

AGRICULTURE, FOOD & NATURAL RESOURCES PATHWAY



Success in the World of Work

**Department of Education
American Samoa
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Agriculture, Food & Natural Resources Career Pathway

The Agriculture, Food & Natural Resources Pathway includes entry-level, technical and professional careers within related industries of American Samoa. There are many career opportunities within this pathway cluster.

The Natural Resources Career Pathway includes Agriculture that includes the following occupations—

High School Graduate Level **Community College Graduate Level**

- | | |
|---------------------------------------|----------------------------------------|
| • Agriculture Trainee | • Extension agent 1, 2 or 3 |
| • Agriculture elementary teacher aide | • Farm supervisor |
| • Quarantine trainee | • Pesticide enforcement worker |
| • Farmer assistant | • Pesticide enforcement worker |
| | • Conservation officer 1, 2 or 3 |
| | • Pesticide applicators |
| | • Hardware sales clerk |
| | • Produce manager |
| | • Poultry production worker/supervisor |
| | • Lab technician |
| | • Tour guides |
| | • Landscaper |
| | • Nursery worker/attendant |
| | • Greenhouse attendant |
| | • Swine production worker/supervisor |
| | • Veterinary assistant |
| | • Fisher |
| | • Aqua culture worker/supervisor |
| | • Agriculture teacher* |

*additional education is required beyond the community college degree

What is the Career and Technology Education (CTE) Plan

1. It is a plan to motivate students to participate in activities that will lead to graduation with a high school diploma; an industry recognized credential and/or prepared to enter post-secondary education in a related degree program.
2. It is a career-oriented system of programs with the direct involvement of local employers to provide students with a major step towards the skills employers need.
3. It prepares students academically and vocationally for either entrance to college or careers in a selected field or both.
4. It is a partnership among the high school, community college, local employers, and the American Samoa Department of Education.

The Plan

- Involves a close working partnership between the high school and local businesses.
- Focuses on the concept that all students select a Career Pathway upon which to focus their studies while in high school
- All students are enrolled in classes with integrated curriculum from 1st through 12th
- Elementary teachers have resources and lessons to begin career awareness and career development through the career guidance and counseling programs.
- Orients students towards graduation and receiving a fully credited diploma.
- Develops workplace skills used and needed by local employers.
- Includes a mentor program, with each student matched to a volunteer from the local community who is committed to spending two to four hours a month with the student.
- Places students in summer jobs with local employers following the 11th grade, provided that summer school is not required to meet graduation requirements
- Includes workplace learning during the last half of the 12th grade.
- Provides additional motivational activities with local community and business involvement.

What is a Career Pathway?

Career Pathways are used to indicate the careers and occupations that occur within a broadly defined area or “cluster” which helps to focus the curriculum and career-related learning experiences for the teachers and students.

What is a Career Cluster?

A Career Cluster is a grouping of occupations and broad industries based on commonalities. The sixteen career clusters provide an organizing tool for schools, small learning communities, academies and magnet schools. The clusters and typical pathways in each are:

- **Agriculture, Food & Natural Resources**
 - **Pathways and Career Contents**
 - Food Products and Processing Systems
 - Plant Systems
 - Animal Systems
 - Power, Structural & Technical Systems
 - Natural Resources Systems
 - Environmental Service Systems
 - Agribusiness Systems

- **Architecture & Construction**
 - **Pathways and Career Contents**
 - Design/Pre-Construction
 - Construction
 - Maintenance/Operations

- **Arts, Audio/Video Technology & Communications**
 - **Pathways and Career Contents**
 - Audio and Video Technology and Film
 - Printing Technology
 - Visual Arts
 - Performing Arts
 - Journalism/Broadcasting
 - Telecommunications

- **Business Management & Administration**
 - **Pathways and Career Contents**
 - General Management
 - Business Information Management
 - Human Resources Management
 - Operations Management
 - Administrative Support

- **Education and Training**
 - **Pathways and Career Contents**
 - **Administration and Administrative Support**

- **Professional Support Services**
 - **Teaching & Training**
- **Finance**
 - **Pathways and Career Contents**
 - **Banking and Related Services**
 - **Business Financial Management**
 - **Financial and Investment Planning**
 - **Insurance Services**
- **Government & Public Administration**
 - **Pathways and Career Contents**
 - Governance
 - National Security
 - Foreign Service Planning
 - Revenue and Taxation Regulation
 - Public Management/Administration
- **Health Science**
 - **Pathways and Career Contents**
 - Therapeutic Services
 - Diagnostic Services
 - Health Informatics
 - Support Services
 - Biotechnology Research/Development
- **Hospitality & Tourism**
 - **Pathways and Career Contents**
 - Restaurants and Food/Beverage Services
 - Lodging
 - Travel & Tourism
 - Recreation, Amusements & Attractions
- **Human Services**
 - **Pathways and Career Contents**
 - Early Childhood Development & Services
 - Counseling & Mental Health Services
 - Family & Community Services
 - Personal Care Services
 - Consumer Services
- **Information Technology**
 - **Pathways and Career Contents**
 - Network Systems
 - Information Support and Services
 - Web and Digital Communications
 - Programming / Software Development
- **Law, Public Safety, Corrections & Security**
 - **Pathways and Career Contents**
 - Correction Services
 - Emergency/Fire Management Services
 - Security & Protective Services
 - Law Enforcement Services
 - Legal Services

- **Manufacturing**
 - **Pathways and Career Contents**
 - Production
 - Manufacturing Prod. Process Dev.
 - Maintenance, Installation & Repair
 - Quality Assurance
 - Logistics & Inventory Control
 - Health, Safety/Environmental Assurance
- **Marketing, Sales and Service**
 - **Pathways and Career Contents**
 - Marketing Management
 - Professional Sales
 - Merchandising
 - Marketing Communication
 - Marketing Research
- **Science, Math, Engineering & Technology**
 - **Pathways and Career Contents**
 - Engineering and Technology
 - Science and Math
- **Transportation, Distribution & Logistics**
 - **Pathways and Career Contents**
 - Transportation Operations
 - Logistics Planning/Management Services
 - Warehousing/Distribution Ctr. Operations
 - Facility/Mobile Equipment Maintenance
 - Transportation Systems/
Infrastructure Plng., Mgmt. Regs.
 - Health, Safety/ Enviro. Mgmt.
 - Sales/Service

Pathways adopted by the Department of Education in American Samoa are:

1. Human Services
2. Health Sciences
3. Science, Technology, Engineering & Mathematics
4. ***Agriculture, Food & Natural Resources***
5. Business Management, Administration & Information Technology
6. Arts, Audio/Video Technology & Communication
7. Education & Training
8. Architecture and Construction
9. Transportation, Distribution & Logistics

Examples of Content within Career Pathways

Within each of the career pathways there may be two (2) or more career content areas that relate the student's learning to the knowledge and skills required to become successful in that field and to prepare them to continue their education in community college, college or university, or at the work-site. These areas are often organized into Career Pathways.

Career Pathway	Code	Occupation
Agribusiness Systems	45-1012.00	Farm Labor Contractors
Agribusiness Systems	11-3031.02	Financial Managers, Branch or Department
Agribusiness Systems	13-1021.00	Purchasing Agents and Buyers, Farm Products
Animal Systems	45-2021.00	Animal Breeders
Animal Systems	19-1011.00	Animal Scientists
Animal Systems	45-2093.00	Farmworkers, Farm and Ranch Animals
Animal Systems	45-1011.08	First-Line Supervisors/Managers of Animal Husbandry and Animal Care Workers
Animal Systems	45-1011.06	First-Line Supervisors/Managers of Aquacultural Workers
Animal Systems	41-1011.00	First-Line Supervisors/Managers of Retail Sales Workers
Animal Systems	45-3021.00	Hunters and Trappers
Animal Systems	39-2021.00	Nonfarm Animal Caretakers
Animal Systems	29-1131.00	Veterinarians
Animal Systems	31-9096.00	Veterinary Assistants and Laboratory Animal Caretakers
Animal Systems	29-2056.00	Veterinary Technologists and Technicians
Animal Systems	19-1023.00	Zoologists and Wildlife Biologists
Environmental Service Systems	13-1041.01	Environmental Compliance Inspectors
Environmental Service Systems	17-3025.00	Environmental Engineering Technicians
Environmental Service Systems	17-2081.00	Environmental Engineers
Environmental Service Systems	19-4091.00	Environmental Science and Protection Technicians, Including Health
Environmental Service Systems	29-9011.00	Occupational Health and Safety Specialists
Environmental Service Systems	29-9012.00	Occupational Health and Safety Technicians
Environmental Service Systems	37-2021.00	Pest Control Workers
Environmental Service Systems	51-9199.01	Recycling and Reclamation Workers
Environmental Service Systems	53-1021.01	Recycling Coordinators
Environmental Service Systems	53-7081.00	Refuse and Recyclable Material Collectors
Environmental Service Systems	51-8031.00	Water and Liquid Waste Treatment Plant and System Operators
Food Products and Processing Systems	45-2011.00	Agricultural Inspectors
Food Products and Processing Systems	51-3021.00	Butchers and Meat Cutters
Food Products and Processing Systems	45-1011.00	First-Line Supervisors/Managers of Farming, Fishing, and Forestry Workers
Food Products and Processing Systems	51-3091.00	Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders
Food Products and Processing Systems	51-3092.00	Food Batchmakers
Food Products and Processing Systems	51-3093.00	Food Cooking Machine Operators and Tenders
Food Products and Processing Systems	19-1012.00	Food Scientists and Technologists

