

Agribusiness Curriculum Guide

Central Valley Consortium
Agricultural Education
Tech Prep

**Developed by the
Central Valley Consortium
Agricultural Education Tech Prep
Agribusiness Curriculum Committee
Committee Members:
Phase I - Writing the Curriculum**

Leonard DeRuiter, Chairman - Phase I

Phase II - Field Testing the Curriculum

Ed Hartzell, Oakdale High School
Vikki Davis, Chowchilla High School
Jan Maddux, Chowchilla High School
Mark Anglin, Atwater High School
Ron Alves, Chairman - Phase II

Don Borges, Coordinator

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** These documents/appendices were inserted into this guide in their original form and therefore the page numbering which pertains to these documents is not truly accurate. The page numbering in this table of contents indicates where the new appendix begins. Most of the appendices are longer than one page. However, since we have included original copies, we did not want to alter them by arbitrarily placing page numbers at the bottom.*

SECTION ONE

Introduction

Introduction

American agriculture has changed and today's rate of change may be the most radical since the industrial revolution. The food and fiber system is a vast and complex network of interrelated industries that reaches far beyond the farm gate to include all those involved in bringing food and fiber to consumers both in the United States and abroad. This system includes the people who farm the land, plus those who provide the inputs and those that process the outputs. This expanded view of agriculture, the food and fiber system, is referred to for the purposes of this guide as *agribusiness*.

Agribusiness includes all the vital activities performed both on and off the farm that contributes to the food and fiber system's overall success. This three-part system is made up of (1) the agricultural input sector, (2) the production sector, and (3) the process-manufacturing sector. In order to capture the total essence and interactions among the various segments of agribusiness industries, one must apply the systems approach. It becomes a good deal easier to understand agribusiness when these sectors are visualized as part of an interrelated food and fiber system in which each sector's performance is heavily dependent on the proper function of the other two.

As noted, agribusiness is undergoing profound change. The structure of agribusiness industries in all sectors continues to change in response to a variety of forces. Financial pressures brought on by low commodity and product prices, rapid technological advances, new markets entrants and mergers, foreign competition, government intervention, and other factors have combined to change agribusiness irreversibly. As a result, agribusiness firm managers find themselves operating in a new, exciting, and complex decision making environment. Amid all these changes one thing remains clear -- success in the future will belong to those agribusiness firms and managers that can adapt and respond profitably in this new and more demanding business environment.

The role of educators must be first to understand exactly what is agribusiness. Second, to develop the instructional format to enable students to grasp and comprehend the three part system referred to as agribusiness. Thirdly, the agribusiness systems concept must become part of all agriculture subject matter areas as well as being a curriculum offering of its own. This guide will offer a variety of options to better enable Tech Prep participants to accomplish the third element noted above.

SECTION TWO

Curriculum

Designing Tech Prep Agribusiness Curriculum

Tech Prep curriculum design is a complex task because it involves more variables than traditional curriculum development. Two elements, integrating academics with vocational education and the collaborative process between secondary and post secondary educators, as well as employer, labor and community representatives, create this design complexity. When the scope of agribusiness is added to the above variables, the building of a meaningful, attainable curriculum is indeed a formidable challenge.

The first step in revising curriculum to fit the Tech Prep model is a planning process. A plan is an orderly outline that defines what, who, how, when and how much. Once the plan is formulated, then the specifics of course structure, articulation, and content can be addressed. This part of the guide outlines the planning process while the remainder addresses specifics about agribusiness curriculum.

The Tech Prep Curriculum plan should answer the following questions:

- **What is the desired outcome for the new curriculum?** This question needs to address which students will be served; the agribusiness program areas and occupations targeted; and the responsibility each Tech Prep consortium member has in attaining these desired outcomes.

