of Labor Statistics, please refer to the summary tables options under the occupation category on the "Create reports" tab.**

Source: Labor Insight Jobs (Burning Glass Technologies)

Job Counts By Year

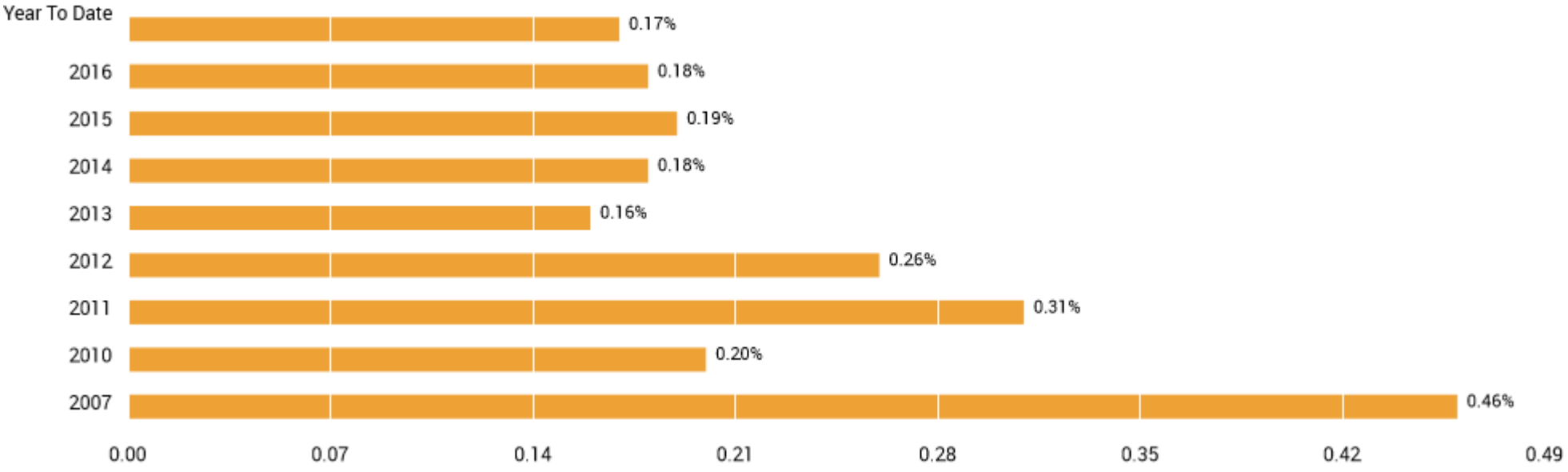
This report shows data for the following time periods: 2007, 2010, 2011, 2012, 2013, 2014, 2015 and 2016. Any active time period filters have not been applied. Percentages shown are out of the total number of postings for your selected location.

Please also note that these results reflect point-in-time data and are subject to change as improvements are made to our aggregation and reporting methodologies. Burning Glass does not recommend use of this data for time series reporting.

Dec. 15, 2016 - Mar. 14, 2017 (Data not available after Mar. 12, 2017)
There are 89 postings available with the current filters applied.
There are 0 unspecified or unclassified postings.

Active Selections

Last 90 days AND (MSA : Tampa-St. Petersburg-Clearwater, FL (Metropolitan Statistical Area)) AND (Title with : Environmental)



Program Action Plan

Program: Environmental Science Technology, AS

Date Completed: March 2017

Prepared By: Natavia Middleton and Maura Scanlon

I. Action Plan Items:

	Action Item	Measure Addressed	Completion Date	Responsible Party
1	Maintain and/or increase enrollment in environmental science courses.	Unduplicated Headcount	August 2018	Maura Scanlon, Natavia Middleton
2	Research and receive input from advisory committee about possible additional industry certifications that can be incorporated into the degree program.	Industry Certifications	May 2018	Maura Scanlon, Natavia Middleton
3	Eliminate two subplans: Sustainability Subplan & Environmental Resources/Energy Management Subplan; and Create Renewable Energies and Sustainable Systems Subplan.	Unduplicated Headcount	August 2018	Maura Scanlon, Natavia Middleton

II. Special Resources Needed:

Use of BayPines STEM center as field site to enhance learning outcomes in environmental science courses, is needed.

III. Area(s) of Concern/Improvement:

Deletion of two subplans and creation of a new subplan will take time to put in place. The existing subplans will have a three year teach out plan and it may take 2-3 years before the impact of this change can be seen in regards to student enrollment and matriculation.