Career Pathway	Code	Occupation
Food Products and Processing Systems	45-2041.00	Graders and Sorters, Agricultural Products
Food Products and Processing Systems	51-3022.00	Meat, Poultry, and Fish Cutters and Trimmers
Food Products and Processing Systems	51-3023.00	Slaughterers and Meat Packers
Natural Resources Systems	11-9011.03	Aquacultural Managers
Natural Resources Systems	17-1021.00	Cartographers and Photogrammetrists
Natural Resources Systems	49-9092.00	Commercial Divers
Natural Resources Systems	47-5041.00	Continuous Mining Machine Operators
Natural Resources Systems	47-5011.00	Derrick Operators, Oil and Gas
Natural Resources Systems	47-5031.00	Explosives Workers, Ordnance Handling Experts, and Blasters
Natural Resources Systems	45-4021.00	Fallers
Natural Resources Systems	33-3031.00	Fish and Game Wardens
Natural Resources Systems	45-3011.00	Fishers and Related Fishing Workers
Natural Resources Systems	19-4093.00	Forest and Conservation Technicians
Natural Resources Systems	45-4011.00	Forest and Conservation Workers
Natural Resources Systems	53-7071.00	Gas Compressor and Gas Pumping Station Operators
Natural Resources Systems	51-8092.00	Gas Plant Operators
Natural Resources Systems	19-4041.00	Geological and Petroleum Technicians
Natural Resources Systems	19-4041.02	Geological Sample Test Technicians
Natural Resources Systems	19-4041.01	Geophysical Data Technicians
Natural Resources Systems	47-5081.00	Helpers--Extraction Workers
Natural Resources Systems	53-7033.00	Loading Machine Operators, Underground Mining
Natural Resources Systems	45-4023.00	Log Graders and Scalers
Natural Resources Systems	45-4022.00	Logging Equipment Operators
Natural Resources Systems	47-5042.00	Mine Cutting and Channeling Machine Operators
Natural Resources Systems	11-9121.00	Natural Sciences Managers
Natural Resources Systems	51-8093.00	Petroleum Pump System Operators, Refinery Operators, and Gaugers
Natural Resources Systems	19-4099.02	Precision Agriculture Technicians
Natural Resources Systems	53-7072.00	Pump Operators, Except Wellhead Pumpers
Natural Resources Systems	19-1031.02	Range Managers
Natural Resources Systems	47-5051.00	Rock Splitters, Quarry
Natural Resources Systems	47-5061.00	Roof Bolters, Mining
Natural Resources Systems	47-5012.00	Rotary Drill Operators, Oil and Gas
Natural Resources Systems	47-5071.00	Roustabouts, Oil and Gas
Natural Resources Systems	51-7041.00	Sawing Machine Setters, Operators, and Tenders, Wood
Natural Resources Systems	47-5013.00	Service Unit Operators, Oil, Gas, and Mining
Natural Resources Systems	53-7111.00	Shuttle Car Operators
Natural Resources Systems	53-7073.00	Wellhead Pumpers
Plant Systems	25-1041.00	Agricultural Sciences Teachers, Postsecondary
Plant Systems	11-9011.02	Crop and Livestock Managers

Career Pathway	Code	Occupation
Plant Systems	25-9021.00	Farm and Home Management Advisors
Plant Systems	49-3041.00	Farm Equipment Mechanics
Plant Systems	11-9011.00	Farm, Ranch, and Other Agricultural Managers
Plant Systems	11-9012.00	Farmers and Ranchers
Plant Systems	45-2092.02	Farmworkers and Laborers, Crop
Plant Systems	45-2092.00	Farmworkers and Laborers, Crop, Nursery, and Greenhouse
Plant Systems	45-1011.07	First-Line Supervisors/Managers of Agricultural Crop and Horticultural Workers
Plant Systems	37-1012.00	First-Line Supervisors/Managers of Landscaping, Lawn Service, and Groundskeeping Workers
Plant Systems	45-1011.05	First-Line Supervisors/Managers of Logging Workers
Plant Systems	19-1032.00	Foresters
Plant Systems	11-9011.01	Nursery and Greenhouse Managers
Plant Systems	45-2092.01	Nursery Workers
Plant Systems	37-3012.00	Pesticide Handlers, Sprayers, and Applicators, Vegetation
Plant Systems	19-1013.00	Soil and Plant Scientists
Plant Systems	19-1031.01	Soil and Water Conservationists
Plant Systems	37-3013.00	Tree Trimmers and Pruners
Power, Structural and Technical Systems	45-2091.00	Agricultural Equipment Operators
Power, Structural and Technical Systems	41-2022.00	Parts Salespersons

GOING GREEN.....

Green occupations will likely change as a result of the green economy. Green economy activities and technologies are increasing the demand for occupations, shaping the work and worker requirements needed for occupational performance, or generating new and emerging occupations. It is important to note that some areas cross over to related clusters.

Within each content area required courses and electives are identified that must be completed prior to graduation from high school with specific skills that must be demonstrated for certification in that area or pathway. Career related learning experiences occur within each pathway that connects the student's learning to the real world. By the senior year in high school, work experiences in the community related to the student's career choice may take as much as one-half of the school day depending upon the student's individual career goal plans. Preparation for entry into the next level of education or directly into the workplace is met within the framework of the career pathway and individualized for each student depending upon his or her aspirations and goals.

HOW TO USE THE GUIDE

The Career Pathway Guides are informational documents used to explain the purpose, components and goals of the American Samoa Career Pathway System.

The target audience for this publication is:

- High school staff members
- Advisory Committee members
- Interested community members
- Career academy supporters

COMPONENTS OF THE NATURAL RESOURCES PATHWAY—AGRICULTURE CAREER CONTENTS

- ◆ Vision and Goals of Career Pathway System
- ◆ Core Competencies
- ◆ Career Pathway Core Academic Courses, Core Competencies and Levels of Preparation
- ◆ Integrated Curriculum
- ◆ Career and Technical Curriculum Based on Industry Standards
- ◆ Guidance and Counseling
- ◆ Business and Industry Involvement
- ◆ Career Pathway Advisory Committee
- ◆ Community College Connections

VISION AND GOALS

Career Pathway Systems thrive when the educators have a clear vision and focus on helping students reach their goals. The vision and goals should be developed with input from all educators, students, parents, and business partners.

The Agriculture Career Pathway Vision is:

STUDENTS READY FOR LIFE

The Agriculture Career Pathway Mission is:

- To prepare all students academically, technologically, culturally, and socially to attain their full potential as contributing members of society.

The Agriculture Career Pathway Goals:

The Natural Resources Pathway Agriculture Career Pathway is designed to provide students with the skills, technical knowledge, and work habits necessary for entry level employment in agriculture production or related careers. The Pathway prepares students to work and advance their career in horticulture crop production, animal husbandry, landscaping, and in agriculture support careers such as education, extension, research, and agriculture equipment and support. The program also prepares students for transfer to 4-year colleges for the pursuit of higher degrees in agriculture and related fields.

The overall goals of the program are:

- Connect learning with earning—students who understand the relationship between learning and career skills are more likely to make a successful transition from school to career.
- Develop a common vision for all partners—both educators and business partners work together to provide the workforce needed for the future.
- Demand high expectations for all students—standards and the criteria to meet those standards are established for all students.

The Agriculture Career Pathway Student Goals are:

- Make well-informed career choices
- Understand and apply a career planning process
- Complete a logical sequence of core academic and appropriate vocational courses
- Perform relevant work-based learning experiences
- Apply leadership and workplace readiness skills
- Exit the Career Pathway System prepared for further education and employment.

Core Courses and Competencies

A logical sequence of relevant courses, both academic and vocational, is designed for the Natural Resources Pathway Agriculture Career Content. High school, community college and other higher education course offerings are being considered as the Career Pathway continues to develop.

Courses are developed or expanded to include nontraditional settings such as: distance learning opportunities, Internet experiences, work-site settings such as farms, seed companies, high school students working with community college students on projects and school-based enterprises.

Academic courses recommended in the Natural Resources Pathway Agriculture Career Contents meet high school and/or community college entrance requirements. The academic courses also support industry need for skills and competencies. The Core Competencies within all High School Career Pathways include SCANS or other core competency skills. The Career Pathways Model for American Samoa's High Schools is depicted below:



All agricultural careers require a good foundation in natural sciences, especially biology and chemistry, with some knowledge of ecology. Basic skills in English and mathematics are also essential. High school experience in agriculture is important to students entering Agriculture Science at the college level.

The Core Academic Courses and Competencies for the Natural Resources Pathway in Agriculture are:

9th Grade

English I
Algebra I
General Science
Career Development I
World Geography
Samoan Studies
Health

11th Grade

English III
Algebra II
Chemistry
Agriculture I A & B
Samoan History
*Computer Literacy
Elective

*Recommended electives

10th Grade

English II
Geometry
Biology
Career Development II
World History
Basic PE
Samoan Studies II

12th Grade

English IV
Agriculture II A & B
Agriculture III (2 blocks)
*Local Business Econ.
Elective
Elective

Required courses in Italics

Personal Qualifications

To be successful and happy in an agricultural career, a person should have a sincere interest in all living things, and in all aspects of the natural world. Anyone working in agriculture should have patience, and should be practical and hardworking.

For the educational careers in agriculture, a person should be outgoing and enjoy interacting with other people. All fields of agriculture require a willingness to continue learning throughout life.

Core Competencies

There are five competencies that comprise the core competencies all students within the High School Career Pathways System must acquire during their progress through the high school curriculum. These core competencies are:

Resources

Identifies, organizes, plans and allocates resources such as time, money, materials and facilities, and human resources

Interpersonal Skills

Works with others as a member of a team, teaches others new skills, serves clients/customers, exercises leadership, negotiates toward agreements and works with diversity.

Information Skills

Acquires and uses information, evaluates and maintains information, interprets and communicates information and uses computers to process information.

Technology Skills

Works with a variety of technologies that include selecting technology, apply technology to tasks, and maintains and troubleshoots equipment.

Systems Skills

Understanding, monitoring, improving, and designing systems of all kinds. This most complex and important of the competencies are the most difficult to define. Most basically, workers need to work with processes that operate over time. The process can be farming, health care, constructing or installing. One can understand systems built by others or by nature. Systems will be biological, physical, social, or economic in nature. At a higher level, one can design or build a system and find a larger system to improve it as experience is gained and reflected upon.

