CECIL COLLEGE
REAL STUDENTS. REAL SUCCESS.

College Academic Program Review

Horticulture Science Degree and Certificate

Spring 2015

Executive Summary

The Horticulture Science first appeared in the Cecil College catalogue as a certificate program in 2009. In 2011 the AAS degree was developed. As part of this review and taking into account the changes required based on the State of Maryland's College Readiness and Completion Act of 2013 (also known as SB 740), the course credit requirements were reviewed with a recommendation of reducing the credits requirements from 63-64 to a revised total of 60 credits. The 60 credit recommendation was submitted for final review/approval by the Academic Affairs Committee in 2015. Participation in this program is weak but with focused attention on review recommendations, it is expected that enrollment will respond to this growing field of interest and employment

1.0 Program Description

The Associate of Applied Science, Horticulture Science offers a selection of science and horticulture courses for students wishing to pursue an immediate career or transfer to programs in horticultural science and plant biology. This program serves students interested in the fields of nursery production, greenhouses landscape design and construction and plant sciences.

The Certificate in Horticulture Science is a 16 credit program that provides a foundation in the knowledge skills and training required for occupations in the horticulture industry or further studies in the plant sciences. Students will identify plants and their cultural requirements, identify landscape uses for plant materials, soil nutrients and amendments and gain an understanding of the materials and methods use in landscape design and construction.

1.1.1 Provide brief history of the program.

The Horticulture Science certificate program first appeared in the 2009 Cecil College Catalog. The goal was to provide students with the immediate skills and certification needed to work in the growing landscaping businesses. It soon became apparent that some students would be better served with a degree that was transferrable to a four year institution and the Horticulture degree in the form of an Associate of Applied Science was another way to serve student needs. The Horticulture Science AAS degree first appeared in the 2011 Cecil College catalogue. In response to changes required by the State of Maryland's College Readiness and Completion Act of 2013 (also known as SB 740), the course credit requirements were reviewed with a recommendation of reducing the credits requirements from 63-64 to a revised total of 60 credits. This revision was submitted and approved by the Academic Affairs Committee in 2015.

As a result of a review conducted of the General Studies Degree program during the fall 2002 and approved by the Academic Affairs Committee and the Academic Senate in April 2003, Cecil College defines **general education** as the portion of the curriculum devoted to the development of the skills, knowledge, and abilities desired of all students regardless of chosen majors. The general education program provides all students with writing, speaking, reading, critical thinking, computing, and information literacy and knowledge to function as educated citizens in a complex world.

Details of the General Education review are available in the program assessment for the General Studies Degree Program conducted in spring 2012.

1.1.2 Relationship to the College's Mission Statement and Strategic Plan

Cecil College Mission Statement

"Cecil College is a comprehensive, open-admission, learner-centered institution. The College provides career, transfer, and continuing education coursework and programs that anticipate and meet the dynamic intellectual, cultural and economic development challenges of Cecil County and the surrounding region. Through support services and a technologically enriched learning environment, the College strives to empower each learner with skills, knowledge, and values needed for college preparation, transfer to four-year institutions, workforce entry or advancement, and personal enrichment. Further, Cecil College promotes an appreciation of cultural diversity, social responsibility, and academic excellence."

1.1.3 Cecil College Strategic Plan

The Strategic Plan focuses on four strategic initiatives:

1. Emphasis on student completion
2. Increasing opportunities for Bachelors and Higher Degree Programs in Cecil County
3. Creating workforce opportunities related to federal government expansion, and
4. Becoming a regional leader in incorporating innovative technology

Cecil College's Horticulture Science degree and certificate programs support the mission of the College as well as the initiatives outlined in the Strategic Plan by providing a wide range of comprehensive coursework in a variety of areas of horticulture that fosters the development of knowledge, skills, and abilities that are essential for students to prepare for workforce entry or advancement and personal enrichment.

1.1.4 Faculty Profile

Given the nature of the Horticulture Science degree and certificate, most of our courses are taught by adjunct faculty with expertise related to the course sequence. We have listed here, those faculty members who teach the mandatory courses for this degree. Faculty members teaching the General Education requirements are listed with the General Education assessments.