Natavia Middleton, Dean

10/2/2017
Date

References

Rule 6A-14.060(5). *Florida Administrative Code, Accountability Standards.* Retrieved March 2017, from the Department of Education site: https://www.flrules.org/gateway/RuleNo.asp?title=COMMUNITY%20COLLEGES&ID=6A-14.060

Contact Information

Please address any questions or comments regarding this evaluation to:

Magaly Tymms, MA
Assessment Director, Academic Effectiveness and Assessment
St. Petersburg College, P.O. Box 13489, St. Petersburg, FL 33733
(727) 341-3195
Tymms.magaly@spcollege.edu

Appendices

PROGRAM OF STUDY

Natural Science Department

Environmental Science Technology Associate in Science

ENVSC-AS

Effective Beginning Catalog Term: Spring 2016 (0510)

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 Chapin, Dean
chapin.john@spcollege.edu
(727) 394-6995

Program Summary

As the world around us grows more complex, so too does our need to take care of it. Gain the scientific background of how we impact the environment and how society tries to keep it in check through environmental regulation and compliance.

This A.S. degree in Environmental Science Technology gives you:
- A choice of three specializations: sustainability, water resource management or environmental resources and energy management
- Enhanced earning potential
- Knowledge of green practices
- The ability to help your organization meet environmental standards
- Knowledge of how to manage air and water pollution remediation
- Awareness of environmental regulations and compliance
- The ability to operate and calibrate lab and field instruments for quantitative and qualitative analysis of pollutants

This 64-credit-hour A.S. degree transfers to SPC's Bachelor of Applied Science in Sustainability Management.

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.

Job-Related Opportunities

Students will be prepared to enter the workforce as an environmental technician in:

Federal, state, county and local government agencies

Water (including storm water, wastewater, desalination) Treatment Plants

Utilities (Waste-to-Energy facilities, Renewable Energy, Energy companies)

Non-profit organizations (parks, preserves, educational, conservation and grass-root organizations)

Private Environmental Monitoring/Consulting Laboratories

Graduation Rules

Minimum grade of "C" required in all General Education Courses and all Support Courses used to satisfy a General Education Requirement.

AS GENERAL EDUCATION REQUIREMENTS **Communications - Composition**		**Credits**
	Complete 3 credits from the approved General Education Composition I coursework. Minimum grade of "C" required. This requirement must be completed within the first 24 credits of coursework toward the AS degree.	3
Total Credits		**3**

AS GENERAL EDUCATION REQUIREMENTS **Communications - Speech**		**Credits**
	Complete 3 credits from the approved General Education Speech coursework . Minimum grade of "C" required.	3
Total Credits		**3**

AS GENERAL EDUCATION REQUIREMENTS **Social and Behavioral Sciences**		**Credits**
	Complete 3 credits from the approved General Education Social and Behavioral Sciences coursework. Minimum grade of "C" required.	3
Total Credits		**3**

AS GENERAL EDUCATION REQUIREMENTS **Humanities and Fine Arts**		**Credits**
	Complete 3 credits from the approved General Education Humanities and Fine Arts coursework. Minimum grade of "C" required.	3
Total Credits		**3**

AS GENERAL EDUCATION REQUIREMENTS **Mathematics**		**Credits**
	Complete 3 credits from the approved General Education Mathematics coursework. Minimum grade of "C" required.	3
Total Credits		**3**

AS GENERAL EDUCATION REQUIREMENTS Ethics		Credits
	Complete 3 credits from the approved General Education Ethics coursework. Minimum grade of "C" required.	3
Total Credits		**3**

AS GENERAL EDUCATION REQUIREMENTS Computer/Information Literacy Competency		Credits
	Competency may be demonstrated by completing the Computer Information and Literacy Exam (CGS 1070T) OR by successful completion of one of the approved Computer/Information Literacy Competency courses. No minimum credits required.	
Total Credits		**0**

AS GENERAL EDUCATION REQUIREMENTS Enhanced World View		Credits
	Complete at least one 3-credit course intended to enhance the student's world view in light of an increasingly globalized economy. Minimum grade of "C" required. In some cases, this course may also be used to satisfy another General Education Requirement.	
Total Credits		**0**

MAJOR CORE COURSES Complete 23 credits		Credits
BSC 2250C	Field Biology of Florida with Lab	3
CHM 1025	Introductory Chemistry	3
CHM 1025L	Introductory Chemistry Lab	1
ENC 2210	Technical Writing	3
ESC 1000 C	Earth Science	3
EVR 2892C	Environmental Sampling and Analysis I	3
GIS 2040	Introduction to Geographic Information Systems	3
EVR 2930	Special Topics in Environmental Science	1
EVR 1001 C	Introduction to Environmental Science	3
Total Credits		**23**