Vocational Core Course Development

In the process of developing the vocational course curriculum committees of teachers, both academic and vocational worked cooperatively to identify range of occupations in each vocational course. They also collaboratively identified the knowledge and skills that apply to the occupations in course and met with business and industry to verify or change the identified knowledge and skills.

The next step was to develop an effective course syllabus for each vocational course containing the following components:

- course title
- description
- prerequisite courses
- amount of credit for the course
- the performance objectives
- course outline
- materials and equipment
- texts and references
- methods of instruction
- methods of evaluation
- student skills profile
- student task list

The next step is to inservice the instructors on the new course guides. This is critical in order to be able to successfully teach the knowledge and skills related to several occupational contexts.

The Course Guides for the Agriculture Content contain an overall task list for Agriculture I and II and a skill list.

AGRICULTURE, FOOD AND NATURAL RESOURCES PATHWAY: FOOD PRODUCTS AND PROCESSING This plan of study can serve as a guide, along with other career planning materials, as learners work to achieve their career goals. Courses listed within this plan are options for recommended coursework. The learner's plan should be individualized to meet his/her educational and career goals. This plan should also be customized with the educational institution's specific course titles and meet college ready/work ready requirements. Educational levels to be considered (check all that apply): On-the-job training Apprenticeship Military Training Certificate/License Associate Degree Bachelor Degree Professional Degree

Agriculture, Food and Natural Resources - Food Products and Processing Pathway								SAMPLE OCCUPATIONS
Academic/Career Advisement Provided	Grade Level	English/ Language Arts	Math	Science	Social Studies/ Sciences	Career and Technology Education (CTE) Majors <i>*Italicized majors additional course information</i>	Other Elective and Required Courses	Occupations Requiring Postsecondary Education <ul style="list-style-type: none"> ■ Agricultural Communications Specialist ■ Agricultural Salesperson ■ Food and Drug Inspector ■ Food Meal Supervisor ■ Food Processor ■ Meat Cutter-Meat Grader ■ Meat Processor ■ Produce Buyer Occupations Requiring Baccalaureate Degree and Beyond <ul style="list-style-type: none"> ■ Agricultural Educator ■ Bacteriologist ■ Biochemist-Nutritionist ■ Bioengineer ■ Dietician ■ Food and Fiber Engineer ■ Food Scientist ■ Meat Science Researcher ■ Microbiologist ■ Quality Control Specialist
	HIGH SCHOOL / TECHNOLOGY CENTER							
S E C O N D A R Y	9	English/LA I	Algebra I	Biology I	Samoan History	<i>*Food Products and Processing</i> <i>*Meat Processor (T&I)</i> NOTE: Cooperative Alliance courses may be listed here.	Computer Technology or Foreign Language Fine Arts or Speech Financial Literacy Additional courses to support career goal: Introduction to Agribusiness TechConnect Intro to Agriscience Agriscience II/ Additional science	
	↓	English/LA II	Geometry	Chemistry	American History			
	10	English/LA III	Algebra II	Physics	U.S.			
	↓	English/LA IV	Trigonometry or other upper level math courses: Pre-Calculus Calculus Statistics	(Upper division lab sciences)	Government Economics Geography World History			
COLLEGE/ UNIVERSITY								
P O S T S E C O N D A R Y	13	-English Comp I -English Comp II	-College Algebra	-Chemistry	-American Government	-Food and the Consumer -Scientific Study of Food Products and Processing Systems	TECHNOLOGY CENTER NOTE: Attainment of a CTE major at a technology center may be completed as a high school student or an adult. Career Major courses may count for college credit.	
	14	-Speech/Oral Communications -Technical Writing	-Calculus	-Biological Science -Botany	-American History -Geography	-Principles of Food Processing -Food Product Development -Food Laws, Regulations & Regulatory Processes		
	15	Continue courses in your area of specialization					NOTE: Use the postsecondary institution's degree plan to help customize the learner's plan.	
	16	Complete Food Products and Processing Major (4-year degree program)						
Opportunities for experience/training for high school or postsecondary learner: <input type="checkbox"/> Career and Technology Education student organization <input type="checkbox"/> Internship/work study <input type="checkbox"/> Job shadowing <input type="checkbox"/> Mentorship <input type="checkbox"/> Part-time employment <input type="checkbox"/> Volunteer work in charitable/community organizations <input type="checkbox"/> Work based/work site learning								

(Learner Signature) _____ (Parent/Guardian Signature) _____ (School Official Signature) _____
 Dates: Freshman review _____ Sophomore review _____ Junior Review _____ Senior Review _____ Grade 13 review _____ Grade 14 review _____

Sample plan adapted from States' Career Clusters Initiatives Pathway Plans of Study

AGRICULTURE, FOOD AND NATURAL RESOURCES PATHWAY: PLANT AND SOIL SCIENCE This plan of study can serve as a guide, along with other career planning materials, as learners work to achieve their career goals. Courses listed within this plan are options for recommended coursework. The learner's plan should be individualized to meet his/her educational and career goals. This plan should also be customized with the educational institution's specific course titles and meet college ready/work ready requirements. Educational levels to be considered (check all that apply): On-the-job training Apprenticeship Military Training Certificate/License Associate Degree Bachelor Degree Professional Degree

Agriculture, Food and Natural Resources – Plant and Soil Science Pathway								SAMPLE OCCUPATIONS
Academic/Career Advisement Provided	Grade Level	English/ Language Arts	Math	Science	Social Studies/ Sciences	Career and Technology Education (CTE) Majors <small>*Italicized majors additional course information</small>	Other Elective and Required Courses	Occupations Requiring Postsecondary Education <ul style="list-style-type: none"> ■ Agricultural Journalist ■ Biotechnology Lab Technician ■ Commodity Marketing Specialist ■ Custom Hay/Silage Operator ■ Farmer ■ Golf Course Manager ■ Grain Operation Superintendent ■ Green House Manager ■ Rancher ■ Tree Surgeon
	HIGH SCHOOL / TECHNOLOGY CENTER							
S ↓ E ↓ C ↓ O ↓ N ↓ D ↓ A ↓ R ↓ Y	9	English/LA I	Algebra I	Biology I	Samoan History	<i>*Agri Technology</i> <i>*Plant and Soil Services Work-force Transition</i>	Computer Technology or Foreign Language	Occupations Requiring Baccalaureate Degree <ul style="list-style-type: none"> ■ Agricultural Educator ■ Bioinformatics Specialist ■ Botanist ■ Plant Breeder and Geneticist ■ Plant Pathologist ■ Soil and Water Specialist
	10	English/LA II	Geometry	Chemistry	American History	<i>*Service Careers Landscaper's Assistant (T&I)</i> <i>*Horticultural Plant and Soil Science</i> <i>*Agronomic Plant and Soil Science</i>	Fine Arts or Speech	
	11	English/LA III	Algebra II	Physics	U.S. Government	<i>*Horticulture (T&I)</i> <i>*Floriculture Design Assistant (T&I)</i> <i>*Service Careers Horticulture Assistant (T&I)</i> NOTE: Cooperative Alliance courses may be listed here.	Financial Literacy	
	12	English/LA IV	Trigonometry or other upper level math courses: Pre-Calculus Calculus Statistics	(Upper division lab sciences)	Economics Geography World History		Additional courses to support career goal: TechConnect Intro to Agriscience Agriscience II Intro to Horticulture Additional science	
COLLEGE/ UNIVERSITY								
P ↓ O ↓ S ↓ T ↓ S ↓ E ↓ C ↓ O ↓ N ↓ D ↓ A ↓ R ↓ Y	13	-English Comp I -English Comp II	-College Algebra	-Chemistry	-American Government	-Principles of Plant Systems -Fundamentals of Plant Production and Management	TECHNOLOGY CENTER NOTE: Attainment of a CTE major at a technology center may be completed as a high school student or an adult. Career Major courses may count for college credit. NOTE: Use the postsecondary institution's degree plan to help customize the learner's plan with regard to degrees, etc.	
	14	-Speech/Oral Communications -Technical Writing	-Statistics	-Biological Science -Botany	-American History -Geography	-Students choose area of specialization and take related courses such as Horticulture, Forestry or Agronomy		
	15	Continue courses in your area of specialization						
	16	Complete Plant and Soil Science Major (4-year degree program)						
		Opportunities for experience/training for high school or postsecondary learner: <input type="checkbox"/> Career and Technology Education student organization <input type="checkbox"/> Internship/work study <input type="checkbox"/> Job shadowing <input type="checkbox"/> Mentorship <input type="checkbox"/> Part-time employment <input type="checkbox"/> Volunteer work in charitable/community organizations <input type="checkbox"/> Work based/work site learning						

(Learner Signature)

(Parent/Guardian Signature)

(School Official Signature)

Dates: Freshman review _____ Sophomore review _____ Junior Review _____ Senior Review _____ Grade 13 review _____ Grade 14 review _____

Sample plan adapted from States' Career Clusters Initiatives Pathway Plans of Study

AGRICULTURE, FOOD AND NATURAL RESOURCES PATHWAY: ANIMAL SCIENCE This plan of study can serve as a guide, along with other career planning materials, as learners work to achieve their career goals. Courses listed within this plan are options for recommended coursework. The learner's plan should be individualized to meet his/her educational and career goals. This plan should also be customized with the educational institution's specific course titles and meet college ready/work ready requirements. Educational levels to be considered (check all that apply): On-the-job training Apprenticeship Military Training Certificate/License Associate Degree Bachelor Degree Professional Degree