- **Who will be involved in curriculum development?** The answer to this question seems quite logical. However, it is necessary to remind educators that the evolution of Tech Prep curriculum is a cooperative, integrated process that involves secondary administrators, teachers, counselors, and staff; post secondary administrators, teachers, counselors, and staff; employer representatives; and labor representatives. It is only through significant participation by each of these groups that this curriculum will fulfill the goals of the Tech Prep concept.

- How will the design of new curriculum be carried out?
- When will the new curriculum be completed, tested and implemented?
- Where will the resources, both human and financial, come from for carrying out this project?: All three of these questions are considered simultaneously for obvious reasons. They involve commitment by public institutions, private businesses, and the individuals who work for these companies. all members of a consortium must be committed to the point of providing people power and financial and in-kind resources to attain curriculum revision goals for the purposes of establishing a Tech Prep program.

In order to check and balance each parties commitment, these elements must be part of
a written Tech
Prep curriculum plan.

Current Status of California High School Agriculture Business Curriculum

The FFA and Agribusiness: Almost every high school agriculture program has agribusiness elements such as those listed in the skills section of this guide. These skills are often introduced, reinforced, and taught as a result of FFA activities, rather than specific subject matter curriculum. The sales, marketing, and computer contests; parliamentary procedure; public speaking; and leadership activities are all examples of endeavors that embody agribusiness skills. Much of this education occurs during the pre-Tech Prep phase of a student's high school career. It is difficult to assess and give credit, in many cases both in high school as well as college, to students for their accomplishments in this area. Yet the activities, and more importantly the end results, have much value.

A number of options are available to quantify agribusiness skills achieved through FFA activities into credit. (1) An articulation agreement that deals with the portfolio itself is one consideration. This concept raises numerous questions. No attempt will be made to address them at this time, but only to offer portfolio articulation as an idea. (2) Another approach would be to identify "FFA" agribusiness skills modules and give credit for these similar to the Kubota example illustrated in Appendix XX. (3) A third option could be to create a "ghost" course for "FFA" agribusiness skills (a leadership course?). (4) Another alternative would be for a teacher, advisor, or counselor to write a descriptive evaluation of these "FFA" agribusiness skills. This evaluation could be part of the portfolio, but would better serve the student if it were part of the academic transcript. Credit would be given for a non-graded written evaluation similar to that done by universities as UC Santa Cruz and Goddard College (Vermont).

It is not the purpose of this guide to endorse the concept that credit be given for "FFA" agribusiness skills. It is also not the purpose to direct the particulars on how giving credit should be accomplished. The objective is to call the reader's attention to a situation and give some options to consider when forming a Tech-Prep consortium.

High School Agribusiness Curriculum: Although there is a model core curriculum for agribusiness, as well as other subjects, how the curriculum is applied varies considerably. Since the FFA is an integral part of almost any high school agriculture program, there are agribusiness skills and concepts taught through FFA activities and teaching. (See Section II and The FFA and Agribusiness.) Single person, two people, and three or more person departments teach

agribusiness differently as a result of human resource variations. This is exclusive of individual expertise and interest. Adding a Tech Prep component to high school agriculture program introduces another element for consideration.

A survey of selected high school agriculture programs on specific agribusiness courses being taught resulted in the following ten scenarios. The descriptions are editorialized into summary form, but still give a picture of the variety that exists in the States secondary agribusiness curriculum.

- One semester agribusiness-like courses offered annually
- One year agribusiness-like course offered every other year
- One year agribusiness-like course offered annually
- An introduction to Agriculture Economics course offered annually
- An introduction to Agriculture Economics course offered annually for social science graduation credit.
- One semester contemporary issues in agriculture course offered every other year.
- One year/semester course on computer applications in agriculture offered annually.
- The schools computer science courses taught by the agriculture department.
- One year course in agricultural sales offered every year.
- One year course called farm management offered every other year.