MAJOR ELECTIVE COURSES Business (Select 3 credits)		Credits
ECO 2013	Principles of Macroeconomics	3
ECO 2013H	Honors Macroeconomics	3
GEB 1011	Introduction to Business	3
MAN 2021	Principles of Management	3
Total Credits		**3**

MAJOR ELECTIVE COURSES Biology (Select 3 - 4 credits)	Credits

BSC 2010	Biology I Cellular Processes	3
and		
BSC 2010 L	Biology I Cellular Processes Laboratory	1
OCE 2001	Introduction to Oceanography	3
OCB 1000C	Biology of Marine Life	3
Total Credits		**3**

SUBPLANS **Select one subplan from below (Complete 17 credits)**	**Credits**
Total Credits	**17**

SUBPLAN CORE COURSES **Subplan: Water Resource Management (Complete 17 credits)**		**Credits**
EVR 1016	Hazardous Waste/ Materials Management	3
EVR 1263	Urban Pollution	3
EVR 1328	Natural Resources Conservation and Management	3
EVR 1357	Wetland Resources	3
EVR 1858	Environmental Regulation and Compliance	3
EVR 2949	Co-op Work Experience	2

SUBPLAN CORE COURSES **Subplan: Environmental Resources/Energy Management (Complete 17 credits)**		**Credits**
EVR 1263	Urban Pollution	3
EVR 1310	Renewable Energy Resources, Energy Efficiency and Conservation Methods	3
EVR 1328	Natural Resources Conservation and Management	3
EVR 1858	Environmental Regulation and Compliance	3
EVR 2316	Solar Energy Principles and Applications	3
EVR 2949	Co-op Work Experience	2

SUBPLAN CORE COURSES **Subplan: Sustainability (Complete 11 credits)**		**Credits**
EVR 1310	Renewable Energy Resources, Energy Efficiency and Conservation Methods	3
EVR 1328	Natural Resources Conservation and Management	3
EVR 1858	Environmental Regulation and Compliance	3
EVR 2949	Co-op Work Experience	2

SUBPLAN ELECTIVE COURSES **Subplan: Sustainability - Sociology (Select 3 credits)**		**Credits**
SYG 2000	Introductory Sociology	3
SYG 2010	Social Problems	3

SUBPLAN ELECTIVE COURSES Subplan: Sustainability - Microeconomics (Select 3 credits)		Credits
ECO 2023	Principles of Microeconomics	3
ECO 2023H	Honors Microeconomics	3
Total Credits		**64**

PID 499

Program Assessment Report

Program: Environmental Science Technology
Report Year: 2015-16
Drafted by Maura Scanlon on Jul 20, 2016

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: Scientifically interpret and apply the concepts, principles and theories that constitute aspects of environmental science.

I. Use of Past Results

Environmental science is a multidisciplinary subject that encompasses many fields. Students in the AS Environmental Science Technology program are expected to have knowledge of how these fields interact and be able to speak to their importance when dealing with current events during their co-op work experience class (EVR 2949).

The 2012-13 Assessment Report indicated that one-hundred percent of students who completed their co-op in Fall 2012, Spring 2013 and Summer 2013 received a "met standards" rating or "exceeded standards" rating from their co-op site supervisor for possessing a good grasp of Environmental Science.

Ninety percent of the students who completed their co-op in Fall 2012, Spring 2013 and Summer 2013 received a "met standards" rating or "exceeded standards" rating from their co-op site supervisor for possessing a command of Environmental Science terminology and correct usage of it.

II. Methodology

Means of Assessment: The results of the co-op work experience class (EVR 2949) evaluation were used to assess students' mastery of this MLO in the Environmental Science program, prior to graduation.

Date(s) of Administration: Each semester from Fall 2013-Summer 2014, Fall 2014-Summer 2015, and Fall 2015-Spring 2016

Method: Students are required to complete a co-op work experience class (EVR 2949) as part of their graduation requirements. They must complete 120 hours of work at an approved site based on their chosen sub-plan. The student is expected to apply knowledge gained throughout prior coursework while performing duties as assigned.

Assessment Instrument: The assessment instrument consists of a grading rubric completed by the site-supervisor at the student's completion of 120 hours. Students will be rated as "below standards", "met standards" or "exceeded standards" on "possesses good grasp of environmental science", and "possesses command of environmental science terminology and uses it correctly".

Population: Students enrolled in EVR 2949 (Co-op Work Experience)

III. Criteria for Success

The criteria are deemed to have been successfully met if the student is rated as "met standards" or "exceeded standards" on the site-supervisor's completed evaluation.