Agriculture, Food and Natural Resources – Animal Science Pathway								SAMPLE OCCUPATIONS
Academic/Career Advisement Provided	Grade Level	English/ Language Arts	Math	Science	Social Studies/ Sciences	Career and Technology Education (CTE) Majors <i>*Italicized majors additional course information</i>	Other Elective and Required Courses	Occupations Requiring Postsecondary Education <ul style="list-style-type: none"> ■ Animal Caretaker-Poultry Manager ■ Aquaculturalist ■ Artificial Insemination Technician ■ Dairy Producer ■ Equine Manager ■ Feed Sales Representative ■ Livestock Buyer ■ Livestock Inspector ■ Livestock Producer ■ Veterinary Assistant
		HIGH SCHOOL / TECHNOLOGY CENTER						
S E C O N D A R Y	9	English/LA I	Algebra I	Biology I	Samoan History	<i>*Equine Production (T & I)</i> <i>*Animal Science</i>	Computer Technology or Foreign Language Fine Arts or Speech Financial Literacy Additional courses to support career goal: TechConnect Intro to Agriscience Agriscience II Additional science	Occupations Requiring Baccalaureate Degree and Beyond <ul style="list-style-type: none"> ■ Agricultural Educator ■ Animal Nutritionist ■ Livestock Geneticist ■ Meat Science Researcher ■ Physiologist ■ Wildlife Biologist ■ USDA Inspector ■ Veterinarian
	↓	English/LA II	Geometry	Chemistry	American History			
	10	English/LA III	Algebra II	Physics	US Government			
	↓	English/LA IV	Trigonometry or other upper level math courses: Pre-Calculus Calculus Statistics	(Upper division lab sciences)	Economics Geography World History	NOTE: Cooperative Alliance courses may be listed here.		
COLLEGE/ UNIVERSITY								
P O S T S E C O N D A R Y	13	-English Comp I -English Comp II	-College Algebra	-Biological Science	-American Government	-Orientation to Animal Science -Survey of the Animal Industry	TECHNOLOGY CENTER NOTE: Attainment of a CTE major at a technology center may be completed as a high school student or an adult. Career Major courses may count for college credit.	
		-Speech/Oral Communications -Technical Writing		-Chemistry	-American History -Geography	-Animal Anatomy and Physiology -Working with Animals		
	15	Continue courses in your area of specialization					NOTE: Use the postsecondary institution's degree plan to help customize the learner's plan with regard to degrees, licenses, etc.	
	16	Complete Animal Science Major (4-year degree program)						
Opportunities for experience/training for high school or postsecondary learner: <input type="checkbox"/> Career and Technology Education student organization <input type="checkbox"/> Internship/work study <input type="checkbox"/> Job shadowing <input type="checkbox"/> Mentorship <input type="checkbox"/> Part-time employment <input type="checkbox"/> Volunteer work in charitable/community organizations <input type="checkbox"/> Work based/work site learning								

(Learner Signature)

(Parent/Guardian Signature)

(School Official Signature)

Dates: Freshman review _____

Sophomore review _____

Junior Review _____

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Grade 13 review _____

Grade 14 review _____

Sample plan adapted from States' Career Clusters Initiatives Pathway Plans of Study

AGRICULTURE, FOOD AND NATURAL RESOURCES PATHWAY: AGRICULTURE POWER, STRUCTURES AND TECHNOLOGY This plan of study can serve as a guide, along with other career planning materials, as learners work to achieve their career goals. Courses listed within this plan are options for recommended coursework. The learner’s plan should be individualized to meet his/her educational and career goals. This plan should also be customized with the educational institution’s specific course titles and meet college ready/work ready requirements. Educational levels to be considered (check all that apply): On-the-job training Apprenticeship Military Training Certificate/License Associate Degree Bachelor Degree Professional Degree

Agriculture, Food and Natural Resources – Agriculture Power, Structures and Technology Pathway								SAMPLE OCCUPATIONS
Grade Level	English/ Language Arts	Math	Science	Social Studies/ Sciences	Career and Technology Education (CTE) Majors <small>*Italicized majors additional course information</small>	Other Elective and Required Courses	Occupations Requiring Postsecondary Education	
	HIGH SCHOOL / TECHNOLOGY CENTER							
ACADEMIC / CAREER ADVISEMENT PROVIDED	9	English/LA I	Algebra I	Biology I	Samoan History	Computer Technology or Foreign Language Fine Arts or Speech Financial Literacy Additional courses to support career goal: TechConnect Intro to Agriscience Agriscience II	<ul style="list-style-type: none"> ■ Communication Technician ■ Database Administrator ■ Electronic Systems Technician ■ Equipment/Parts Manager ■ GPS Technician ■ Heavy Equipment Maintenance Technician ■ Information Lab Specialist ■ Machine Operator ■ Machinist ■ Recycling Technician ■ Remote Sensing Specialist ■ Welder 	
	10	English/LA II	Geometry	Chemistry	American History			
	11	English/LA III	Algebra II	Physics	U.S. Government			
	12	English/LA IV	Trigonometry or other upper level math courses: Pre-Calculus Calculus Statistics	(Upper division lab sciences)	Economics Geography World History			
COLLEGE/ UNIVERSITY								
POSTSECONDARY	13	-English Comp I -English Comp II	-College Algebra	-Earth Science -Biological Science	-American Government	-Power, Structural and Technical Systems	<p>TECHNOLOGY CENTER NOTE: Attainment of a CTE major at a technology center may be completed as a high school student or an adult. Career Major courses may count for college credit.</p> <p>NOTE: Use the postsecondary institution’s degree plan to help customize the learner’s plan with regard to degrees, certification, etc.</p>	
	14	-Speech/Oral Communications -Technical Writing	-Calculus	-Physics -Chemistry	-American History -Geography	-Technical Systems -Advanced Applications of Technical Systems		
	15	Continue courses in your area of specialization						
	16	Complete Agriculture Power, Structures and Technology Major (4-year degree program)						
<p>Opportunities for experience/training for high school or postsecondary learner: <input type="checkbox"/> Career and Technology Education student organization <input type="checkbox"/> Internship/work study <input type="checkbox"/> Job shadowing <input type="checkbox"/> Mentorship <input type="checkbox"/> Part-time employment <input type="checkbox"/> Volunteer work in charitable/community organizations <input type="checkbox"/> Work based/work site learning</p>								

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(School Official Signature)

Dates: Freshman review _____ Sophomore review _____ Junior Review _____ Senior Review _____ Grade 13 review _____ Grade 14 review _____

Sample plan adapted from States' Career Clusters Initiatives Pathway Plans of Study

AGRICULTURE, FOOD AND NATURAL RESOURCES PATHWAY: AGRIBUSINESS AND MANAGEMENT **This plan of study can serve as a guide, along with other career planning materials, as learners work to achieve their career goals. Courses listed within this plan are options for recommended coursework. The learner’s plan should be individualized to meet his/her educational and career goals. This plan should also be customized with the educational institution’s specific course titles and meet college ready/work ready requirements. Educational levels to be considered (check all that apply):** On-the-job training Apprenticeship Military Training Certificate/License Associate Degree Bachelor Degree Professional Degree

Agriculture, Food and Natural Resources – Agribusiness and Management Pathway							SAMPLE OCCUPATIONS	
Grade Level	English/ Language Arts	Math	Science	Social Studies/ Sciences	Career and Technology Education (CTE) Majors <i>*Italicized majors additional course information</i>	Other Elective and Required Courses	Occupations Requiring Postsecondary Education <ul style="list-style-type: none"> ■ Agricultural Chemical Dealer ■ Agricultural Products Buyer-Distributor ■ Bank/Loan Office ■ Dairy Herd Supervisor ■ Entrepreneur ■ Farm Manager ■ Farmer Rancher Feed lot Operator ■ Feed-Supply Store Manager ■ Field Representatives for Bank, Insurance Company or Government Program ■ Livestock Manager ■ Sales Manager ■ Salesperson 	
	HIGH SCHOOL / TECHNOLOGY CENTER							
Academic/Career Advisement Provided	S E C O N D A R Y	9	English/LA I	Algebra I	Biology I	Samoan History	* <i>Agribusiness and Management</i> * <i>Crop Care Professional</i> NOTE: Cooperative Alliance courses may be listed here.	Computer Technology or Foreign Language Fine Arts or Speech Financial Literacy Additional courses to support career goal: Intro to Agriscience Agriscience II Intro to Agribusiness
		↓	English/LA II	Geometry	Chemistry	American History		
		10	English/LA III	Algebra II	Physics	U.S. Government		
		↓	English/LA IV	Trigonometry or other upper level math	(Upper division lab sciences)	Economics		
COLLEGE/ UNIVERSITY								
Academic/Career Advisement Provided	P O S T S E C O N D A R Y	13	-English Comp I -English Comp II	-College Algebra	-Biological Science or Botany	-American Government	TECHNOLOGY CENTER - NOTE: Attainment of a CTE major at a technology center may be completed as a high school student or an adult. Career Major courses may count for college credit.	
		14	-Speech/Oral Communications -Technical Writing		-Chemistry	-American History -Geography	-Agricultural Salesmanship -Agricultural Finance -Agricultural Advertising/ Merchandising	
		15	Continue courses in your area of specialization					NOTE: Use the postsecondary institution’s degree plan to help customize the learner’s plan with regard to degrees, licenses, etc.
16	Complete Agribusiness and Management Major (4-year degree program)							
Opportunities for experience/training for high school or postsecondary learner: <input type="checkbox"/> Career and Technology Education student organization <input type="checkbox"/> Internship/work study <input type="checkbox"/> Job shadowing <input type="checkbox"/> Mentorship <input type="checkbox"/> Part-time employment <input type="checkbox"/> Volunteer work in charitable/community organizations <input type="checkbox"/> Work based/work site learning								

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Sample plan adapted from States' Career Clusters Initiatives Pathway Plans of Study

AGRICULTURE, FOOD AND NATURAL RESOURCES PATHWAY: AG COMMUNICATIONS This plan of study can serve as a guide, along with other career planning materials, as learners work to achieve their career goals. Courses listed within this plan are options for recommended coursework. The learner's plan should be individualized to meet his/her educational and career goals. This plan should also be customized with the educational institution's specific course titles and meet college ready/work ready requirements. Educational levels to be considered (check all that apply): On-the-job training Apprenticeship Military Training Certificate/License Associate Degree Bachelor Degree Professional Degree

