

ACADEMIC POLICY AND PLANNING COMMITTEE CURRICULUM REPORT  
for the period February 22 – April 26, 2018

June 12, 2018

Larry Manalo, Committee Chairperson

Dave DeGroot, Vice Chair

Christine Bisson, Applied Behavioral Sciences

Brent Darwin, Business

Lydia V. Maxwell, Counseling

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Tim Webb, Fine Arts

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Robert Lennihan, Life and Physical Sciences

Derek Mitchem, Mathematical Sciences

Kristy Treur, Public Safety

Thomas VanderMolen, Social & Behavioral Sciences

ASBG Student Representative (Vacant)

Janet Hooghuis & Betsy Wilcox, Admissions & Records Representative (non-voting)


Non-Credit Education (vacant)

Dave DeGroot, Articulation Officer (non-voting)

Melinda Nish, Interim Vice President, Academic Affairs (non-voting)

Rebecca Andres, Curriculum Specialist (non-voting)

Approved by Academic Senate:

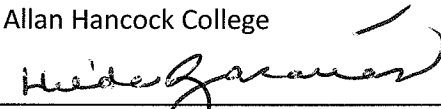
 5/17/18

President, Academic Senate

Date

Allan Hancock College

Adopted by Board of Trustees:

 6/12/18

President, Board of Trustees

Date

Allan Hancock Joint Community College District

### NEW COURSES RECOMMENDED FOR ADOPTION

This section lists all new courses including credit, noncredit, experimental, and special topics.

#### NEW Credit Courses: Catalog year 2019-20

Course Prefix	Course Title	Units
MMAC 129	Digital Tools for Visual Media	3

#### NEW Noncredit Courses: Effective pending Chancellor's Office approval

Course Prefix	Course Title	Hours
NESL 7040	Conversation for Beginning ESL	32-48
NESL 7041	Conversation for Intermediate ESL	32-48
VOCE 7109	Microsoft Windows	16-18
VOCE 7110	Social Media	16-18
VOCE 7111	E-mail	16-18
VOCE 7112	Intro to Microsoft PowerPoint	16-18
VOCE 7800	Commercial Truck Driving: Preparation for the Learner's Permit	80-90
VOCE 7801	Commercial Truck Driving: Behind the Wheel Training	160-180
WKPR 7800	Career Readiness and Planning	9-12
WKPR 7801	Functional Work Skills	96-108

#### NEW Noncredit Program: Effective pending Chancellor's Office approval.

Award	Title	Hours
Certificate of Completion	Workforce Readiness	105-120
Certificate of Completion	Commercial Truck Driving	240-270

### COURSE REVIEW

To meet accreditation standards, one year prior to a scheduled program review, discipline faculty review all course outlines in the discipline for currency of course content and materials, appropriate requisites and learning outcomes, general education status, and articulation status. The courses in this section represent only those courses in the discipline that have completed the review levels in CurriQunet and not necessarily all of the courses in the discipline.

Modifications include but are not limited to course units, hours, prerequisites, co-requisites, advisories, and enrollment limitations. Specific modifications are identified below.

**MAJOR COURSE MODIFICATIONS:** Resulting from a regularly scheduled course review cycle, modifications are effective pending publication of course details where applicable. Catalog year: 2019-20.

Course Prefix	Course Title	Units
AG 125	Soils and Plant Nutrition Advisory: CHEM 120 Modifications include formatting and updating text.	4
CS 111	Fundamentals of Programming 1	4

Prerequisites: MATH 331  
 Advisory: CS 102  
 Updated wording, prerequisites (similar to Cal Poly), changing textbooks, catalog description, sample questions in assignments, and DL addendum

DA 380 Dental Assisting Skills Lab 0.5  
 Limitation on enrollment: Admittance to the Dental Assisting Program or successful completion of program requirements

ECS Early Childhood Studies  
 The early childhood studies modification serves the purpose of implementing the required revisions to the California Colleges ECE Curriculum Alignment Project (CAP, 2015) and as part of a regularly scheduled course review cycle.  
 A limitation on enrollment is being added: All students enrolled in ECS 105, ECS 106, ECS 118 or ECS 119 must show proof of their current tuberculosis (TB) clearance and immunization against influenza, pertussis and measles to the ECS program in order to meet the provisions of SB792.