IV. Summary of Assessment Findings

Results via Face-to-Face

	Total # Students	# students "below standards"	# students "met standards"	# students "exceeded standards"
Fall 2013-Summer 2014	11	0	1	10
Fall 2014-Summer 2015	11	0	5	5
Fall 2015-Spring 2016	14	1	4	9

Results via Distance Delivery (Online, Blended, etc)

The course used to assess PLO 1 was taught exclusively face-to-face and did not include online sections.

V. Discussion and Analysis of Assessment Findings

From Fall 2013 through Spring 2016, thirty-six students have completed their EVR 2949 co-op class. One student (2.8%) out of the total was rated "below standards" for this PLO, while the majority (97.2%) were rated as "met standards" or "exceeding standards." Students' ability to apply concepts, principles and theories within the workforce setting is an important outcome that reflects on overarching understanding of multiple topics and courses within the degree program. The results show that overall, students are meeting this standard.

VI. Action Plan and Timetable for Implementation

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

- Program coordinator to meet on a regular basis with internship and career services staff in preparing students for co-op work experience, including resume development, mock interviews and placement assistance
  - Maura Scanlon / May 2017

  Budget / Planning Implications:

  No additional monies needed

#2: Evaluate environmental risks and develop plans to address their effects using current methodology and technology.

I. Use of Past Results

The ability to understand and evaluate environmental risks and management plans is critical when working in environmental fields. Students in the AS Environmental Science Technology program are required to demonstrate this skill in the co-op work experience (EVR 2949).

The 2012-13 Assessment Report indicated that one-hundred percent of students who completed their co-op in Fall 2012, Spring 2013 and Summer 2013 received a "met standards" rating or "exceeded standards" rating from their co-op site supervisor for demonstrating the ability to evaluate problems and identify areas that need to be addressed.

II. Methodology

Means of Assessment: The results of the co-op work experience class (EVR 2949) evaluation were used to assess students' mastery of this MLO in the Environmental Science program, prior to graduation. *Note: prior action plan included changing this means of assessment, but course since course is taken by students both enrolled in the AS Environmental Science and general AA students, the Program Administrator M. Scanlon felt this was not an accurate measurement.

Date(s) of Administration: Each semester from Fall 2013-Summer 2014, Fall 2014-Summer 2015, Fall 2015-Spring 2016

Method: Students are required to complete a co-op work experience class (EVR 2949) as part of their graduation requirements. Students must complete 120 hours working at an approved site based on their chosen sub-plan. The student is expected to apply knowledge gained throughout prior coursework while performing duties as assigned.

Assessment Instrument: The assessment instrument consists of a grading rubric completed by the site-supervisor at student's completion of the 120 hours. Students will be rated on "demonstrates the ability to evaluate problems and identify areas that need to be addressed".

Population: Students enrolled in EVR 2949 (Co-op Work Experience)

III. Criteria for Success

The criteria are deemed to have been successfully met if the student is rated as "met standards" or "exceeded standards" on the site-supervisor's completed evaluation.

IV. Summary of Assessment Findings

Results via Face-to-Face

	Total # Students	# students "below standards"	# students "met standards"	# students "exceeded standards"
Fall 2013-Summer 2014	11	0	3	8
Fall 2014-Summer 2015	11	1	4	6
Fall 2015-Spring 2016	14*	0	4	8

* Note Fall 2015-Spring 2016 had 14 students but only 12 responses - two (2) of the evaluators chose N/A for this evaluation category

Results via Distance Delivery (Online, Blended, etc)

The course used to assess PLO 2 was taught exclusively face-to-face and did not include online sections.

V. Discussion and Analysis of Assessment Findings

From Fall 2013 through Spring 2016, thirty-six students have completed their EVR 2949 co-op class, and thirty-four received an evaluation mark from their site-supervisor for this PLO. One student (2.9%) out of the total was rated "below standards" for this PLO, while the majority (97.1%) were rated as "met standards" or "exceeding standards." The co-op work experience course focuses in on their chosen sub-plan and associated representative tasks within that subfield. The results show that overall, students are meeting this standard.

VI. Action Plan and Timetable for Implementation

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

- Program coordinator to meet on a regular basis with internship and career services staff in preparing students for co-op work experience, including resume development, mock interviews and placement assistance
  - Maura Scanlon / May 2017

  Budget / Planning Implications:

  No additional monies needed

#3: Evaluate the role of environmental policies, laws and management practices on the changes in a local ecosystem over a defined period of time.

I. Use of Past Results

The ability to understand and evaluate environmental policy, law and management practices is critical when developing plans that effect the environment, society and economics. Students in the AS Environmental Science Technology program demonstrate this in their Environmental Regulation and Compliance (EVR 1858) class.