<i>Agriculture, Food and Natural Resources – Ag Communications Pathway</i>								SAMPLE OCCUPATIONS	
Academic/Career Advisement Provided	Grade Level	English/ Language Arts	Math	Science	Social Studies/ Sciences	Career and Technology Education (CTE) Majors <i>*Italicized majors information</i>	Other Elective and Required Courses	Occupations Requiring Postsecondary Education <ul style="list-style-type: none"> ■ Advertising ■ Customer Relations ■ Graphic Design ■ Insurance Sales ■ Photographer ■ Production Coordinator ■ Project Coordinator ■ Retail Sales ■ Writer Occupations Requiring Baccalaureate Degree <ul style="list-style-type: none"> ■ Agricultural Communications Specialist ■ Agricultural Consultation ■ Agricultural Journalist ■ Agricultural Marketing ■ Marketing Specialist ■ Public Relations 	
	HIGH SCHOOL / TECHNOLOGY CENTER								
S E C O N D A R Y	9	English/LA I	Algebra I	Biology I	Samoan History	*Agricultural Communications NOTE: Cooperative Alliance courses may be listed here.	Computer Technology or Foreign Language Fine Arts or Speech Financial Literacy Additional courses to support career goal: Journalism; Marketing; Intro to Agriscience Agriscience II		
	↓	English/LA II	Geometry	Chemistry	American History				
	10	English/LA III	Algebra II	Physics	U.S. Government				
	↓	English/LA IV	Trigonometry or other upper level math courses: Pre- Calculus ; Calculus; Stat.	Botany (Upper division lab sciences)	Economics Geography World History				
COLLEGE/ UNIVERSITY									
P O S T S E C O N D A R Y	13	-English Comp I -English Comp II	-College Algebra or Calculus	-Biological Science	-Ag Econ or Economics -Geography	- Agriculture Communications -Journalism -General Agriculture	TECHNOLOGY CENTER NOTE: Attainment of a CTE major at a technology center may be completed as a high school student or an adult. Career Major courses may count for college credit.		
	14	-Speech/Oral Communications -Technical Writing		-Chemistry -Botany	-Sociology -Political Science	-Students choose area of specialization and take related courses such as Journalism, Advertising, Public Relations, or Telecommunications			
	15	Continue courses in your area of specialization							NOTE: Use the postsecondary institution's degree plan to help customize the learner's plan with regard to degrees, licenses, etc.
	16	Complete Ag Communications Major (4-year degree program)							
Opportunities for experience/training for high school or postsecondary learner: <input type="checkbox"/> Career and Technology Education student organization <input type="checkbox"/> Internship/work study <input type="checkbox"/> Job shadowing <input type="checkbox"/> Mentorship <input type="checkbox"/> Part-time employment <input type="checkbox"/> Volunteer work in charitable/community organizations <input type="checkbox"/> Work based/work site learning									

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Sample plan adapted from States' Career Clusters Initiatives Pathway Plans of Study

AGRICULTURE, FOOD AND NATURAL RESOURCES PATHWAY: NATURAL RESOURCES AND ENVIRONMENTAL SCIENCE **This plan of study can serve as a guide, along with other career planning materials, as learners work to achieve their career goals. Courses listed within this plan are options for recommended coursework. The learner’s plan should be individualized to meet his/her educational and career goals. This plan should also be customized with the educational institution’s specific course titles and meet college ready/work ready requirements. Educational levels to be considered (check all that apply):** On-the-job training Apprenticeship Military Training Certificate/License Associate Degree Bachelor Degree Professional Degree

Agriculture, Food and Natural Resources – Natural Resources and Environmental Science Pathway								OCCUPATIONS
Academic/Career Advisement Provided	Grade Level	English/ Language Arts	Math	Science	Social Studies/ Sciences	Career and Technology Education (CTE) Majors <i>*Italicized majors information</i>	Other Elective and Required Courses	Occupations Requiring Postsecondary Education
	HIGH SCHOOL / TECHNOLOGY CENTER							
S E C O N D A R Y	9	English/LA I	Algebra I	Biology I	Samoan History	*Natural Resources/ Environmental Science *Landscape Designer (T&I) *Landscape Maintenance Technician (T&I) NOTE: Cooperative Alliance courses may be listed here.	Computer Technology or Foreign Language Fine Arts or Speech Financial Literacy Additional courses to support career goal: TechConnect Intro to Agriscience Agriscience II Additional science	
	↓	English/LA II	Geometry	Chemistry	American History			
	10	English/LA III	Algebra II	Physics	U.S. Government			
	↓	English/LA IV	Trigonometry or other upper level math courses: Pre-Calculus Calculus Statistics	(Upper division lab sciences)	Economics Geography World History			
COLLEGE/ UNIVERSITY								Occupations Requiring Baccalaureate Degree <ul style="list-style-type: none"> ■ Agricultural Educator ■ Ecologist ■ Fish and Game Officer ■ Geologist ■ Hydrologist ■ Mining Engineer
P O S T S E C O N D A R Y	13	-English Comp I -English Comp II	-College Algebra	-Biological Science -Botany	-American Government	- Management of Natural Resource Systems -Principles of Natural Resource Conservation	TECHNOLOGY CENTER NOTE: Attainment of a CTE major at a technology center may be completed as a high school student or an adult. Career Major courses may count for college credit.	
	14	-Speech/Oral Communications -Technical Writing	-Calculus	-Chemistry	-American History -Geography	-Protecting Natural Resources -Disease Management		
	15	Continue courses in your area of specialization						
16	Complete Natural Resources and Environmental Science Major (4-year degree program)							
Opportunities for experience/training for high school or postsecondary learner: <input type="checkbox"/> Career and Technology Education student organization <input type="checkbox"/> Internship/work study <input type="checkbox"/> Job shadowing <input type="checkbox"/> Mentorship <input type="checkbox"/> Part-time employment <input type="checkbox"/> Volunteer work in charitable/community organizations <input type="checkbox"/> Work based/work site learning								

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Grade 13 review _____ Grade 14 review _____

Sample plan adapted from States' Career Clusters Initiatives Pathway Plans of Study

(SAMPLE CLUSTER PLAN) AGRICULTURE, FOOD AND NATURAL RESOURCES: This plan of study can serve as a guide, along with other career planning materials, as learners work to achieve their career goals. Courses listed within this plan are options for recommended coursework. The learner's plan should be individualized to meet his/her educational and career goals. This plan should be customized with the educational institution's specific course titles and meet college ready/work ready requirements. Educational levels to be considered (check all that apply): On-the-job training Apprenticeship Military Training Certificate/License Associate Degree Bachelor Degree Professional Degree

Agriculture, Food and Natural Resources							SAMPLE OCCUPATIONS	
NOTE: Interest Inventory Administered and Interpreted. Tentative Plan of Study Initiated for all learners.							Occupations Requiring Postsecondary Education ■ Agricultural Chemical Dealer ■ Aquaculturalist ■ Bank/Loan Office ■ Environmental Compliance- ■ Assurance Manager ■ Equine Manager ■ Farm Manager ■ Health and Safety Sanitarian ■ Meat Cutter-Meat Grader ■ Park Manager ■ Produce Buyer ■ Recycling Technician ■ Wildlife Manager	
Grade Level	English/ Language Arts	Math	Science	Social Studies/ Sciences	Career and Technology Education (CTE) Pathways <i>*Italicized pathways to career majors</i>	Other Elective and Required Courses		
HIGH SCHOOL / TECHNOLOGY CENTER							Occupations Requiring Baccalaureate Degree or Beyond ■ Agricultural Educator ■ Botanist ■ Ecologist ■ Environmental Engineer ■ Fish and Game Officer ■ Plant Pathologist ■ Veterinarian	
S E C O N D A R Y	9 ↓ 10 ↓ 11 ↓ 12	English/LA I English/LA II English/LA III English/LA IV	Algebra I Geometry Algebra II Trigonometry or other upper level math courses: Pre-Calculus Calculus Statistics	Biology I Chemistry Physics (Upper division lab sciences)	Samoan History American History U.S. Government Economics Geography World History	<i>*Food Products and Processing</i> <i>*Plant and Soil Science</i> <i>*Animal Science</i> <i>*Agricultural Power, Structures and Technology</i> <i>*Agribusiness and Management</i> <i>*Ag Communications</i> <i>*Natural Resources and Environmental Science</i>		Computer Technology or Foreign Language Fine Arts or Speech Financial Literacy Additional courses to support career goal: TechConnect; Journalism Marketing; Intro to Agriscience Agriscience II; Intro to Horticulture Intro to Agribusiness Additional science
COLLEGE/UNIVERSITY								
P O S T S E C O N D A R Y	13	-English Comp I -English Comp II	-College Algebra	-Biological Science	-American History -Geography	Take courses pertinent to the pathway selected.		TECHNOLOGY CENTER NOTE: Attainment of a CTE major at a technology center may be completed as a high school student or an adult. Career Major courses may count for college credit.
	14	-Speech/Oral Communications -Technical Writing			-American Government	Continue courses pertinent to the pathway selected.		
	15	Continue courses in area of specialization. Use institution's degree plan.						NOTE: Use the postsecondary institution's degree plan to help customize the learner's plan with regard to degrees, licenses, etc.
	16	Complete courses for Career Major. Use institution's degree plan.						
Opportunities for experience/training for high school or postsecondary learner: <input type="checkbox"/> Career and Technology Education student organization <input type="checkbox"/> Internship/work study <input type="checkbox"/> Job shadowing <input type="checkbox"/> Mentorship <input type="checkbox"/> Part-time employment <input type="checkbox"/> Volunteer work in charitable/community organizations <input type="checkbox"/> Work based/work-site learning								

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Sample plan adapted from the States' Career Cluster Initiatives Pathway Plans of Study

PATHWAY COMPETENCIES AND CERTIFICATION

Quality curriculum standards and a program framework for a new delivery system have now been developed for the Agriculture Career Pathway System. This framework provides the direction necessary to train students in the competencies required to meet the needs of business and industry. The teachers in each academy must now begin to align their content to meet these important standards. The curriculum content outlined above will serve as the vehicle to teach the skills for which students will be tested and certified. The Agriculture Career Pathway integrates basic education concepts with specific training in a myriad of work-oriented tasks for job placement and further education.