Faculty Member	Credentials	Courses Taught	Other College Activities
Beth Olsen	PhD Env. Sci	BIO 104/114.	
Adjunct Faculty	Subject Matter Expert	HCS 152, 153, 154, 155, 156, 160, 161, 253	

1.1.5 Horticulture Science Degree and Certificate Requirements

Horticulture Science AAS Degree Requirements
Total Credits Required in Program: 60

	General Education	*General Education Code*	*Credits*
BIO 101 and BIO 111 or BIO 131 and BIO 131	General Biology and General Biology Lab or Principles of Biology I and Principles of Biology I Lab	S	3 1
CHM	Chemistry with lab elective	SL	3 1
CIS	Introduction to Computer Concepts	I	3
EGL 101	Freshman Composition	E	3
EGL 102	Composition and Literature	H	3
ELECT	Interdisciplinary and Emerging Issues Elective	I	3
MAT	Math Elective (select from MAT 121, 123, 127, 201)	M	4
SOC SCI	Social Science Elective	SS	3
SPH 121 or SPH 141	Interpersonal Communication or Public Speaking	H	3
	Program Requirements		
BIO 104 and BIO 114	Botany: An introduction to Horticulture and Botany, An Introduction to Horticulture Lab		3 1
BUS	Business elective		3
ELECT	Choose from BIO, ENV, VCP or PHE		2
HCS 152 and 142	Soils and Fertilizers and Soils and Fertilizers Lab		3 1
HCS 153	Landscape Construction and Maintenance		3
HCS 154	Botanical Gardens Studies		3
HCS 155	Woody Plants Identification I		2
HCS 156	Herbaceous Plants Identification I		2
HCS 160	Woody Plants Identification II		2
HCS 161	Herbaceous Plants Identification II		2
HCS 253	Introduction to Landscape Design		3
SPN	Beginning Spanish I		3

Horticulture Science Certificate

	Certificate Requirements		
BIO 104 and BIO 114	Botany: An Introduction to Horticulture and An Introduction to Horticulture Lab		3 1
HCS 152	Soils and Fertilizers		3
HCS 153 or HCS 154	Landscaping Construction and Maintenance or Botanical Gardens Studies		3
	Certificate Electives		*Select 6 Credits*
HCS 155 or HCS 156	Woody Plants Identification I or Herbaceous Plants I		2
HCS 160 or HCS 161	Woody Plants Identification II or Herbaceous Plants II		2

2.1 Statistical Data [Program Level]

The enrollment data for the past five years for the Horticulture Science courses are provided below. The general education courses are addressed within the Program Review conducted by each discipline.

Enrollment History
FY 2009 – 2013

Horticulture Science degree

	Total Enrollment
FY 2009/2010	2
FY 2010/2011	3
FY 2011/2012	6
FY2012/2013	11
FY 2013/2014	10

Horticulture Science Degree Full-Time/Part-Time Enrollment
FY 2009 – 2014

		Total Enrollment	Full-Time	% of Total	Part-Time	% of Total
FY 2009/2010	Summer 2009	1	0	0%	1	100%
	Fall 2009	1	0	0%	1	100%
	Spring 2010	1	0	0%	1	100%
FY 2010/2011	Summer 2010	1	0	0%	1	100%
	Fall 2010	2	1	50%	1	50%
	Spring 2011	3	0	0%	3	100%
FY 2011/2012	Summer 2011	2	0	0%	2	100%
	Fall 2011	3	0	0%	3	100%
	Spring 2012	5	2	40%	3	60%
FY 2012/2013	Summer 2012	4	0	0%	4	100%
	Fall 2012	9	6	67%	3	33%
	Spring 2013	9	3	33%	6	67%
FY 2013/2014	Summer 2013	4	0	0%	4	100%
	Fall 2013	7	4	57%	3	43%
	Spring 2014	7	3	43%	4	57%

Horticulture Science Degree
Students by Age

	Total Enrollment	Less Than 25	% of Total	26-30	% of Total	31-40	% of Total	41-50	% of Total	51 and over	% of Total
FY 2009/2010	2	0	0%	0	0%	1	50%	0	0%	1	50%
FY 2010/2011	3	1	33%	0	0%	0	0%	1	33%	1	33%
FY 2011/2012	6	3	50%	0	0%	0	0%	1	17%	2	33%
FY 2012/2013	11	6	55%	0	0%	0	0%	1	9%	4	36%
FY2013/2014	10	6	60%	0	0%	1	10%	0	0%	3	30%