These offerings are based on a number of different sources. Some of them use the Agribusiness Core Curriculum as the basis for lesson plans. Others are a combination of the Core Curriculum and district curriculum. Still others are based on a text book such as Farm and Ranch Business Management. Some instructors make the class very issues oriented and use newspapers and periodicals as their guide and source of information. None of these approaches to agribusiness education meet the true definition of the tech prep concept as viewed by the Central Valley Consortium for Agriculture Education Tech Prep.

Agribusiness as a Tech-Prep Pathway

As with all agricultural pathways, the design of the agribusiness pathway begins with the student completing the Model Curriculum basic Core during the freshman and sophomore years. In the junior year, the student enters a four year sequence of articulated courses in the AGRIBUSINESS PATHWAY (two years at the high school level and two years at the community college). The state approved MODEL CURRICULUM IN AGRIBUSINESS is the basis of instruction for the high school level and can be articulated with introductory courses in agribusiness at the community college level. Using the Model Curriculum assures that instruction in specific agribusiness units are being covered and enables articulation continuity throughout the state.

By following the Model Curriculum, the student will have had the opportunity to learn the basic concepts of agribusiness and can receive post secondary credits for the introductory course at the community college. Once at the community college, the student will then have the opportunity for specialization in one or more areas such as marketing, accounting, or sales. At the completion of two years at the community college, the student will have earned an Associate of Science degree and/or technical certification in Agribusiness. With a solid foundation in the basic academic areas and careful planning, the student wishing to work toward a B.A. degree in agribusiness at a four year institution should be able to do so without difficulty.

**NOTE: Figure 1 is not available in this format.
For a hard copy of Figure 1 please contract the Consortium:
c/o Stanislaus County Office of Education
801 County Center Three Ct.
Modesto CA 95355**

**Explanation for Proposed Agribusiness Model
Consortium Curriculum Framework**

The following discusses components of figure 1:

1. Career awareness and exploration, experience, and various social skills are introduced early in a student's educational career. As far as Tech Prep is concerned, it is important that sufficient quality information be made available so that a student can make an intelligent subject area choice near the end of junior high school.
2. A student's curriculum during the first two years of high school is designed to meet school graduation requirements and provide the core for entrance into a Tech Prep program. The agriculture curriculum could be delivered in one or more formats. (1) It may be traditional, with two years of introductory agriculture science courses and two of mechanics being the options. (2) If a school decides to offer only Tech Prep for its agriculture program, then pre-Tech Prep may be very prescriptive for that Tech Prep area. This may well be the case for agribusiness, as there are six different subject emphasis within agribusiness. (3) Large departments may have a non-Tech Prep pathway and a Tech Prep pathway.
3. This part of the flow chart shows all the agriculture Tech Prep options, but emphasis is on agribusiness. Once a student decides to pursue an agribusiness Tech Prep program and is qualified, they enroll in more specific agribusiness courses. The number of options possible that a school can offer is limited only by one's imagination. (See Section IV: Options for Tech Prep Agribusiness Programs.)
4. One of the keys to success in Tech Prep is the articulation between the community colleges and high schools. (See Section VI: Alternative Pathways for Agriculture Business Articulation). In a strict Tech Prep Model the capstone for a student's agribusiness study occurs during the community college phase of the program.
5. A second Tech Prep key is meaningful employment of graduates as a result of a solid relationship between schools and the agribusiness industry. This aspect of Tech Prep cannot be emphasized ... strongly enough.

Pursuing Tech Prep does not prevent a student from transferring to a four year ..school at the completion of community college.

6. This chart emphasizes the need for communication between schools and business. The feedback loop from the agribusiness industry to both the high schools and community colleges is a paramount step in Tech Prep alliances. It is important that the business community is a partner in curriculum development and skill identification.

In summary, Figure 1 provides an overview of a Model Tech Prep consortium framework for an agribusiness program. Since the figure is a schematic, there is not great detail. More detailed discussion of figure parts 3, 4, 5 and 6 are contained in this curriculum guide.

Developing Tech Prep Curricula

The following is an explanation of the procedure that was followed in identifying, developing, implementing, and field testing the Agribusiness Curriculum.