The 2012-13 Assessment Report indicated that in the Fall 2012 semester, the majority of students (80%) met the criteria, as they earned a 70% or higher on the environmental policy paper. In the Spring 2013 semester, a smaller number of students (72%) met the criteria, by scoring a 70% or higher on the environmental policy paper. In the Summer 2013 semester, the majority of students (80%) met the criteria, as they earned a 70% or higher on their environmental policy paper.

In fall 2014, this PLO was slightly modified. Previously, PLO 3 was 'Evaluate the role of environmental policies, laws and management practices and their effects on environmental, social and economic factors.'

II. Methodology

Means of Assessment: The results of a term paper within the EVR 1858 Environmental Regulation and Compliance course were used to assess students' mastery of this MLO in the Environmental Science program, prior to graduation.

Date(s) of Administration: Spring 2015-Summer 2015, Fall 2015-Spring 2016 (results of semesters prior were unavailable as they were located on a prior LMS system (Angel) that has since been discontinued).

Method: Students are required to complete a term paper on an assigned topic relating to existing regulation. The student is expected to research applicable policies, laws and management practices as they pertain to the topic. The student will provide implications related to ecosystem changes and policy and practice that occurred because of the enacted legislation over a given period of time.

Assessment Instrument: The project paper is graded on a scale from 0-100%

Population: Students enrolled in EVR 1328 (Environmental Regulation and Compliance).

III. Criteria for Success

The criteria are deemed to have been successfully met if the student achieves a score of 70% or better on their final project. The maximum score a student can obtain is 100%.

IV. Summary of Assessment Findings

Results via Face-to-Face

The course used to assess PLO 3 was taught exclusively online and did not include face-to-face sections.

Results via Online

	Total # Students	# students below 70%	# of students 70-79%	# students 80-89%	# student 90-100%
Spring 2015-Summer 2015	32	4	2	2	24
Fall 2015-Spring 2016	41*	10	2	15	11

*Three students received "I" or incomplete for their final grade and did not complete term paper (are not included in score data)

V. Discussion and Analysis of Assessment Findings

The course has been offered every semester. In the semesters Spring 2015-Summer 2015, the majority of students (87.5%) met the criteria, as they earned a 70% or higher on the environmental policy paper. During the semesters of Fall 2015-Spring 2016, a smaller number of students (74.4%) met the criteria, by scoring a 70% or higher on the environmental policy paper.

VI. Action Plan and Timetable for Implementation

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

- Specify services available to students for the writing of their term paper (ie. writing studio assistance, library assistance)
  - Maura Scanlon / May 2017

  Budget / Planning Implications:

  No additional monies needed

#4: Systematically apply field testing and field measurement collection practices in an ecosystem.

I. Use of Past Results

The ability to utilize and obtain information from field measurement equipment is an important aspect of an environmental science technician. Students in the AS Environmental Science Technology program will gain knowledge of this equipment through Environmental Sampling and Analysis (EVR 2892c), and will demonstrate mastery of this skill in their co-op work experience class (EVR 2949).

The 2012-13 Assessment Report indicated that ninety percent of students who completed their co-op in Fall 2012, Spring 2013 and Summer 2013 received a "met standards" rating or "exceeded standards" rating from their co-op site supervisor for demonstrating a working knowledge of the assigned environmental science duties.

One hundred percent of the students who completed their co-op in Fall 2012, Spring 2013 and Summer 2013 received a "met standards" rating or "exceeded standards" rating from their co-op site supervisor for demonstrating a working knowledge of related equipment and their correct usage.

II. Methodology

Means of Assessment: Field assignments found in EVR 2892c (Environmental Sampling & Analysis) were utilized to assess this PLO.

Date(s) of Administration: Spring 2015-Summer 2015; Fall 2015-Spring 2016 (results of semesters prior were unavailable as they were located on a prior LMS system (Angel) that has since been discontinued),

Method: Students are required to complete EVR 2892c Environmental Sampling and Analysis prior to graduating. Students enrolled in this course learn and conduct field collections utilizing a variety of methods and equipment. Results are recorded in a field notebook which is graded by the instructor.

Assessment Instrument: The assessment instrument consists of a field notebook which is utilized multiple times during the course during field and lab exercises. Students record their findings in the notebook, which is evaluated by the instructor on a percentage basis.

Population: Students enrolled in EVR 2892c Environmental Sampling and Analysis.

III. Criteria for Success

The criteria are deemed to have been successfully met if the student achieves a score of 70% or better on their field notebook. The maximum score a student can obtain is 100%

IV. Summary of Assessment Findings

Results via Face-to-Face

	Total # Students	# students below 70%	# students 70-79%	# students 80-89	# of students 90-100%
Spring 2015	14	1	0	0	13
Summer 2015	9	0	2	1	6
Spring 2016	11	3	0	0	8

Results via Distance Delivery (Online, Blended, etc)

The course used to assess PLO 2 was taught exclusively face-to-face and did not include online sections.