ECS 105 Observation and Assessment 3  
 Prerequisites: ECS 100  
 Advisories: ENGL 513  
 Modifications: Catalog description, SLOs, course objectives, assignments, methods of evaluation, and textbook updated.

ECS 106 Introduction to Early Childhood Curriculum 3  
 Prerequisite: ECS 105.  
 Advisories: ENGL 513  
 Limitation on enrollment: Students must show proof of current tuberculosis (TB) clearance and immunization against influenza, pertussis and measles to the ECS program in order to meet the provisions of SB792.  
 Modifications: Catalog description. change prerequisite course to advisory, new prerequisite, new LOE, content, SLOs, course objectives, assignments, textbook and other materials updated.

ECS 114 Parent Child Relationships 3  
 Advisory: ENGL 513  
 Modifications: semester offering to fall

ECS 116 Teaching in a Diverse Society 3  
 Advisories: ECS 101 and ENGL 513  
 Modifications: Catalog description. SLOs, course objectives, outside assignments, methods of evaluation, text, and DL addendum updated.

ECS 118 Practicum: Preschool 3  
 Prerequisite: ECS 106  
 Advisory: ENGL 513  
 Limitation on enrollment: Students must show proof of current tuberculosis (TB) clearance and immunization against influenza, pertussis and measles to the ECS program in order to meet the provisions of SB792.  
 Modifications: Catalog description, new LOE. SLOs. course objectives, methods of instruction, methods of evaluation, and textbook updated.

ECS 119 Practicum: Infant/Toddler 3  
 Prerequisites: ECS 106, ENGL 513, ECS 115, ECS 151

Limitation on enrollment: Students must show proof of current tuberculosis (TB) clearance and immunization against influenza, pertussis and measles to the ECS program in order to meet the provisions of SB792.

Modifications: catalog description, semester offering to fall and spring, new LOE, and course objectives updated.

ECS 149	Cooperative Work Experience The course outline has been updated to align with the current CWE template.	1-8
ECS/EDUC 132	Child Identity and Learning Advisories: ECS 100 and ENGL 513 Modifications: textbook, and DL addendum.	
ECS 303	Introduction to Early Childhood Advisory: ENGL 513 Modifications: Course objectives, methods of evaluation, textbook and materials updated.	2
ECS 310	Art for Young Children Advisory: ENGL 513	3
ECS 311	Creating Learning Materials Advisory: ENGL 513 Modifications: Textbook and methods of evaluation updated.	3
ECS 312	Music for Early Childhood Educators Advisory: ENGL 513 Modifications: Course objectives, outside assignments, and methods of evaluation. The adopted textbook is a standard in the workforce.	3
ET 140	Engineering Drawing Prerequisite: ET 100 The grading option has been changed	3
LE	Law enforcement courses have been reviewed as part of its regularly scheduled review cycle. Modifications are made per agency mandates.	
LE 320	Basic Law Enforcement Academy Prerequisite: LE 310 Introduction to Law Enforcement Academy (Pre-Academy) or equivalent course or training as determined by the Director of Law Enforcement Training. NOTE: Approval of equivalent enrollment eligibility is not a guarantee that state regulatory and licensing authorities will also grant equivalencies for licensure for employment purposes.  Advisories: ENGL 306, PE 141  Limitations on Enrollment: Prior to enrollment, students must also complete an academy application packet and submit Livescan fingerprints to the California Department of Justice to verify that they can legally be issued and possess a firearm. Students must score 42 or higher on the POST PELLETB Test. Students must submit a completed California POST approved Medical History/Clearance form signed by their physician after medical examination. Prerequisite  The modifications are a result of an agency mandate to include additional course hours for mental health training. The units are increasing from 22.5 to 24 units.	24
LE 424	PC 832 Arrest	1.5

Limitation on enrollment: Freedom from illness or disability that would prevent the student from safely performing the required arrest and control physical skills.

The lecture hours are being reduced to 1.875, and lab hours are being added. The units are decreasing from 2.5 to 1.5 units.

LE 425 PC 832 Firearms 0.50

Limitation on enrollment: Freedom from illness or disability that would prevent the student from safely participating in live fire shooting activities, California Department of Justice Firearms Clearance (PC 13511.5).