Horticulture Science Degree
Students by Gender

	Total Enrollment	Female Student	% of Total	Male Students	% of Total
FY 2009/2010	2	1	50%	1	50%
FY 2010/2011	3	1	33%	2	67%
FY 2011/2012	6	2	33%	4	67%
FY 2012/2013	11	5	45%	6	55%
FY 2013/2014	10	7	70%	3	30%

Horticulture Science Degree
Number of Students by Ethnicity

	Total Enrollment	African-American	% of Total	American Indian	% of Total	Asian	% of Total	Hispanic	% of Total	White	% of Total	Two or more races	% of Total	Unknown	% of Total
FY 2009/2010	2	0	0%	0	0%	0	0%	0	0%	2	100%	0	0%	0	0%
FY 2010/2011	3	0	0%	0	0%	0	0%	0	0%	3	100%	0	0%	0	0%
FY 2011/2012	6	0	0%	0	0%	0	0%	0	0%	6	100%	0	0%	0	0%
FY 2012/2013	11	0	0%	0	0%	0	0%	0	0%	11	100%	0	0%	0	0%
FY 2013/2014	10	0	0%	0	0%	0	0%	0	0%	9	90%	1	10%	0	0%

Horticulture Science Degree
First-time Students in the Fall Semester who enrolled in the Next Fall Semester

	Number of First Time Students Enrolled in Fall	Number of Students Enrolled in the Next Semester	% of Total
FY 2009/2010	1	1	100%
FY 2010/2011	0	0	0%
FY 2011/2012	1	1	100%
FY 2012/2013	3	2	67%
FY 2013/2014	3	2	67%

Horticulture Science Degree
First-time Students Who Have Completed 30 College Level Credits or more

	Total First-time Students	Students WHO HAVE NOT COMPLETED College-Level Credits	% of Total	Students Who Have Completed 15 College-Level Credits or less	% of Total	Students Who Have Completed 16-29 College-Level Credits or more	% of Total	Students Who Have Completed 30 College-Level Credits or more	% of Total
FY 2009/2010	1	0	0%	0	0%	0	0%	1	100%
FY 2010/2011	0	0	0%	0	0%	0	0%	0	0%
FY 2011/2012	2	1	50%	0	0%	0	0%	1	50%
FY 2012/2013	5	2	40%	2	40%	0	0%	1	20%
FY 2013/2014	3	1	33%	0	0%	2	67%	0	0%
TOTAL	11	4	36%	2	18%	2	18%	3	27%

Horticulture Science Degree
Students starting in FY 2009-2010 and completed 30 credits that Transferred Out (Headcount)

Type of Higher Institutions

In-State Transfer	
2-year institution	4-year institution
0	0

Out-of-State Transfer	
2-year institution	4-year institution
0	0

In-State Transfer	
Public	Private
0	0

Out-of-State Transfer	
Public	Private
0	0

Top 10 Higher Education Institutions where Cecil College Students Transferred

In-State	
None	0
Out-of-State	
None	0

Horticulture Science Degree
Students starting in FY 2010-2011 and completed 15-29 credits that Transferred Out (Headcount)

Type of Higher Institutions

In-State Transfer	
2-year institution	4-year institution
0	0

Out-of-State Transfer	
2-year institution	4-year institution
0	0

In-State Transfer	
Public	Private
0	0

Out-of-State Transfer	
Public	Private
0	0

In-State	
None	0
Out-of-State	
None	0

Horticulture Science Degree
Students starting in FY 2012-2013 and completed 15-29 credits that Transferred Out (Headcount)
Top 10 Higher Education Institutions where Cecil College Students Transferred

Type of Higher Institutions

In-State Transfer	
2-year institution	4-year institution
0	0

Out-of-State Transfer	
2-year institution	4-year institution
0	0

In-State Transfer	
Public	Private
0	0

Out-of-State Transfer	
Public	Private
0	0

In-State	
None	0
Out-of-State	
None	0

Horticulture Science Degree
Number of Degrees Awarded to Pell Recipients

Enrollment History
FY 2009 – 2013

	Total Degrees	Pell Recipients	% of Total
FY 2009/2010	1	0	0%
FY 2010/2011	0	0	0%
FY 2011/2012	4	0	0%
FY 2012/2013	1	0	0%
FY 2013/2014	0	0	0%
Total	6	0	0%