V. Discussion and Analysis of Assessment Findings

EVR 2892c has been offered every Spring and Summer semester. Enrollment in the course has increased as the number of students enrolled in the program are progressing through their required coursework. The class is a lecture and laboratory / field course which enables students hands-on experience in the field using equipment and techniques taught in the course. Spring 2015, 93% of students successfully completed their field notebook assignment with a grade of 70% or above. Summer 2015, 100% of students completed the assignment at 70% or above, and in Spring 2016, 73% of students completed the assignment with a score of 70% or above.

VI. Action Plan and Timetable for Implementation

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

- Purchase environmental testing equipment with input from advisory committee in regard to current trends and equipment used in their fields
  - Maura Scanlon / May 2017

  Budget / Planning Implications:

  Equipment costs as needed

Action Plan

Category	Action Plan Detail / Implications	For PLO	Responsible Party / Due Date
B. Enhance Curriculum & Faculty Development			
B7.	**Make technology related improvements**		
	Purchase environmental testing equipment with input from advisory committee in regard to current trends and equipment used in their fields **Budget / Planning Implications:** Equipment costs as needed	#4	Maura Scanlon May 2017
C. Improve Teaching and Learning Throughout the College			
C2.	**Communicate & collaborate with other areas of the college (eg. Counseling, library, etc.)**		
	Specify services available to students for the writing of their term paper (ie. writing studio assistance, library assistance) **Budget / Planning Implications:** No additional monies needed	#3	Maura Scanlon May 2017
	Program coordinator to meet on a regular basis with internship and career services staff in preparing students for co-op work experience, including resume development, mock interviews and placement assistance **Budget / Planning Implications:** No additional monies needed	#1, #2	Maura Scanlon May 2017

Evaluation of the Impact of Action Plan Items on Program Quality

Student success in obtaining employment after graduation in the field is improved through networking gained through the co-op work experience and utilizing career services available. The coordination between internship and career services staff in coordination with the program administration helps better prepare and coach students through the EVR 2949 co-op work experience class. Participation in EVR 2949 enables them to have a better understanding of workforce demands and application of knowledge and skills learned in the degree program.

Employers value communication skills and knowledge of current applicable laws and regulations in the field; successful completion of a term paper, and knowing research, revision, and editing practices improve this skill. Making student aware of assistance in these areas should improve the success rate of completion of a term paper anaylzing a specific applicable topic for this learning outcome.

Continued improvement in equipment for the environmental sampling course to meet current workforce needs will improve student preparedness as they complete their co-op work experience class, apply for jobs, and enter the workforce after graduation.

Approvals

Program Administrator:
Maura Scanlon - Faculty - Biology/Environmental Sustainability

Approved by Maura Scanlon - Faculty - Biology/Environmental Sustainability on Jul 20, 2016

Educational Outcomes Coordinators:
Amy Eggers - Research Analyst
Joe Boyd - Assessment Coordinator
Magaly Tymms - Assessment Director

Approved by Joe Boyd - Assessment Coordinator on Jul 20, 2016

Deans:
John Chapin - Dean
Natavia Middleton - (Interim) Dean,Natural Science

Approved by Natavia Middleton - (Interim) Dean,Natural Science on Nov 29, 2016

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

Approved by Anne Cooper - Senior VP Instruction and Academic Programs on Jan 30, 2017

Appendix C: 2016 Advisory Committee Minutes and Recommendations

Advisory Board Meeting Minutes for March 2016 and September 2016 are provided within this Appendix.

For additional Advisory Board Committee Minutes and Recommendations, please refer to the following link:
http://www.spcollege.edu/epicenter/advisory/advisory_committees.htm

ST. PETERSBURG COLLEGE

Minutes of Meeting

DATE/TIME: March 18, 2016 – 12 noon

LOCATION: Seminole Campus, Library Conference Room "C" – LI 203

ATTENDEES: Sandy Decarlo, Ray Gorman, Irvin Kety, Kelli Levy, Maura Scanlon, Jacob Wortock

DATE ISSUED: March 21, 2016

The following is a recap of the items discussed and agreed upon at the meeting regarding the SPC Environmental Science Technology Advisory Committee. This is a summary of the writer's interpretation of the meeting. Unless advised in writing to the contrary, it is assumed that those in attendance are in agreement with the statements as set forth and work will proceed on this basis. If you have clarifications you wish to make, please contact Maura Scanlon via e-mail at scanlon.maura@spcollege.edu or telephone at 727-394-6947. Thank you.