The limitation on enrollment language is updated and aligns with guidelines for advanced public safety courses. The lecture hours are reduced to 0.5 and 1 hour of lab is being added. The total units are changing from 1.5 to 0.5 units.

MUS

The music course review includes prerequisite validation via content review, changes to course titles for course sequencing, and updates to course content.

MUS 101 Music History Ancient-Baroque 3

Advisory: ENGL 101  
Semester offering and texts updated

MUS 122 Piano 4 1

Prerequisite: MUS 121  
Modification: Course title change, formerly Piano Repertoire.

MUS 123 Voice 2 2

Prerequisite: MUS 129 Voice 1  
Modification: Course title change, formerly Class Vocal Techniques.

MUS 124 Voice 3 2

Prerequisite: MUS 123 Voice 2  
Modifications: Course title change, formerly Intermediate Vocal Techniques.

MUS 127 Voice 4 2

Prerequisite: MUS 124 Voice 3  
Modifications: Course title change, formerly Vocal Repertoire.

MUS 128 Piano 1 1

Modification: Course title change, formerly Introduction Piano.

MUS 129 Voice 1 2

Modifications: Course title change, formerly Introduction to Singing.

MUS 140 Symphonic Band 1

Limitation on enrollment: Audition  
Repeatable: 3

MUS 151 Concert Band 1

Limitation on enrollment: Audition  
Repeatable: 3

NURS

The course review for nursing includes updating courses per agency standards and requirements.

NURS 103 RN Practicum 1 5

Corequisite: NURS 111  
LOE: Admittance to RN Program

Modifications: Discipline placement and textbook have been updated, worksheet to validate this course as meeting the health and wellness graduation requirement

NURS 108	RN Practicum 2 Corequisite: NURS 112 LOE: Admittance to RN Program Modifications: Discipline placement and textbook have been updated, worksheet to validate this course as meeting the health and wellness graduation requirement	5
NURS 337	Professional Relationships Limitation on enrollment: Admittance to VN Program and/or successful completion of summer semester VN courses. Modification: Text and materials have been updated.	1
PHTO	The course review for photography includes updating course text and materials and reviewing currency of course content.	
PHTO 140	Introduction to Color Photography Prerequisite: PHOTO 110 or PHOTO 170 Modifications: PHTO 170 has been added as alternative prerequisite course.	3
PHTO 381	Black and White Photo Lab 2 Corequisites: PHTO 110 or PHTO 120 or PHTO 130 or PHTO 150 or any 179, 189, Or 199 as related to black and white photo process only. LOE: Students may not be concurrently enrolled in PHTO 380 and PHTO 381.	1
PHTO 382	Color Photo Lab 1 Corequisite: PHTO 140 or any 179, 189, or 199 as related to color photo processes only. LOE: Students may not be concurrently enrolled in PHTO 380 and PHTO 381.	0.5
PHTO 383	Color Photo Lab 2 Corequisite: PHTO 140 or any 179, 189, Or 199 as related to color processes only.	1
PHTO 384	Digital Photo Lab 1 Corequisite: PHTO 170 or any 179, 189, Or 199 as related to digital photo processes only.	0.5
PHTO 385	Digital Photo Lab 2 Corequisite: PHTO 170 or any 179, 189, Or 199 as related to color processes only. LOE: Students may not be concurrently enrolled in PHTO 384 and PHTO 385	1
VOCE 7103	Introduction to the Internet The course is being updated to include current technology levels	16-18 hrs

**MAJOR COURSE MODIFICATIONS** not resulting from Course Review. Modifications include but are not limited to course units, hours, prerequisites, co-requisites, advisories, and enrollment limitations. Specific modifications are identified below.

Course Prefix &	Course Title	Units
BIOL 128	Microbiology	4.5

Prerequisite: BIOL 100 or BIOL 124 or BIOL or 125 or BIOL 150 and CHEM 120 or CHEM 150

The course is being updated for currency and to better match CID descriptors. The units for the laboratory part of the course are decreasing from 2 units to 1.5 units to reflect the 5 lab hours per week. This will bring the course total down from 5 to 4.5 units. There are also changes made to advisories and prerequisites to improve student success. The course content will separate laboratory activities from lecture topics. The text and laboratory manual editions will be updated

LBRY 170

Library Research Methods

2

Advisory: ENGL 513

The course is being modified to reflect a new textbook and to add an additional option on the final capstone project that gives students more flexibility to demonstrate knowledge of learning objectives. The DL addendum has also been updated.