2.2 Statistical Data [Certificate Level]

Horticulture Science Certificate

	Total Enrollment
FY 2009/2010	9
FY 2010/2011	8
FY 2011/2012	16
FY2012/2013	10
FY 2013/2014	4

Horticulture Science Certificate Full-Time/Part-Time Enrollment
FY 2009 – 2014

		Total Enrollment	Full-Time	% of Total	Part-Time	% of Total
FY 2009/2010	Summer 2009	1	0	0%	1	100%
	Fall 2009	8	0	0%	8	100%
	Spring 2010	6	1	17%	5	83%
FY 2010/2011	Summer 2010	5	0	0%	5	100%
	Fall 2010	6	1	17%	5	83%
	Spring 2011	5	0	0%	5	100%
FY 2011/2012	Summer 2011	7	1	14%	6	86%
	Fall 2011	12	3	25%	9	75%
	Spring 2012	12	2	17%	10	83%
FY 2012/2013	Summer 2012	4	0	0%	4	100%
	Fall 2012	9	3	33%	6	67%
	Spring 2013	7	2	29%	5	71%
FY 2013/2014	Summer 2013	2	0	0%	2	100%
	Fall 2013	4	0	0%	4	100%
	Spring 2014	3	0	0%	3	100%

Horticulture Science Certificate
Students by Age

	Total Enrollment	Less Than 25	% of Total	26-30	% of Total	31-40	% of Total	41-50	% of Total	51 and over	% of Total
FY 2009/2010	9	4	44%	0	0%	1	11%	1	11%	3	33%
FY 2010/2011	8	2	25%	1	13%	0	0%	1	13%	4	50%
FY 2011/2012	16	6	38%	1	6%	1	6%	1	6%	7	44%
FY 2012/2013	10	5	50%	0	0%	1	10%	1	10%	3	30%
FY2013/2014	4	2	50%	0	0%	0	0%	0	0%	2	50%

Horticulture Science Certificate
Students by Gender

	Total Enrollment	Female Student	% of Total	Male Students	% of Total
FY 2009/2010	9	5	56%	4	44%
FY 2010/2011	8	7	88%	1	13%
FY 2011/2012	16	13	81%	3	19%
FY 2012/2013	10	7	70%	3	30%
FY 2013/2014	14	3	75%	`1	25%

Horticulture Science Certificate
Number of Students by Ethnicity

	Total Enrollment	African-American	% of Total	American Indian	% of Total	Asian	% of Total	Hispanic	% of Total	White	% of Total	Two or more races	% of Total	Unknown	% of Total
FY 2009/2010	9	0	0%	0	0%	0	0%	0	0%	9	100%	0	0%	0	0%
FY 2010/2011	8	0	0%	1	13%	0	0%	0	0%	7	88%	0	0%	0	0%
FY 2011/2012	16	1	6%	1	6%	0	0%	1	6%	13	81%	0	0%	0	0%
FY 2012/2013	10	0	0%	1	10%	1	10%	1	10%	17	70%	0	0%	0	0%
FY 2013/2014	4	0	0%	1	25%	0	0%	0	0%	3	75%	0	0%	0	0%

Horticulture Science Certificate
First-time Students in the Fall Semester who enrolled in the Next Fall Semester

	Number of First Time Students Enrolled in Fall	Number of Students Enrolled in the Next Semester	% of Total
FY 2009/2010	2	1	50%
FY 2010/2011	3	2	67%
FY 2011/2012	5	2	40%
FY 2012/2013	2	0	0%
FY 2013/2014	0	0	0%