The following definitions will be helpful:

State Standards--Agriculture Performance Standards developed by the state and validated by industry in each of the 7 career paths or clusters. These are the student expectations after having completed specific courses in agriculture.

Integrated Performance Activities--Agriculture Integrated Activities that are used to enhance classroom instruction and are a hands-on, problem solving approach to education. They were developed to provide methodology to fulfill the State Standards and can be tied closely to them.

Ag I Core--The Basic Core, the state agriculture curriculum intended for the High School Freshman (Grade 9) year. This is a broad overview of all agriculture industries. It is a compilation of curriculum unit outlines complete with objectives, methods, enhancements, and assessments.

Ag II Core--A continuation of the Ag I Basic Core with increasing levels and student expectations. It is designed to be taught at the High School Sophomore (Grade 10) year. It is also a compilation of curriculum unit outlines complete with objectives, methods, enhancements, and assessments.

Advanced Clusters--The 7 career specific advanced curriculum areas with attendant units of instruction. The curriculum is narrowed to a single career area, of greater depth and expectations, but follows the same format as the Ag I and Ag II Basic Cores. It is intended to be taught in the High School Junior (Grade 11) and Senior (Grade 12) years.

Assumption of Industry Validation--It is unclear exactly how much industry validation occurred in the development of the above. Industry advisory was included in the process through the agriculture instructors who developed the curriculum units. To date there has been no disagreement as to the validity of these units or standards/activities by the Industry Advisory Committees associated with this Tech Prep Consortium.

Local enhancement--Additional activities and/or curriculum that is specific to a particular program and/or is not provided in the advanced cluster.

Supervised Practical Experience (SPE), Supervised Agricultural Experience (SAE), and Supervised Occupational Experience Programs (SOEP), are all synonymous terms that explain the project aspect of FFA and work-place learning. These activities are integral to the instructional program and are extensions of the classroom. Students may be involved in Entrepreneurial Enterprise Ownership Projects and/or Work Experience Projects. In both cases the activities should be directly related to the student's career pathway and are closely monitored and supervised by the agriculture instructor.

<p style="text-align: center;">Steps Followed in Developing the Agribusiness Tech Prep Curriculum</p>
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Step 1

Identify that a curriculum exists and validate that it is appropriate for Ag Tech Prep Programs. Resulted in adopting the California State Agriculture Curriculum, Agribusiness Advanced Cluster.

Step 2

Identify if there existed a set of adopted standards that could be used in curriculum direction and assessment. Resulted in adopting the State Agriculture Performance Standards in Agribusiness.

Step 3

Identify if any other materials had been developed to enhance the educational and validation process. Resulted in adoption of State Agriculture Integrated Activities in Agribusiness.

Step 4

Articulate (match) the State Standards and the Integrated Activities into logical pairs or groups.

Step 5

Articulate the State Standards, Integrated Activities, and Advanced Cluster Curriculum Units. This validates what curriculum units fulfill which standards and provides integrated activities for inclusion with the teaching unit. This many-faceted approach builds higher student competency levels and critical-thinking problem-solving skills.

Step 6

Identify additional integrated activities that can be used with the curriculum to attain completion of State Standards.

Step 7

Identify if the curriculum breaks itself down into logical groups of units and subsequent courses of instruction. The Agribusiness Curriculum _____

Step 8

Identify if the time allocated for teaching each unit is reasonable given the inclusion of integrated performance activities and local enhancements. After reviewing the curriculum, it was apparent that the time allocated to each unit was not sufficient to cover the material.

Step 9

Identify if any additional curriculum units were needed to complete the State Standards expectations.

Step 10

Take each course and sequence units of instruction into a logical sequence of increasing complexity and expectations.

Step 11

Identify additional integrated activities for either new units or to enhance already developed curriculum units of instruction. Identify any local enhancements that will enrich the curriculum for specific programs.