### PROGRAM MODIFICATIONS

Catalog Year: 2019-20

<b>Program Award</b>	<b>Program Title</b>	<b>Units</b>
Associate in Science	Agricultural Science AG 161, Introduction to Plant Science is being added to the core courses and AG 156 and AG 157 are being removed from the core courses. The required core units is changing from 13 to 14 units. AG 149, 156, and 160 are being added to selected units. Only courses with the AG discipline are included in the selected units and BIOL 154, FSN 133, Math 123, and CHEM 120 are being removed. The total program units are changing from 22 to 23 units.	23
Certificate of Achievement	Agricultural Science AG 161, Introduction to Plant Science is being added to the core courses and AG 156 and AG 157 are being removed from the core courses. The required core units is changing from 13 to 14 units. AG 149, 156, and 160 are being added to selected units and BIOL 154, FSN 133, Math 123, and CHEM 120 are being removed. The total program units are changing from 22 to 23 units.	23
Associate in Art	Mathematics w/Computer Science Emphasis Updated program outcomes language to improve assessment results.	24
Associate in Art	Mathematics w/Physics Emphasis Updated program outcomes language to improve assessment results.	25

**MISCELLANEOUS MODIFICATIONS**

<b>Modification Type</b>	<b>Course Prefix and No.</b>	<b>Course Title</b>	<b>Units</b>
Corrections to semester offerings	CS 161	Discrete Structures	3
	ENGR 100	Introduction to Engineering	1
	ENGR 161	Materials Science	3
	ENGR 162	Materials Science Lab	1
	ENGR 170	Electric Circuit Analysis	3
	ENGR 171	Electric Circuit Lab	1
	ENVT 450	HAZWOPER	0.5
	ENVT 456	FRO Refresher	0.5
Remove Repeats	FILM 123	Directing for the Camera	2
Course Outcomes	MATH 521	Foundations for Mathematics	5
Textbook Change	SPCH 101	Public Speaking	3

**COURSE DROPS**

<b>Effective</b>	<b>Course Prefix</b>	<b>Course Title</b>	<b>Units</b>
2019-2020	ART 109	American Art	3
	ART 131	Portraits	1.5
	BIOL 135	Natural History of California	4
	BIOL 145	Desert Ecology	2
	DANCE 126	Clinic in Ballet Barre – Sunset Drop	0.5
	DANC 167	Clinic in Intermediate Tap – Sunset Drop	0.5
	DANC 174	Intermediate Ballroom – Sunset Drop	0.5
	EMS 303	Paramedic Prep	2.5
	ENGL 115	Writing Fiction	3
	ENGL 116	Writing Poetry	3
	ENGR 172	Circuits and Devices	4
	ENGR 173	Circuits and Devices Laboratory	1
	MATH 313	Algebra 1: Part 1	3
	MATH 314	Algebra 1: Part 2	3
	PE 156	Beginning Golf	1
	PSY 120	Cultural Psychology	3
	RVT 308	Seminar for Registered Veterinary Technicians	1



## SUNSET LISTED COURSES

Any credit course that has not been taught for a period of two calendar years will be placed on a sunset list, where it will remain for one year. A course on the Sunset List indicates that there is potential for removing the course from the catalog. The department presents a response to the AP&P committee, via department vote, in regard to retaining the course, or dropping the course.