Career Pathway Curriculum Framework For The Natural Resources Pathway in Agriculture

The Career Pathway chart for the Agriculture Contents is displayed on the next page of this document. As the chart displays, the overall design of the Academy is a coordinated curriculum that requires (1) a core consisting of basic agriculture and farming skills that lead to the job title of Farm Assistant and (2) a job title that leads to the a farm supervisor. All students entering the Natural Resources Pathway for Agriculture must initially complete the Farm Assistant Test before progressing on to the Farm Supervisor.

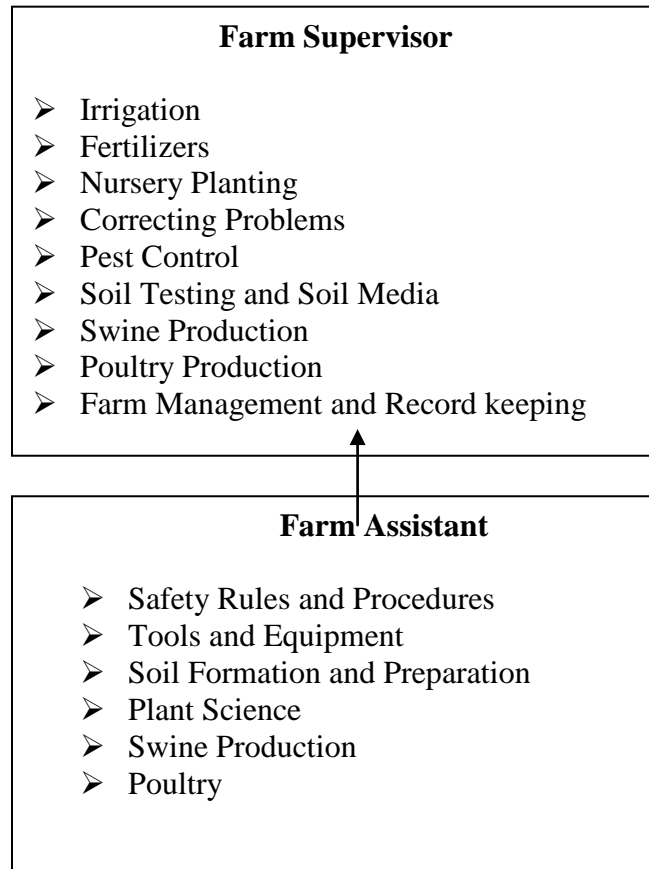
There are two written, multiple-choice certification tests in the Agriculture Contents. They are displayed in each of the two boxes on the chart. These two certification tests include:

- (1) Farm Assistant
- (2) Farm Supervisor

Prerequisite: Must pass the Farm Assistant certification test before taking this test

The Natural Resources Agriculture Job Title Categories and Career Ladder is depicted in the graph below:

Agriculture Career Pathway Job Title Categories and Career Ladder Chart



Curriculum Standards by Certification Test Area

The list of curriculum and student learning standards were developed by occupational job title. The standards represent specific knowledge and skills that must be mastered if the student is to be employable in that job title. The certification test aligned to these standards will be the measure that is used to evaluate both the student's level of mastery and instructional quality of the school.

The skills assessment and certification tests can be used as a valuable tool in supporting high quality educational and training programs based on rigorous standards in American Samoa. These tests are designed to validate the skills and curriculum standards learned by the students.

The Student Learning and Curriculum Standards are listed below:

Job Specific—Farm Assistant

The Farm Assistant job title requires students to development knowledge in safety rules and procedures; tools and equipment; soil formation and preparation; plant sciences; swine production and poultry.

Performance Test—Farm Assistant

This certification test contains the following hands-on skills demonstrations in the form of jobs. The following is a brief description of each job along with an estimation of the amount of time it will take for a student to complete that job. The administration of the performance test will require students to complete the job while an evaluator observes and measures the student's performance against a set of standards. These jobs may be taken before or after the written part of the test.

Job1—Establish a New Turf grass Plot (30 minutes)

The student will inspect a piece of land for a turf plot, take a soil sample, apply appropriate lime, fertilizer, till the material into the soil, seed, sprig, or sod the plot, apply mulch, and set up equipment for watering.

Job 2—Identify and Control Pests (25 minutes)

The student will be provided with a host of plants with pest problems and will make recommendations on pesticides.

Job 3—Inspect and Operate Power Equipment (20 minutes)

The student will perform pre-start checks on selected power equipment (such as a tiller, weed eater, etc.) and will demonstrate safety practices relative to starting and stopping the equipment.

Job 4—Plant a container-grown tree (30 minutes)

The student will dig and prepare a hole for planting, prepare the backfill, plant and water a tree.

Job 5—Stake out a site plan: entrance walkway (25 minutes)

The student will select from a supply of stakes those that symbolize the shrubs, small trees, shade trees, and irrigation parts that appear in a plan. The will measure and locate the plant materials, hammer in the stakes in proper locations, and lay out the bed lines.

Job 6—Judge and Grade Vegetables (25 minutes)

The student is examine and judge specimens and rank them from most to least mature.

Job Specific—Farm Supervisor

The Farm Supervisor job title requires students to development knowledge and skills in irrigation principles, fertilizing; nursery planting; correcting problems; pest control; soil testing and soil media; swine and poultry production; and farm management and record keeping. Prerequisite: Students must have passed the Farm Assistant test prior to taking this test.

Curriculum Standards with Table of Test Specifications

The following tables provide a detailed list of the curriculum standards in the form of tasks along with the number of test items that appear on the written multiple choice certification tests. In addition, if a hands-on performance test was developed for the certification area, the job(s) are described following the test specification description along with an estimation of the amount of time it will take for a student to complete that job.

Farm Assistant Certification Test

Certification Area: Farm Assistant

A	Safety Rules and Procedures	No. of Test Items
	1 Apply personal safety rules	2
	2 Apply general safety rules	4
	3 Apply machine and equipment safety	4
B	Tools and Equipment	No. of Test Items
	4 Properly operate common hand tools	15
	5 Properly operate common equipment	8
	6 Operate mechanized equipment including tractor, plow, ripper, disc plows, merry tiller	6
C.	Soil Formation and Preparation	No. of Test Items
	7 Describe and identify soil factors	9
	8 Describe effects of sunlight, water, temperature on soil	2
	9 Identify basic principles of terracing	1
	10 Identify considerations for selecting a farm site	4
	11 Identify methods of land clearing	2
D.	Plant Science	No. of Test Items
	12 Classify vegetables into root, leafy, fruit, cucurbit and legume crops	16
	13 Explain difference between hybrid and variety seeds	4
	14 Apply seed germinating test	3
	15 Identify major parts of a plant	5
	16 Explain parthenocarpic fruit development	13
	17 Classify monoyledons and dicoyledons based on leaf venation, floral organs, cambium and root system	3
	18 Name and analyze insects	9
	19 Explain propagation and difference between asexual and sexual plant propagation	8
	20 Demonstrate planting, fertilizing, watering, transplanting and hardening-off and sanitation of common vegetables	11
E.	Swine Production	No. of Test Items
	21 Identify types of hogs	1
	22 Identify internal and external parts of a hog	3
F	Poultry	No. of Test Items
	23 Identify appropriate chicken for egg or broiler production	4
	24 Identify external and internal parts of a chicken	2

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Performance Test—Farm Assistant

This certification test contains the following hands-on skills demonstrations in the form of jobs. The following is a brief description of each job along with an estimation of the amount of time it will take for a student to complete that job. The administration of the performance test will require students to complete the job while an evaluator observes and measures the student's performance against a set of standards. These jobs may be taken before or after the written part of the test.

Job 1—Establish a New Turf grass Plot (30 minutes)

The student will inspect a piece of land for a turf plot, take a soil sample, apply appropriate lime, fertilizer, till the material into the soil, seed, sprig, or sod the plot, apply mulch, and set up equipment for watering.

Job 2—Identify and Control Pests (25 minutes)

The student will be provided with a host of plants with pest problems and will make recommendations on pesticides.

Job 3—Inspect and Operate Power Equipment (20 minutes)

The student will perform pre-start checks on selected power equipment (such as a tiller, weed eater, etc.) and will demonstrate safety practices relative to starting and stopping the equipment.

Job 4—Plant a container-grown tree (30 minutes)

The student will dig and prepare a hole for planting, prepare the backfill, plant and water a tree.

Job 5—Stake out a site plan: entrance walkway (25 minutes)

The student will select from a supply of stakes those that symbolize the shrubs, small trees, shade trees, and irrigation parts that appear in a plan. The will measure and locate the plant materials, hammer in the stakes in proper locations, and lay out the bed lines.

Job 6—Judge and Grade Vegetables (25 minutes)

The student is examined and judge specimens and rank them from most to least mature.

Certification Area: Farm Supervisor

A	Irrigation	No. of Test Items
	1 Use several different methods of irrigation	9
B	Fertilizer	No. of Test Items
	2 Select and apply proper grade of fertilizer to a given crop	12
C	Nursery Planting	No. of Test Items
	3 Transplant seedlings from nursery to field	2
	4 Plant seeds in flats	1
	5 Transplant seedlings from flats to pots	1
	6 Apply proper sanitation practices in nursery to prevent plant diseases	6
D	Correct problems	No. of Test Items
	7 Mulch properly using various available materials	1

	8	Demonstrate how to erect four types of trellis firmly	1
	9	Demonstrate methods of pruning	3
	10	Build and maintain a compost pile	1
E		Pest Control	No. of Test Items
	11	Demonstrate proper method of pesticide application	11
	12	Follow safety rules when applying pesticide	6
	13	Identify types of pesticides	4
F		Soil Testing and Media	No. of Test Items
	14	Properly collect soil samples for testing	2
	15	Test soil for pH	4
	16	Identify plant nutrient deficiencies (major, minor and trace elements)	2
	17	Select and identify soil planting media	1
G		Swine Production	No. of Test Items
	18	Identify normal breeding habits	4
	19	Identify proper feeding program	3
	20	Identify proper housing of hogs	3
H		Poultry	No. of Test Items
	21	Manage feed	3
	22	Identify proper housing of poultry	3
I		Farm Management and Record keeping	No. of Test Items
	23	Select and prepare fresh vegetables for market	1
	24	Keep accurate farm records (equipment, tools, planting, marketing)	18
	25	Construct and maintain farm facilities	6

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Performance Test—Farm Supervisor

This certification test contains the following hands-on skills demonstrations in the form of jobs. The following is a brief description of each job along with an estimation of the amount of time it will take for a student to complete that job. The administration of the performance test will require students to complete the job while an evaluator observes and measures the student's performance against a set of standards. These jobs may be taken before or after the written part of the test.