Item No.	Description or Comments
1	*Welcome* – Everyone in attendance introduced themselves and the meeting was brought to order at approximately 12:15pm
2	*Approval of April Minutes*- Approval of March 2015 meeting minutes by Kelli Levy, seconded by Sandy Decarlo
3	*Old Business & Updates* – Maura Scanlon talked about the Green Demonstration Home that is scheduled to start construction in Spring 2017 and completed by Fall 2017. The goal is to create a structure that would meet the living building challenge, beyond Platinum LEED standards. Natural Sci chair Amanda Gilleland is currently teaching an independent research class related to the project, and additional sections are to be scheduled in subsequent semesters and continue even after building is completed.
4	Maura also gave a brief overview of the Bay Pines STEM center and provided attendees with a copy of an article written last Nov 2015: https://newsspc.wordpress.com/2015/11/02/construction-continues-on-spcs-bay-pines-learning-center/ - Most likely the project will be completed Dec 2016.
5	*Environmental Science Technology update*- Sandy Decarlo distributed information about enrollment for the program – recently enrollment has dropped slightly, but is in line with other programs enrollments, which have also declined as overall SPC enrollment has declined. Subplan enrollment continues to be fairly even between the three subplans. Further data shows that students enrolled are largely non-traditional students (approximately 50% are aged 22-35, and 25% are aged 36+) and are attending SPC part-time (79%).
6	Irv Kety asked about services for these non-traditional students, as they tend to know the material in classes, but do not necessarily perform well on tests and exams. Sandy advised about learning services available to students if they choose to take advantage of them, and offered to even have workshops for students if instructors request them to meet specific needs of the class
7	To encourage students and bring more students into the program, Career Services and individual programs will be visiting targeted local high schools in the near

	future; additional suggestions by Irv Kety, Kelli Levy and Ray Gorman included involving successful graduates, either visiting their place of work, or have panel discussions from individuals working in the environmental field either at the upcoming SPC Public Expo event or at other times.
8	*Certifications* – the 30hr Gen. Industry OSHA certification grant has expired, looking to integrate other certifications into coursework. Maura Scanlon will be offering the FL DEP Erosion and Sedimentation 2-day training the week after final exams in May. Irv suggested integrating some free certifications, such as NIMS and FEMA certifications
9	*Articulations* – to be revisited this year
10	*New Business:* March 17th SPC Career Services hosted an Internship Expo that included appropriate places for Environmental Students to intern at; SPC Seminole will again be hosting a Public Utilities Expo on May 17th, during Public Works week.
11	Student opportunities: Maura relayed that the student chapter of the TBAEP (Tampa Bay Assoc. of Enviro. Professionals) was established this Jan at SPC; so far involvement has been low, but will seek to grow this year with events related to careers
12	*Open Forum*: Kelli Levy advised of Pinellas County's recent project to evaluate behaviors and perceptions of trash, cleanup scheduled for McKay Creek, Cross Bayou Saturday 3/19; expressed the importance of students volunteering and building relationships either outside of a class or through internships; the county has put in request for paid intern positions
13	Ray Gorman talked about FWPCOA upcoming trainings in April, see website for more information and register though the website – also distributed information about the FL Public Works Expo in Tampa Bay April 18-22, and emphasized it was also a good opportunity for students to volunteer for as this would provide free admission to the other sessions
14	Irv Kety mentioned an informal TB Waste Water Forum group that began meeting a few months ago – will provide information to Maura Scanlon and/or Sandy Decarlo in order to facilitate someone speaking at the meeting about SPC degree program and students
15	*Next Meeting Date* – TBA – sometime in Sept
16	Meeting adjourned approximately 1:45pm

ST. PETERSBURG COLLEGE

Minutes of Meeting

DATE/TIME: September 16, 2016, 10:15

LOCATION: St. Petersburg Hilton

ATTENDEES: Mary Campbell, Paul Cozzie, Ivy Drexler, Amanda Gilleland, Kelly Gordon, Ray Gorman, Irvin Kety, James Kostka, Maura Scanlon, Jacob Wortock

DATE ISSUED: September 26, 2016

The following is a recap of the items discussed and agreed upon at the meeting regarding the SPC Environmental Science Technology Advisory Committee. This is a summary of the writer's interpretation of the meeting. Unless advised in writing to the contrary, it is assumed that those in attendance are in agreement with the statements as set forth and work will proceed on this basis. If you have clarifications you wish to make, please contact Maura Scanlon via e-mail at scanlon.maura@spcollege.edu or telephone at 727-394-6947. Thank you.