No. of Appearances on Sunset List	Prefix & Number	Course Title	Rationale to Retain (provided by the department faculty)
1 <sup>st</sup> Appearance	DA 380	DA Skills Lab	The course was offered successfully in Fall 2011 but was cut due to budget cuts. Action: The course will be offered in an upcoming spring, summer, or fall term.
	ENGL 108	Literary Arts Journal 2 Review Date: Fall 2015	Last Offered: Spring 2010 Action: The course will be offered again in an upcoming spring, summer, or fall term.
	ENGL 109	Applied Composition Review Date: Fall 2015	Last Offered: Fall 2006 Action: The course will be offered again in an upcoming spring, summer, or fall term.
	ENGL 135	Introduction to Poetry Review Date: Fall 2015	Last Offered: Sum 2013 Action: The course will be offered again in an upcoming spring, summer, or fall term.
	ENVT 152	Identification and Assessment of Hazardous Materials Review Date: Fall 2016	The department wishes to continue with this course due to the following extenuating circumstances: program review underway, sunsetting the course will affect the program.
	ESL 550	Grammar 1 Review Date: Spring 2014	The course was offered successfully in Fall 2014. Action: The course will be offered in fall 2018 at LVC
	FILM 106	Film and Television Writing II Review Date: Fall 2017	Action: The course will be offered in Fall 2019
	FILM 106	Film and Television Writing II Review Date: Fall 2017	Action: The course will be offered in Fall 2019.
	FILM 108	Film and Television in the 21 <sup>st</sup> Century Review Date: Fall 2017	Action: The course will be offered in Fall 2019.
	FILM 386	Film Festival Production Lab Review Date: Fall 2016	The course was successfully offered in spring 2016. The department wishes to continue with this course due to the following extenuating circumstances. The course is being rewritten to reduce hours.
	LS 101	Success in College Review Date: Spring 2016	Action: The course will be offered again in an upcoming spring, summer, or fall term.
	MT 301	Introduction to Safety Review Date: Spring 2015	The course is being considered for statewide online offering.
	MT 302	Quality and Process Improvement Review Date: Spring 2016	The course is being considered for statewide online offering.

2<sup>nd</sup>  
Appearance

MT 303	Manufacturing Processes and Production Review Date: Spring 2015	The course is being considered for statewide online offering.
MT 304	Maintenance Awareness Review Date: Spring 2015	The course is being considered for statewide online offering.
STEM 140	Math and Science Teaching Careers Review Date: Fall 2015	Formerly, EDUC 140. The department wishes to retain the course, with plans to modify and then offer in spring 2019 and every spring.
WLDT 317	Ornamental Iron 1 Review Date: Spring 2015	The course was last offered successfully in spring 2016. Action: The course will be offered again in an upcoming spring, summer, and/or fall terms.
DANC 154	Pointe and Partnering Clinic Review Date: Fall 2017	The course was offered successfully in summer 2011. Action: The course will be offered in summer 2018.
DANC 155	Clinic in Pilates Review Date: Spring 2017	The course was offered successfully and successfully taught in fall 2013. Action: The course will be offered in summer 2018.
DANC 161	Clinic in Intermediate Ballet Review Date: Spring 2017	The course was offered successfully and successfully taught in summer 2015. Action: The course will be offered in summer 2018.
DANC 162	Clinic in Jazz Review Date: Spring 2017	The course was offered successfully and successfully in summer 2015. Action: The course will be offered again in summer 2018.
DANC 172	Beginning Ballroom Dance Review Date: Spring 2017	Rationale: The course was offered successfully in fall 2011. Review Date: Spring 2017 Action: The course will be offered in spring 2019.
ENVT 151	Hazardous Materials – Site Supervisor Review Date: Fall 2016	The department wishes to continue with this course due to the following extenuating circumstances: program review underway, sunseting the course will affect the program.
ENVT 157	First Aid for HazMat Workers Review Date: Fall 2016	The department wishes to continue with this course due to the following extenuating circumstances: program review underway, sunseting the course will affect the program.
EL 122	Electronic Devices and Circuits Review Date: Fall 2016	The course was offered successfully in Spring 2017. The department wishes to continue with this course due to the following extenuating circumstances. The course should be kept until a new FT instructor is hired and decides how to restructure the EL curriculum
EL 123	Electronic Devices and Circuits Lab Review Date: Fall 2016	The course was offered successfully in spring 2017. The department wishes to continue with this course due to the following extenuating circumstances. The course should be kept until a new FT instructor is hired and decides how to restructure the EL curriculum.
EL 135	Electronic Measurement and Instrument Review Date: Spring 2017	The department wishes to continue with this course due to the following extenuating circumstances. Course will be taught again when enough students progress through the lower level courses and enrollment is large enough to warrant the class being offered.