Job 1—Calculate Net Worth (30 minutes)

The student will be provided with a blank net worth statement and calculate net worth from the data provided.

Job 2—Balance a Ration Using the Pearson Square (30 minutes)

The student is to set up the problem using the format provided.

Job 3—Control Plant Pests (30 minutes)

The participant will inspect an assigned crop area and identify any insects, diseases, or weeds as well as select the most appropriate chemical control and quantities stated.

Job 4—Administer an Injection (30 minutes)

The student is to determine the method of injection and load the syringe with the prescribed amount of medicine. Then, an appropriate injection site will be selected and prepared, and the injection will be administered.

Job 5—Start a Crop of Geraniums (or other cuttings) (25 minutes)

The student is to prepare a soil less mixture for starting, by direct sticking, one dozen geranium cuttings (or other cuttings).

Job 6—Prune a container-grown tree and a lime shrub (25 minutes)

The student is to prepare a tree for pruning and demonstrate skill in the use of pruning shears.

Together, the curriculum standards and certification exams constitute a critical piece of accountability for the Academy and the business partners. Students completing the curriculum and the certification tests will offer evidence of the attainment of skills that meet industry standards. Business and industry must partner to assure that these students are recognized through the hiring process as adding value to the business hiring them.

Work-based Learning Options

One of the most critical components of a Career Pathway, making it a unique approach to relevant, integrated education, is work-based learning. This is applied learning taken outside the classroom walls. For many students, this is the crucial element of the Career Pathway experience. Here is the application of all they have learned and is actually a component of their educational experience.

The Agriculture Career Pathway team has created these learning options working together with students, industry partners, and parents. In the Natural Resources Agriculture Career Pathway, students beginning as early as 9th grade have the opportunity for summer work experience and job shadowing in the 10th grade through the Career Development II class.

Mentoring in the 11th grade, internships in the 12th grade as well as volunteering/community service opportunities and some school-based enterprises are

being developed to continue to cultivate students' career plans and to provide increasingly more complex work-based experiences for students.

The Work-based Learning Component for the Natural Resources Pathway—Agriculture Career Content

Career exploration and experiences in work-based learning begin in 9th grade in Career Development I. Students are introduced to career interests and explore each Career Pathway area. Students rotate approximately every 7 weeks through the four Career Pathway orientations (Business Information, Health and Human Resources, Industrial/Engineering and Natural Resources).

9th grade students are also provided instruction in completing job applications, how to conduct oneself during a job interview, letters of application and developing resumes. Students also are introduced to proper processes for securing and changing employment. During the course of Career Development I class, students are given instruction on labor laws, termination processes and entrepreneurial skills. Opportunities in non-traditional jobs are explored and discussed along with the relationship of work, family, society and leisure. Guest speakers from the Chamber of Commerce and other businesses are utilized to assist in teaching these skills and concepts.

In addition, students in the course develop a career pathway plan, set goals, and develop a career portfolio for use during high school. Students are provided instruction in the workplace through guest speakers, field trips to businesses, teacher lectures and hands-on activities specific to each Career Pathway during the rotations.

Students also are provided an opportunity to use the ERISS computerized career information delivery system to identify sources of employment within each Career Pathway.

In the Career Development II course, students explore different career clusters. In this course particular attention is given to human relation skills in the context of career development. Each student develops a career plan to assist them in making career choices.

A technology component is included to provide students the opportunity for hands-on integrated technology applications useful in the workplace. Students will be expected to apply these technology skills to the various career pathways.

In the Career Development II course, all 10th grade students are expected to participate in a job shadowing experience in the area of their career interest. The job shadowing activity must take place outside of normal school hours. The students are expected to identify the career area, the business and make contact with the appropriate person within the business to arrange the date for the job shadowing experience. It is recommended that the Career Pathway students experience more than one day of job shadowing.

In many schools with a block schedule, a course called Career Practicum has been implemented. In this structure, the students are in a classroom with the teacher two days per week and on a work-site observing three days per week. The class continues for one semester. The students are given a structure set of assignments that can only be completed by working with a sponsor or mentor at the work site. The students journal their experiences each day and must identify other issues in the workplace such as safety, continued education, salary and benefits, impact of the economy on the business, inventory, accounting and other components that may be unique to the industry. The days in the classroom are spent in investigating the career cluster and occupations within the cluster as well as making presentations and reports concerning their work experience. This option provides the student with a more complex experience to offer more information as students are making decisions about entering a selected Career Pathway. In the Career Practicum students are encouraged to engage in diverse experiences so that a compare and contrast method of data analysis can take place as part of the decision-making process to enter a Career Pathway or select an occupational focus.

At the end of the year in Career Development II, students will rotate through each of the Career Pathway areas and visit vocational departments at the community college. Students are expected to make a Career Pathway choice by the end of their sophomore year.

Guidance and Counseling

The Guidance and Counseling program is a comprehensive K-12 program that is based on competencies. These competencies for Grades 9-12 are:

AREA I--Career Planning and Exploration

Category A—Planning and Developing Careers

Category C—Understanding How Being Male or Female Relates to Jobs and Careers

Category D—Making Decisions About College

Category L—Planning High School Classes

Category N—Learning How to Use Leisure Time

AREA II—Knowledge of Self and Others

Category B—Understanding and Accepting Self

Category F—Making Decisions

Category H—Understanding and Getting Along With Others

Category K—Knowing How Alcohol and Other Drugs Affect Me and My Friends

Category P—Learning About Marriage and Family Responsibilities

Category Q—Understanding and Appreciation for Cultural Values and Traditions

AREA III—Educational and Occupational Exploration

Category J—Improving Basic Skills and Study Learning Skills

Category M—Learning From Friends and Others Who Have Graduated

Category D—Vocational Selection and Training

Category E—Preparation for Finding Jobs

Category I—Finding Jobs

Category F—Making Decisions

The competencies are taught through increasingly more complex activities throughout the learning process.

In 9th grade students are provided activities which teach the competencies through the Career Development I course. The Career Development I course provides opportunities for students to work on an Individual Career Planner and develop a Career Portfolio. The students take a career assessment to determine interests and to assess life experiences that provide them with glimpses into possible future life work. It is within the Career Development I course that students are first able to rotate through a 7-week introduction to each of the Career Pathways for exploration.

As students develop their educational plan to meet their own individual career goals, a conversation among parents, counselors, and teachers should be taking place to assure students have access to many sources of advice and information. Parents meet with the school and students to help develop the plan.

The career plan is periodically reviewed and revised to make the needed adjustments to accommodate the student's goals as they change and grow. Student advisement is considered the job of everyone in the school setting not just counselors or career development teachers. Parental involvement is very important - they hold the most powerful position to convince students of the importance of education.

BUSINESS/INDUSTRY INVOLVEMENT

In developing the Natural Resources Pathway for Agriculture, the business partners have been representative of the natural resources related business presence in the community. They are partnering in all aspects of the Career Pathway development and progress, especially the relevancy of the curriculum. They may in the future provide equipment and materials. Currently the business partners are providing guest

speakers for the Career Development I and II courses and are hosting field trips not only for the Career Development classes but also the Agriculture classes. They are providing a work site for job shadowing. A mentoring program is being developed while summer work experience is available for students in 9th grades through community college level on a first come, first served basis.

Business and education partners have worked toward consensus in developing and affirming the Agriculture Education curriculum within the Natural Resources Career Pathway.

CAREER PATHWAY ADVISORY COMMITTEE

Each Career Pathway has an Advisory Committee in place. The Advisory Committee's role is to provide input into the structure of the Career Pathway, the curriculum and business connections.

The Steering/Advisory Committee is an adjunct, voluntary group of community members who are qualified in a specific area or areas. The committee is formed annually. The committee is strictly advisory in capacity and had no administrative or legislative authority.

This committee also consists of individuals involved in Career Pathway System's operations including department and school administrators, coordinating/lead teachers, and counselors. The committee reviews policies and procedures and makes recommendations to ensure the Career Pathway program meets both educational and career goals. Business and Industry representatives should be individuals who are able to obtain the needed support (e.g. job shadowing, summer work experience jobs, mentors, equipment) to make the program a success. The committee should be large enough that a different task force can be formed to work on particular issues or solve specific problems without overburdening individuals (e.g. task force for curriculum development, job development, and recruitment of mentors and other volunteers, student support services, public relations).

ARTICULATION AND TECH PREP

The purpose of the articulation component of Tech Prep is to provide linkages among the high schools in American Samoa and American Samoa Community College (ASCC) which assist all students in making a smooth transition from one level to another.

Articulation focuses on creating a smooth transition from the secondary school to a post-secondary setting or the work force. It also facilitates lateral transfer of students between high schools. This component involves identification of articulation linkage points, establishment of teams to link secondary and post-secondary component of the Tech Prep program, and the creation of sequential courses of study for all students.