Item No.	Description or Comments
1	*Welcome* – Everyone in attendance introduced themselves and the meeting was brought to order by Committee Chair Irv Kety at approximately 10:15am
2	*Approval of April Minutes*- Approval of March 2016 meeting minutes by Maura Scanlon, seconded by James Kostka
3	*Old Business & Updates* – Amanda Gilleland spoke about the Green Demonstration Home: current status of the project is at a standstill due to cost issues; decisions will have to be made as to if the project will continue, and if so, an updated timeline may be needed. Irv mentioned increased costs may relate to governmental regulations, and Ray Gorman offered suggestions of defraying costs through volunteer workers, and perhaps partnering with PTC or local high schools, but Amanda advised due to insurance reasons, this may not be possible. Amanda also advised if the project does not continue, the college may pursue working towards building a sustainable garden. In addition, the local Rotary Club will be working with SPC in setting up a shipping container garden on the Seminole campus.
4	Maura Scanlon advised that the Dean of Natural Sciences, Dr. Chapin, will be retiring at the end of Sept. An interim dean will be appointed.
5	Maura also relayed that construction is currently in progress for the Bay Pines STEM center, and is scheduled to be completed in the Spring, and classrooms should be ready by Fall 2017.
6	Jacob Wortock distributed information about current enrollment: Currently 130 students are pursing the AS Enviro Sci Tech degree, compared to 140 last fall. Jacob indicated enrollment across the college has decreased as the economy has improved, and more people have returned to work. Sub-plan enrollment is fairly evenly distributed (Env Res 40, Sustainability 50, Water Res 40). There have been 15 graduates last year. The vast majority of students are part-time (105) compared to full time (25). Ray asked how long, on average, it took for a student to complete, but this information was not readily available during the meeting.
7	Maura informed the committee that based on prior committee recommendations, FEMA IS-0700.a and RCRA certification has been integrated into EVR 1016,

	Hazardous Waste Mgmt course. Maura has been in contact with FL DEP, who are looking at SPC Seminole campus as a potential site for their "Muddy Waters" training event in Spring 2017.
9	*Articulations* – James is in the process of rewriting the Lakewood HS environment curriculum to submit to the state, with the emphasis on Marine Tech; Marine Tech AS degree is available at the community college in Key West. Maura remarked if the new curriculum did not meet the requirements for articulating for credit for the intro to environmental course at SPC, it may still transfer as a marine science credit contained within the degree requirements. Once the revised curriculum is approved by the state, it will be reviewed again by SPC for articulation.
10	*New Business:* Ray provided information about some upcoming events: there is an APWA Equipment Rodeo on Oct 5th in Pinellas Park, open to the public, and can be a good opportunity for students to engage with the various public work depts. Ray also indicated APWA Expo will be held in Orlando Aug 27-30 of next year, and encouraged students to volunteer for the event, as then they would have free access to workshops and presentations.
11	Ivy Drexler provided information about the American Backflow Association, and Ray provided contact info for the Florida Suncoast Chapter. Ivy also indicated the Cross Bayou Water Reclamation Facility offers educational tours, and encouraged SPC to set up a tour. Irv commented the more field trips students are exposed to, the better, as students become more engaged and have a better understanding of the field.
12	Mary Campbell provided information about a series of film screenings related to environmental issues offered at the University of Tampa, along with extension's other speaker series events, including Salty Topics and programs related to current events, such as the Zika virus.
13	Maura relayed that the student chapter of the TBAEP (Tampa Bay Assoc. of Enviro. Professionals) is continuing, and is hoping student participation increases. Maura also provided an update that the SPC apiary is doing well, and is hoping to increase student involvement in a SPC student beekeeping club. Mary suggested in the future SPC can partner with Pinellas Co extension when they offer beekeeping workshops, so participants can get some hands on experience.
14	Maura also commented the BLUE Film Festival is coming to St. Petersburg Nov 10-13, and SPC students are encouraged to participate/volunteer.
15	Irv commented the FL DEP SW district will be having an open house on Sept 28 in Tampa – and this would be a good opportunity for students to network.
16	*Open Forum* – Paul Cozzie announced beginning Oct 2nd, the Educational centers at Brooker Creek and Weedon Island will be open on Sundays. Mary provided additional information at a part-time position for educational support specialist would be related to this. Paul also added a Grant Coordinator Position will be opening. Ivy then provided information that Cross Bayou will be looking for a person to fill and educational coordinator position at that facility.
17	*Next Meeting Date* – Tentatively scheduled March 24, 2017 at lunchtime; Maura will confirm time and location at a later date.
18	Meeting adjourned approximately 11:30am

SPC