3.0 General Education Objectives

Program Assessment of General Education Requirements

Program Outcomes	Student Learning Outcomes	Direct/Indirect Assessment Measure	Population	Reporting/Use
A. Students who complete the College's General Education Core Requirements will demonstrate college-level competency in critical and creative thinking skills and problem-solving strategies.	1. Students will identify, categorize and distinguish among elements of ideas, concepts, theories and/or practical approaches to standard problems. 2. Students will analyze, evaluate, and/or criticize various academic disciplines and/or regional/national/global issues.	a. Projects b. Homework Problems c. Exams d. Lab Activities e. Field Activities f. Oral Presentations g. Essays	Students in all related courses	Bio 104 Botany: An Introduction to Horticulture BIO 114 Botany: An Introduction to Horticulture Lab HCS 142 Soils and Fertilizers Lab HCS 152 Soils and Fertilizers HCS 153 Landscaping Construction and Maintenance HCS 154 Botanical Gardens Studies HCS 155 Woody Plants Identification I HCS 156 Herbaceous Plants I HCS 160 Woody Plants Identification II HCS 161 Herbaceous Plants II HCS 253 Introduction to Landscape Design
B. Students who complete the College's General Education Core Requirements will demonstrate College-level competency in writing.	1. Students will demonstrate accurate and effective explanatory writing skills. 2. Students will locate, collect and organize evidence on an assigned research topic.	a. Projects b. Homework Problems c. Exams d. Lab Activities e. Field Reports f. Essays	Students in all related courses	Bio 104 Botany: An Introduction to Horticulture BIO 114 Botany: An Introduction to Horticulture Lab HCS 142 Soils and Fertilizers Lab HCS 152 Soils and Fertilizers HCS 153 Landscaping Construction and Maintenance HCS 154 Botanical Gardens Studies HCS 155 Woody Plants Identification I

Program Outcomes	Student Learning Outcomes	Direct/Indirect Assessment Measure	Population	Reporting/Use
				HCS 156 Herbaceous Plants I HCS 160 Woody Plants Identification II HCS 161 Herbaceous Plants II HCS 253 Introduction to Landscape Design
C. Students who complete the College's General Education Core Requirements will demonstrate college-level competency in oral communications.	1. Students will demonstrate effective public speaking skills. 2. Students will demonstrate an ability to evaluate their own public speaking skills.	a. Projects b. Homework Problems c. Exams d. Lab Activities e. Oral Presentations	Students in all related courses	Bio 104 Botany: An Introduction to Horticulture BIO 114 Botany: An Introduction to Horticulture Lab HCS 142 Soils and Fertilizers Lab HCS 152 Soils and Fertilizers HCS 153 Landscaping Construction and Maintenance HCS 154 Botanical Gardens Studies HCS 155 Woody Plants Identification I HCS 156 Herbaceous Plants I HCS 160 Woody Plants Identification II HCS 161 Herbaceous Plants II HCS 253 Introduction to Landscape Design
D. Students who complete the College's General Education Core Requirements will demonstrate college-level competency in quantitative	1. Students will demonstrate understanding of mathematical principles and methods. 2. Students will demonstrate the ability to perform accurate calculations and symbolic	a. Projects b. Homework Problems c. Exams d. Lab Activities e. Case Problems	Students in all related courses	Bio 104 Botany: An Introduction to Horticulture BIO 114 Botany: An Introduction to Horticulture Lab HCS 142 Soils and Fertilizers Lab HCS 152 Soils and Fertilizers

Program Outcomes	Student Learning Outcomes	Direct/Indirect Assessment Measure	Population	Reporting/Use
analysis.	operations.	f. Oral Presentations g. Essays		HCS 153 Landscaping Construction and Maintenance HCS 154 Botanical Gardens Studies HCS 155 Woody Plants Identification I HCS 156 Herbaceous Plants I HCS 160 Woody Plants Identification II HCS 161 Herbaceous Plants II HCS 253 Introduction to Landscape Design
E. Students who complete the College's General Education Core Requirements will demonstrate college-level competency in computer literacy and in the ability to work productively with information technology.	1. Students will demonstrate the ability to determine or calculate the solution to a problem through the use of computer technology. 2. Students will demonstrate the ability to make effective use of writing-related computer technology.	a. Projects b. Homework Problems c. Exams d Oral Presentations e. Essays	Students in all related courses	BIO 104 Botany: an Introduction to Horticulture
F. Students who complete the College's General Education Core Requirements will demonstrate college-level competency in awareness of ethics, cultural diversity, artistic expression, health-	1. Students will demonstrate an awareness of ethical behavior. 2. Students will demonstrate an understanding of and appreciation for cultural diversity. 3. Students will demonstrate understanding of and	a. Projects b. Homework Problems c. Exams d. Lab Activities e. Case Problems f. Oral Presentations g. Essays	Students in all related courses	Bio 104 Botany: An Introduction to Horticulture BIO 114 Botany: An Introduction to Horticulture Lab HCS 142 Soils and Fertilizers Lab HCS 152 Soils and Fertilizers HCS 153 Landscaping Construction and Maintenance