The development of the Pathways Course Guides is the first step in articulating high school and community college curriculum. The Memorandum of Understanding (MOU) has just been signed signifying the intent to articulate vocational high school courses with correlating technical community college courses. It is the intent for high school vocational students mastering the competencies and standards equal to those in certain courses at the community college through testing, portfolios or competency certificates to be awarded credit upon successful admission and performance at the community college. In this way, the standards for high school vocational programs will be improved, students will be rewarded for their work and students will have an improved method for transitioning from high school, to community college, to work.. The outcome will be:

- coordination of instructional content between secondary and postsecondary courses and among high school courses
- sequential courses of high school study which better prepare student for postsecondary programs or employment after high school
- Dual enrollment in vocational/technical and academic courses

COMMUNITY COLLEGE CONNECTIONS

American Samoa Community College (ASCC) was founded in 1970 to provide post-secondary education opportunities in the liberal arts, teacher training, vocational-technical education and general education to the residents of American Samoa. As a Land Grant Institution, the American Samoa Community College provides two-year transferable programs in general education, vocational-technical training as well as programs in Samoan and Pacific Studies, Adult Education and literacy.

ASCC is granted full accreditation by the Western Association of Schools and Colleges and the Accrediting Commission of Community and Junior Colleges.

Connections will be built from American Samoa High schools to ASCC through vertical integration of the academic courses. The Computer and Business Management Career Pathways aligns with the College of Arts and Sciences through the Associate of Science Degree in Business Management, the Associate of Science Degree in Office Administration and Technology, and the Associate of Science

Degree in Public Administration. Certificates of Proficiency in Accounting and Office Administration and Technology offered by the community college also connect with the high schools' career content areas in Computer and Business Management.

Entrance Requirements

Admission is open to all that can profit from instruction at ASCC provided they meet the following conditions:

- The student is a legal resident of American Samoa.
- The student is a high school graduate, General Education Diploma recipient, bears an U.S. Military Form 214 or is at least 18 years of age.
- The student is admitted under the special admission policy for high school seniors.

Degrees and Certificates

ASCC offers the Associate of Science Degree (AS) and the Associate of Arts Degree (AA) and Certificates of Proficiency.

- **The Associate of Science (AS) degree** is awarded to students successfully completing a program of occupational, technical, professional and general education courses. The purpose of the Associate of Science degree program is to prepare students for employment and/or to continue education in their prospective field of interest. Students graduating with an Associate of Science degree must meet the following requirements:
 1. Complete general graduation requirements.
 2. Complete general education requirements.
 3. Complete program requirements.
 4. Meet the residency requirements of 15 credits toward program be completed at ASCC.A minimum of 60 credit hours is required for the Associate of Science degree.

- **The Associate of Arts (AA) degree** provides developing and understanding in the content and methodology of the major genres of study, awareness of the traditional cultural aspects of Samoa and the Pacific region and preparation for students planning on continuing their studies by transferring to a four-year college or university. Students graduating with an Associate of Arts degree must meet the following requirements:
 5. Complete general graduation requirements.
 6. Complete general education requirements
 7. Complete program requirements.

8. Meet residency requirements of 15 credits toward program be completed at ASCC.

A minimum of 60 credit hours is required for the Associate of Arts degree.

- The **Certificate of Proficiency** is offered by a number of programs of study and is intended for the student seeking immediate employment or students currently working and are seeking a career upgrade. The general education requirements are comprised of one English and one Math course specified by the selected program of study. The remaining course requirements are specified by individual Certificate programs.

A minimum of 30 credit hours is required for a Certificate of Proficiency.

Exit Requirements

To be granted an *Associate of Science Degree in Business Accounting*, the following must be fulfilled:

Satisfactory completion of the Business Accounting major:

- 3 credits—Introduction to Literature
- 3 credits—Business Math
- 3 credits—Introduction to Business
- 3 credits—Introduction to Sociology
- 3 credits—Keyboarding
- 3 credits—Introduction to Business
- 3 credits—Freshman Composition
- 3 credits—Financial Math
- 3 credits—Microcomputers Application
- 3 credits—Voc. Technical Math
- 3 credits__Principles of Accounting I
- 3 credits__Principles of Accounting II
- 3 credits__Principles of Accounting III
- 1 credit__Physical Education Elective
- 3 credits__Business Communications
- 3 credits__Payroll & Income Tax
- 3 credits__Business Law
- 3 credits__Macro Economics
- 3 credits__Micro Economics
- 3 credits__SAMPAC Elective
- 3 credits__Using Computers in Accounting
- 3 credits__Humanities Elective
- 4 credits__Science Elective

Total Credits - 65

To be granted an *Associate of Science Degree in Business Management*, the following must be fulfilled:

Satisfactory completion of the Business Management major.

- 3 credits__Intro to Literature
- 3 credits__Business Math
- 3 credits__Intro to Business
- 3 credits__Intro to Sociology
- 3 credits__Keyboarding
- 3 credits__Freshman Composition
- 3 credits__Voc. Technical Math
- 3 credits__Financial math
- 3 credits__Microcomputer Application
- 3 credits__Principles of Accounting I
- 1 credit__Physical Education Elective
- 3 credits__Business Communications
- 3 credits__Business Law
- 3 credits__Macro Economics
- 3 credits__Micro Economics
- 3 credits__ Humanities Elective
- 3 credits__ Principles of Management
- 4 credits__Science Elective
- 3 credits__Retailing
- 3 credits__Advertising
- 2 credits__Practicum
- 3 credits__SAMPAC Elective

Total Credits - 64

To be granted an *Associate of Science Degree in Office Administration and Technology*, the following must be fulfilled:

Satisfactory completion of the Business Management major.

- 3 credits__Intro. to Literature
- 3 credits__Business Math
- 3 credits__Intro. to Business
- 3 credits__Keyboarding
- 3 credits__Intro to Sociology
- 3 credits__Freshman composition
- 3 credits__Voc. Technical Math

- 3 credits__Financial Math
- 3 credits__Microcomputer Application
- 3 credits__Principles of Accounting I
- 1 credit__Physical Education Elective
- 3 credits__Business Communications
- 3 credits__Macro Economics
- 3 credits__Principles of Accounting II
- 3 credits__Adv. Typing/Wd. Processing
- 4 credits__Science Elective
- 3 credits__Office Procedures
- 3 credits__SAMPAC Elective
- 3 credits__Intro. to Programming
- 3 credits__Humanities Elective
- 3 credits__Records Management
- 2 credits__Office Administration Practicum

Total Credits – 64

To be granted a *Certificate of Proficiency in Office Administration and Technology*, the following must be fulfilled:

- 3 credits__Freshman Composition
- 3 credits__Prin. Accounting III
- 3 credits__Business Math
- 3 credits__Intro. to Business
- 3 credits__Microcomputers App.
- 3 credits__Keyboarding
- 4 credits__Science Elective
- 3 credits__Financial Math
- 3 credits__Business Communications
- 3 credits__Adv. Typing/Wd. Process
- 3 credits__Records Management
- 3 credits__Office Procedures or
- Office Administration

Total Credits - 37

To be granted a *Certificate of Proficiency in Accounting*, the following must be fulfilled:

- 3 credits__ Freshman Composition
- 3 credits__ Principles of Accounting II
- 3 credits__Computers in Accounting

- 3 credits__Intro. to Business
- 3 credits__Business Communications
- 3 credits__Macro Economics
- 4 credits__Science Elective
- 3 credits__Principles of Accounting II
- 3 credits__Payroll/Income Tax Prep.
- 3 credits__Business Math
- 3 credits__ Microcomputer App.
- 3 credits__Keyboarding

Total Credits - 37

CHALLENGES FOR THE NATURAL RESOURCES PATHWAY—AGRICULTURE CONTENT

Some unique challenges are presented to the Agriculture Career Content in fully implementing the vision and goals of the Career Pathway. These are unique to the Natural Resources Agriculture Career Pathway only.

The limited land area available for the high school students to experience a working farm limits the quality of laboratory experiences that are available to students. In order for students to be able to fully understand the processes needed for quality production, they need a working farm in which to apply their vocational competencies learned in the classroom. Because of the lack of access to a working farm, the quality and number of hands-on experiences are limited for students.

The greatest barrier is time. A working farm must be maintained 7 days a week throughout the year without regard to school semesters or holidays. Unlike a computer lab or automotive shop, it cannot be locked securely away for the summer or during other school holidays. The animals and plants must be continually attended on weekends and holidays. Without full-time staff or a sufficient number of students to divide the work, it is difficult to maintain a working farm.

Classroom simulations can only go so far in providing a realistic experience since the simulation must be stored or ended at some point. Therefore, it is impossible to provide students with a realistic experience of year-round routine maintenance of a farm. A simulation often does not require weeding, building maintenance, veterinary check ups and other routine tasks. Through the partnership between High School and ASCC opportunities are being explored to provide joint projects between high school agriculture students and ASCC students especially in the area of poultry production. High Schools do not offer experiences to students in poultry production. This

partnership would enable the High Schools to expand its options for student agriculture education without the major expense of implementing a new program. More discussions with the Extension service and business partners will be necessary in the near future to overcome these challenges and identify creative solutions supported by the agriculture business community.

EMPLOYMENT OUTLOOK

Agriculture is designated as one of the three foundations of the economy of the American Samoa. There is a shortage, however of skilled and knowledgeable people needed to meet the rising demand for fresh fruits and vegetables, and to increase production of staple foods like taro and tapioca. Landscapers are needed for hotels and other tourist related businesses. Teachers are needed to educate future agricultural workers. Extension workers are needed to assist and support future farmers and landscapers. Researchers are needed to find solutions to local agriculture problems. Workers are needed in the areas of agricultural supply and equipment sales. Clearly, there are many employment opportunities available in agriculture and related fields.

SUMMARY

The Natural Resources Agriculture Career Pathway combines high-level academics and career skills with a real-life context for learning that maximizes students' present and future academic and career success.

Career Pathway instruction strengthens—

- ◆ Integrated instruction
- ◆ Partnerships between education, the family, community and business and industry
- ◆ Acquisition of career goals and skills for both additional education and the workplace

***NATURAL RESOURCES PATHWAY
AGRICULTURE CAREER CONTENT
ACKNOWLEDGMENTS***

The hard work and dedication of many has made this Career Pathway a reality for our students. There were many from the Department of Education, businesses and agriculture leaders who served as a panel and were responsible for developing the course guides and the content of this Career Pathway Guide.

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*Joyce M. Reinke, CETA Consultant and Editor of this Guide
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