Step 12

Field-Test curriculum units, integrated performance activities, and assessment tools. Develop Written Scenarios, Work Samples, additional units of instruction, additional integrated activities, and generally identify if the curriculum functions as intended in the time frame allowed.

Step 13

Make adjustments to the curriculum to reflect the field-test evaluations.

Step 14

Identify if the course curriculum and materials are of sufficient scope, level, expectations, to approximate an available community college course.

Step 15

Articulate the Advanced Cluster courses with specific college courses. Identify which college courses can be approximately duplicated through instruction at the secondary level. Develop skill lists and objective expectations for the college course for student assessment and certification. Augment the existing high school units with additional curriculum, integrated activities, local enhancements and skill expectations to fulfill the college course objectives and requirements.

Step 16

Provide a system for developing high school and community college course articulation agreements.

Step 17

Document this process so that others may use this model for development of Agribusiness Tech Prep Programs. Provide adaptability so that other individuals and institutions may choose portions of this process and developed materials to augment their existing programs. At the same time, provide a complete model that schools can use to develop a new Agribusiness program with little additional resources needed.

The tech prep curriculum design process diagram is not available in this format. For a copy of the diagram, please request it from:

Central Valley Consortium
Ag Tech Prep
Stanislaus County Office of Education
801 County Center Three Ct.
Modesto CA 95355

or call (209) 525-5020

Career Path Performance Standards

Agricultural Business Management

C.1 Management Functions

Students will understand the role of management in planning, organizing, controlling, and directing production agriculture operations and agribusiness firms. They will compare and contrast different management strategies and techniques.

C.2 Private/Public organizations

Students will understand how private and public organizations and agencies impact agriculture and agribusiness. They will analyze and compare the purposes, services, and effects of these organizations.

C.3 Economic Principles

Students will understand basic economic principles as they relate to production agriculture and agribusiness management. They will make management decisions based on their analysis and interpretation of economic information.

C.4 Agriculture Credit

Students will understand credit and its role in agribusiness. They will analyze and compare credit sources and types, calculate repayment ability, and costs of credit.

C.5 Agriculture Records

Students will understand record keeping procedures including, accounting and bookkeeping systems, as well as inventory and depreciation procedures commonly used in production agriculture and agribusiness. They will maintain and complete a set of financial records based on their Supervised Practical Experience Project (SPE) or a simulated class activity.

C.6 Cash Flow Statement, Planning, and Analysis

Students will understand agricultural budgeting, cash flow analysis, and the use of records for planning and analysis. They will prepare an enterprise budget, cash flow statement, and make management decisions based on financial and production records.

C.7 Taxes

Students will understand the purpose of different types of taxes. Students will understand the importance of tax planning and recordkeeping. They will determine the tax obligations for an agribusiness.

C.8 Law and Insurance

Students will understand the insurance needs and major points of law applicable to the agriculture sector. They will identify and describe the major legal and insurance concerns of an agribusiness.

C.9 Commodities and Marketing

Students will understand marketing functions and concepts in agribusiness management. They will design a marketing plan for an agricultural product or service .

C.10 Types of Ownership

Students will understand the different types of production agriculture and agribusiness ownership. They will analyze and compare the advantages and disadvantages of cooperative, corporate, single proprietorship, and partnership as the basic ownership structures.

C.11 Purchasing

Students will understand purchasing and leasing options involved in agriculture. They will analyze and compare costs of options such as leasing versus purchasing, new versus used equipment, and volume buying.

C.12 Agriculture Sales

Students will understand the principles and techniques involved in marketing and selling agricultural products and services. They will demonstrate agriculture sales skills in a role-playing situation.

C.13 Computer Applications

Students will understand the application of the computer in the agribusiness for decision making and office management. They will perform business operations using database, word processing, and spread sheet software.