EL 136	Electronic Measurement and Instrument Lab Review Date: Fall 2016	The department wishes to continue with this course due to the following extenuating circumstances. Course will be taught again when enough students progress through the lower level courses and enrollment is large enough to warrant the class being offered.
EL 332	Wireless Network Administrator Review Date: Fall 2011	
EL 333	Intro to Network Security Review Date: Fall 2016	The course will be offered in spring, summer, or fall upcoming term.
ET 104	Intro to Robotics and Mechatronics Review Date: Fall 2017	Cross-list: CEL 104 (Fall 2017) and EL 104 (Fall 2017)
ET 128	Intro to Renewable Energy Review Date: Spring 2017	Cross-list: CEL 128 (Fall 2017) and EL 128 (Spring 2017)
ET 131	PLCs & Industrial Control Design Review Date: Fall 2017	Cross-list: CEL 131 (Fall 2017) and EL 131 (Fall 2017)
ET 133	Mechatronics Systems 1 Review Date: Fall 2017	Cross-list: CEL 133 (Fall 2017) and EL 133 (Fall 2017)
ET 139	Electrical Power, Motors, & Controls Review Date: Fall 2016	Cross-list: CEL 139 (Fall 2016) and EL 139 (Fall 2016)
ET 162	Fluid Power & Control Review Date: Fall 2017	Cross-list: CEL 162 (Fall 2016) and EL 162 (Fall 2016)
GEOG 110	Introduction to Meteorology Review Date: Fall 2016	The department wishes to retain the course, with plans to modify in preparation for a new program proposal, Geography for Transfer.
GRPH 127	History of Graphic Design Review Date: Fall 2013	The course should not be in the sunset list. It was offered in fall 2016. Rationale: The department wishes to retain the course, with plans to modify and include in a new transfer degree program.
SOC 122	Sociology of the Hispanic Culture Review Date: Fall 2017	The department wishes to retain the course with plans to offer the course at the high school level via concurrent enrollment.

**Allan Hancock College  
Program Outline**

**Title:** Agricultural Science

**Award Type:** Associate in Science and Certificate of Achievement

Allan Hancock College's Agricultural Science Program is designed for students preparing for, or advancing in careers in agricultural sciences. The agricultural science program will prepare students for a wide variety of entry-level positions related to agribusiness and agricultural science with an emphasis on local career opportunities such as pest management and control, agronomist, agricultural mechanics, environmental horticulture, soil science, orchard/vineyard management, produce sales and marketing, agriculture equipment technician, farm management, greenhouse and nursery operations, agricultural inspection, fertilizer specialist, crop advisor, weed science, irrigation consulting, and botanist. Students will gain practical skills in effective communication, problem solving, critical thinking, collaboration, and leadership through hands-on learning and field trips to local agricultural institutions.

This program will adequately prepare students to transfer for further study in many agricultural science fields including: Crop Protection, Crop Science, Agricultural Education, Agricultural Science, Soil Science, Fruit Science, Vegetable Science or Sustainable Agriculture.

**The graduate of the associate in science and certificate will:**

- Apply current agricultural industry standards, laws and regulations in the agricultural sciences or related fields.
- Demonstrate knowledge of soils, fertilizers, plant nutrition, and current industry growing techniques and apply this understanding to successfully produce agricultural crops.
- Identify common insect and disease pests and use knowledge of pest life cycles to recommend pest prevention and management situation plans.
- Employ effective business skills using industry analysis, market trends, business plans and other standard agribusiness techniques, when presented with a farm or ranch management situation.
- Assess and differentiate effects of agricultural activities in plant and cropping systems, while describing alternative practices in order to make sound agricultural decisions that ensure the quality and success of a crop.
- Demonstrate an understanding of crop plant biological functions and their application to successful commodity production.
- Demonstrate basic worker safety practices.

**Program Requirements**

**A minimum of 23 units in the major is required for the associate in science degree and certificate.**

**Required core courses 14 units:**

**Units: 14**

AG 125	Soils and Plant Nutrition	4
AG 130	Integrated Pest Management for Grapes	4
AG 150	Introduction to Agribusiness	3
AG 161	Introduction to Plant Science	3

**Plus a minimum of 9 units selected from the following:**

**Units: 9**

AG 149	Cooperative Work Experience: Occupation	1 - 3
AG 152	Introduction to Animal Science	3
AG 153	Introduction to Sustainable Agriculture	3
AG 154	Introduction to Fruit Science	3
AG 155	Introduction to Mechanized Agriculture	3
AG 156	Intro to Environmental Horticulture	3
AG 160	Plant Propagation and Production	3
AG 315	Fertilizers & Plant Nutrition	4

**Total Major Units**

**23**

## Allan Hancock College Program Outline

**Title:** Mathematics w/Computer Science Emphasis

**Award Type:** Associate in Arts

The associate in arts degree in math is offered for those students desiring a major in mathematics and recognition of their general education accomplishments.