Program Outcomes	Student Learning Outcomes	Direct/Indirect Assessment Measure	Population	Reporting/Use
and-wellness issues, and the physical and social environment.	appreciation for artistic expression. 4. Students will demonstrate understanding of and appreciation for health-and-wellness issues. 5. Students will demonstrate understanding of and appreciation for the physical and social environment.			HCS 154 Botanical Gardens Studies HCS 155 Woody Plants Identification I HCS 156 Herbaceous Plants I HCS 160 Woody Plants Identification II HCS 161 Herbaceous Plants II HCS 253 Introduction to Landscape Design
G. Students who complete the College's General Education Core Requirements will demonstrate college-level competency in information literacy including finding, evaluating, and using information effectively.	1. Students will identify, categorize, and evaluate multiple information resources. 2. Students will cite multiple information resources in various course assignments.	a. Projects b. Homework Problems c. Exams d. Lab Activities e. Case Problems f. Oral Presentations g. Essays	Students in all related courses	All course syllabi were written before this requirement was included in syllabi

3.1 Program Strengths

- Flexibility for students to align courses with their interests (design, identification, construction certificate) or with requirements of four-year programs.
- Full and Adjunct Faculty are excited and experienced.
- Program attracts a diversity of age groups to College
- The program has spawned a Horticulture Club which sponsors a horticulture scholarship
- Courses offered on a rotating basis to ensure students can complete degree in 2 years or certificate in one year

3.2 Program Weaknesses

- Lack of an active Advisory Board
- Loss of founding adjunct faculty leaves the program without a champion
- All course syllabi need to be reviewed and updates in terms of general education requirements, use of technology and course content. Even the program description does not reflect the current program.
- Improvement needed in Community Outreach
- Low enrollments in almost all courses
- Some courses do not run
- More diversity of course offerings needed

3.3 Program Opportunities

- Develop additional articulation agreements with four-year institutions, Harford Community College and Technical High Schools in Harford and Cecil County.
- Investigate sharing or moving some courses to Continuing Education
- Promising new adjuncts showing desire to express leadership
- Develop additional course offerings for this degree especially internships with local businesses
- Better market career path opportunities for this degree program.
- Revamp marketing and branding strategies for this program, including better website presence.

3.4 Program Threats

- Low enrollment in most courses
- Dependence on use of Adjunct Faculty for all HCS courses
- Consistent budget for annual materials
- Resistance from Campus Development to allow HCS to participate in campus landscaping development

4.0 Other Program Information

4.1 Advisory Council/Board

This program does not have an active Advisory Board.

4.2 Adequacy of Available Technology

The technology available for the Horticulture Science Degree is adequate in meeting the needs of the students. We have iPads for student use in the field, a large printer for landscape planning. Software needs are solicited from faculty and have never been denied.

4.3 Adequacy of Facilities

Classroom space and literature collection in both laboratory and library is adequate for students. Materials that need to be replaced such as plants, soil, mulch, dissecting materials as well as travel funds to study sites (Cecil County Arboretum, University of Delaware Botanical Gardens) and botanical gardens need to have a consistent place in the budget

4.4 Articulation Agreements

The Horticulture Science Program does not have any specific 4 year partnerships. However one student did transfer and successfully complete a Horticulture degree at University of Maryland. Another student graduated and now works with Maryland State Highway Department and a third works for the Maryland State Park Service.

5.0 Program Goals and Objectives

Goals	Timetable for Completion	Required Resources	Obstacles to Completion (if any)
5.1 Review syllabi 5.2 Re-form an advisory Board 5.3 Review program brochures and energize marketing for program 5.4 Increase enrollment 5.5 develop an internship program	Summer 2016	Adjunct faculty commitment Marketing	None Foreseen
5.6 Develop course transfer/articulations with at least one 4 year college	Summer 2017		

6.0 Recommendations

The Horticulture Science Degree is extremely weak and needs to be reevaluated. The loss of the developing Program director has left the program leaderless and without a significant profile on the campus or the community. With a promising faculty on the horizon that may shift some of the program focus the recommendation is to review this programs progress again sooner than the 5 year cycle.

Approvals for Horticulture Science Degree and Certificate

Signature of Division Chair Veronica Dougherty Date 6/9/15

Signature of the Chair of the Academic Affairs Committee Anand Patel Date 6/12/15

Signature of the Dean of Academic Programs _____ Date 6-12-15

Signature of the Chief Academic Officer _____ Date 6-12-15