C.14 International Trade

Students will understand the importance of international trade to the agriculture industry. They will understand the process of marketing agriculture products and services outside of the United States. They will explain the interrelationship of governmental, economic, and cultural factors affecting international trade.

C.15 Business Ethics

Students will understand management and employee ethics in agribusiness activities. They will analyze and interpret questions of ethics.

C.16 Labor Relations

Students will understand the importance of labor management and relations related to agriculture. They will evaluate factors affecting labor management.

C.17 Interpersonal Leadership Development

Students will recognize the traits of effective leaders. They will participate in leadership training activities associated with the FFA including public speaking, leading group discussions, working within a committee, conducting business meetings, and problem solving.

C.18 Supervised Practical Experience Project

Students will understand the relationship between a supervised practical experience project (SPE) and their preparation for a career in agriculture. They will engage in a supervised practical experience employing skills and knowledge learned in the classroom. Students will maintain an on-going recordbook.

Career Path Integrated Performance Activities

Agricultural Business Management

C.1 Agribusiness Management Functions

Students select an individual from a list of government and agribusiness professionals. The students develop questions and interview this person, focusing on the management functions performed on the job. Students individually prepare an oral or a written report of their findings. The report should include how computers are utilized for decision making and management.

Related Standards:

Career Performance	1, 2, 4, 6, 7
Career Path Cluster	C.1, 13
ELA	B.2; C.1, 2; D.5
HSS	G.1

C.2 Cash Flow and Credit

Given a Cooperative Extension Commodity Budget for a commodity produced in the area, students develop an electronic spreadsheet cash journal to calculate income and expenses. The students use this information to analyze and formulate cash flow and credit needs in a written report using a word processor.

Related Standards:

Career Performance	3, 4, 7
Career Path Cluster	C.3, 4, 6
ELA	B.2; C.2; D.1, 5
HSS	G.1, 3
MAT	A.1, 2, 3, 4

C.3 Tax Accounting and Obligation

Given financial information from an agribusiness, students select relevant information, evaluate the financial records, and compute tax obligations using both cash and accrual accounting systems. The students analyze the differences in taxable income and justify orally, or in writing, the selection of a specific accounting method for that agribusiness.

Related Standards:

Career Performance	3, 4
Career Path Cluster	C.1, 5, 7
ELA	B.2; C.2; D.1, 2, 3, 4, 5
HSS	G.1

MAT

A.1, 2, 3, 4

C.4 Marketing and Management Functions

Students analyze the organizational chart of an existing agricultural marketing cooperative. The class is divided into groups of 5-7 students, serving as management teams. Each management team designs an organizational chart for a mock marketing cooperative that incorporates the management and marketing functions of the cooperative, including sales. Student team members present their proposed structure with supporting information to the class.

Related Standards:

Career Performance	2, 3, 4, 6
Career Path Cluster	C.1, 2, 6, 9, 12
ELA	B.2; C.2 ; D.1, 5
HSS	G.1, 2, 3, 4, 5
MAT	A.1, 2, 3, 4

C.5 Lease/Purchasing Options

Given a choice from three different lending institutions and their respective lease-purchase options, students select a specific lease purchase option and develop a fictitious repayment schedule for acquiring a pickup, tractor, and harvesting combine. Students compare and contrast the different lending institutions and any tax advantages that result from purchasing versus leasing.

Related Standards:

Career Performance	1, 3, 4
Career Path Cluster	C.4, 7, 11, 17
ELA	B.2; C.2; D.1, 5
HSS	G.1

C.6 Futures Trading

Using available technical data (i.e. a major daily newspaper, Wall Street Journal, Agridata) students, individually or in groups, select commodities and keep a journal of daily prices. Using this journal and other pertinent data, students buy and sell agricultural commodities in a mock trading situation for a specified period of time. They record these transactions on a profit/loss sheet to calculate contract price, size and quantity, and trading commissions. Students use microcomputers to calculate transactions. At the end of the trading period, students assess their performance in a written report.