**The graduate of the associate degree will:**

- Utilize a variety of problem-solving techniques and strategies to identify, analyze, and solve problems;
- Represent mathematical information symbolically, graphically, numerically, and in writing;
- Interpret and draw inferences from mathematical models such as formulas, graphs, and tables;
- Create and analyze mathematical models of real world and/or theoretical situations, including the implications and limitations of those models;
- Check mathematical results for reasonableness.
- Use appropriate technologies to analyze and solve mathematical problems.

### Major Requirements

**A major of 24 units is required for the associate degree.**

#### Required core courses (24 units):

CS 111	Fundamentals of Programming 1	4
CS 161	Discrete Structures	3
MATH 181	Calculus 1	4
MATH 182	Calculus 2	4
MATH 183	Multivariable Calculus	4
MATH 184	Linear Algebra/Differential Equations	5

**Total Major Units:** 24

## Allan Hancock College Program Outline

**Title:** Mathematics w/Physics Emphasis

**Award Type:** Associate in Art

The associate in arts degree in math is offered for those students desiring a major in mathematics and recognition of their general education accomplishments.

**The graduate of the associate degree will:**

- Utilize a variety of problem-solving techniques and strategies to identify, analyze and solve problems;
- Represent mathematical information symbolically, graphically, numerically, and in writing;
- Interpret and draw inferences from mathematical models such as formulas, graphs, and tables;
- Create and analyze mathematical models of real world and/or theoretical situations, including the implications and limitations of those models;
- Check mathematical results for reasonableness;
- Use appropriate technologies to analyze and solve mathematical problems

### Major Requirements

**A major of 25 units is required for the associate in arts degree.**

**Required core courses (21 units):**

MATH 181	Calculus 1	4
MATH 182	Calculus 2	4
MATH 183	Multivariable Calculus	4
MATH 184	Linear Algebra/Differential Equations	5
PHYS 161	Engineering Physics 1	4

**Plus a minimum of 4 units from the following:**

PHYS 162	Engineering Physics 2	4
PHYS 163	Engineering Physics 3	4

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<b>Total Major Units</b>	<b>25</b>
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## **Allan Hancock College Program Outline**

**Title:** Commercial Truck Driving

**Award Type:** Certificate of Completion

The Commercial Truck Driving Certificate prepares students to take the knowledge test required to obtain a California Commercial Learner's Permit and to take the road test. Upon passing both of these California Department of Motor Vehicle tests, students will be qualified for an entry-level position in the trucking industry. A certificate of Completion is awarded to student who perform 80% or higher on all competency tests and pass the California Commercial Driver's License – Class A or B test.

**The graduate of the certificate in commercial truck driving will:**

- Interpret U.S. Department of Transportation rules and regulations, safety, logs, and other legal issues that apply to trucking and transportation.
- Demonstrate knowledge of commercial vehicle systems and operations.
- Demonstrate how to safely operate equipment and to conduct routine preventive maintenance.
- Demonstrate proficiency by obtaining a California Commercial Driver's License – Class A or B.

**Program Requirements**

**A total of 240-270 hours is required for the certificate of completion**

**Required courses:**

VOCE 7800	Commercial Truck Driving: Preparation for the Learner's Permit	80-90
VOCE 7801	Commercial Truck Driving: Behind the Wheel Training	160-180

## Allan Hancock College Program Outline

**Title:** Workforce Readiness

**Award Type:** Certificate of Completion

This noncredit certificate program provides basic academic skills and workforce readiness skills need for employment. Students will obtain and maintain competitive integrated employment through development of career planning, interpersonal, and communication skills. Fundamental technology skills for job search will be provided. The certificate program is intended to align contemporary work readiness skills with opportunities for employment.

**The graduate of the certificate in workforce readiness will:**

- Demonstrate level-appropriate competency in reading fluency, writing, and basic math operations.
- Develop a Person-Centered Plan for Employment

### **Program Requirements**

**A total of 105-120 hours is required for the certificate of competency**

#### **Required courses:**

WKPR7800	Career Readiness and Planning	9 - 12
WKPR7801	Functional Work Skills	96 - 108