Related Standards:

Career Performance	2, 3, 4, 7
Career Path Cluster	C.2, 3, 5, 9, 12, 13
ELA	B.2; C.2; D.5
HSS	G.1, 2, 3, 4, 5
MAT	A.1, 2, 3, 4

C.7 Purchasing/Impact Options

Students select a production operation in the area and develop a list of managerial services (such as recordkeeping, harvesting etc.) that could be performed by either the owner or by contracting to others. Students, individually or in groups, research the cost of performing versus contracting for each service, report findings, make recommendations to the class, and compile a report to submit to the producer.

Related Standards:

Career Performance	2, 3, 4, 6
Career Path Cluster	C.1, 3, 6, 11
ELA	B.2; C.2; D.1 5
HSS	G.1, 3, 4
MAT	A.1-4

C.8 Agricultural Sales Presentation

Students select an agricultural product or service for which they develop a sales presentation. Based on guidelines in the *California Agriculture Teacher's Association Curricular Code* for the Agriculture Sales Contest they: 1) develop a sales presentation outline showing strategies and techniques, 2) write a script of the presentation, 3) orally make a presentation as if to a potential client, handling spontaneous questions and objections, and 4) prepare a written critique of their oral presentation following a teacher-lead discussion of the strengths and weaknesses of their presentations.

Related Standards:

Career Performance	1, 3, 4
Career Path Cluster	C.12
ELA	B.2; C.1, 2
HSS	G.1

C.9 Historical Impact of Cooperative Law

The class is divided into groups of 4 to 6 students. They use the "brainstorming" technique to hypothesize the economic effect of the elimination of a cooperative law exempting coops from antitrust legislation. Through oral presentations students consider the economic impact on given commodities.

Related Standards:

Career Performance	2, 3, 4
Career Path Cluster	C.3, 8, 10
ELA	B.2; C.2; D.1, 2
HSS	G.1, 2, 3

C.10 Legal and Insurance Considerations

As a class, students interview the managers of three local agribusiness firms in order to determine various legal and insurance concerns of their respective firms. Individually students develop a report of the major areas of concern and outline an insurance program that would meet the needs of an agribusiness firm.

Related Standards:

Career Performance	2, 3, 6
Career Path Cluster	C.1, 8

ELA	B.2; C.2; D.1, 2
HSS	G.1

C.11 International Marketing

Students, in groups of four, select an agricultural commodity and an international market in which to sell their product. They develop a plan for product exchange, currency transfer, and risk analysis. A written and oral presentation will be given by the students.

Related Standards:

Career Performance	1, 2, 3, 4
Career Path Cluster	C.3, 9, 14
ELA	B.2; C.2; D.1, 2
HSS	G.1, 2, 3, 4, 5

C.12 International Marketing Project

Students select one country and one commodity to be exported to that country. They determine relevant cultural differences which should be considered before developing a marketing plan. Students individually, or as a group, prepare an oral or written report on their findings.

Related Standards:

Career Performance	1, 3, 4
Career Path Cluster	C.3, 9, 14
ELA	B.1, 2; C.1, 2; D.1, 2
HSS	G.1, 2, 3, 4, 5

C.13 Agriculture Commodity Exports

Students choose a commodity exported internationally. Students: 1) identify the export country, 2) determine tariffs or quotas levied on a commodity, 3) determine shipping methods, 4) evaluate current events that can effect the commodity exported, 5) track the commodity, 6) present a written and oral report on the soundness of exporting their commodity.

Related Standards:

Career Performance	1, 3, 4
Career Path Cluster	C.3, 14
ELA	B.1, 2; C.1, 2; D.1, 2, 5
HSS	G.1, 2, 3, 4, 5

C.14 Banking and Credit

Students demonstrate their understanding of commercial loan requests. Students 1) divide into two groups: bankers and borrowers, 2) borrowers go to bankers and explain their needs, 3) bankers explain Bank policy requirements and interview the borrower, 4) borrowers submit loan papers and applications, 5) bankers evaluate request, 6) negotiations take place, and a decision for the loan is made. Students then switch roles and repeat the exercise. Students summarize their experience and present them orally to the class.

Related Standards:

Career Performance	C.1, 4, 11
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Career Path Cluster	2, 3, 4
ELA	B.1, 2; C.1, 2 ; D.1, 2
HSS	G.1, 3, 4

C.15 Governmental Agency Reporting

Pairs of students assume the role of a management team and identify the required governmental agency reports required to be filed for an agribusiness. The team will prepare an annual plan including deadlines, forms or information to be submitted, and the location to which the reports are to be sent.

Related Standards:

Career Performance	2, 3, 4
Career Path Cluster	C.1, 2
ELA	B.2; C.2

C.16 Communications/Advertising

Students select an agriculture product or service for which they develop a written marketing and advertising campaign. Students 1) develop a computer data base of potential users of the product or service, 2) develop and mail sales flyers, 3) record hours and expenses for project, 4) evaluate responses, and 5) prepare a written report on findings.

Related Standards:

Career Performance	1, 3, 4
Career Path Cluster	C.9, 13, 17
ELA	B.2; C.2; D.5
HSS	G.1
MAT	A.1, 2, 3, 4

C.17 Ethics and Labor Relations

Students are assigned an individual in the agribusiness community. Individually they "shadow" this representative for a given period of time, paying particular attention to ethics and labor relations that the individual deals with. Students discuss as a class their observations and individually submit a written report on their views of ethics and labor relations.

Related Standards:

Career Performance	1, 2, 4, 6
Career Path Cluster	C.1, 15, 16
ELA	B.2; C.2

C.18 Supervised Practical Experience Discussion

In career pathway groups, students evaluate their career goals and discuss their Supervised Practical Experience in relation to their career goals.

Related Standards:

Career Performance 1, 2, 3, 4, 6, 7

Career Path Cluster C.18

Sequenced Units

Agribusiness

Suggested Sequence of Advanced Cluster Curriculum Units

It is recommended that the following listed units and topics be covered in the 11th and 12th year high school Agribusiness Model Curriculum in order for credit to be earned for an introductory course in Agricultural Economics at the community college. because of geographic and other differences, the sequence and articulated subject matter units and topics may vary from one community college to another. However, the Model Curriculum should be the basic for the two year high school Agribusiness program.

Agribusiness Course (Grade 11, 12)

CLF 1200	Economic Principles
CLF 1201	Introduction to Economic Principles
CLF 1202	Supply, Demand, and Price Determination
CLF 1203	Physical Production Relationships, Values, and Profit Maximizing Level of Input use.
CLF 1204	Fixed and Variable Costs, Marginal Costs and Marginal Revenue, Profit Maximizing Level of Output.
CLF 1205	Diversification and Specialization.
CLF 1206	Combination of Enterprises.
CLF 1207	Managing Risk.
CLF 1208	Economic Terminology.

CLF 1450 Marketing

CLF 1451	Introduction to Marketing.
CLF 1452	Key Factors in Marketing.
CLF 1453	Marketing Strategies; Hedging and Speculation.
CLF 1454	Developing a Marketing Plan.
CLF 1455	Trading in International Markets.
CLF 1456	Introduction to World Trade.
CLF 1457	Agricultural Exports and Trade Policies.
CLF 1458	Marketing Procedures in World Trade.

CLF 1500 Cooperatives

- CLF 1501 Cooperatives Compared to Other Business Forms.
- CLF 1502 Agricultural Cooperatives in the United States.
- CLF 1503 Economics of Cooperatives.
- CLF 1504 Classes of Cooperatives.
- CLF 1505 Organizing and Operating a Cooperative.
- CLF 1506 Cooperative Principles and Decision-making.
- CLF 1507 Laws and Taxes affecting Cooperatives.
- CLF 1508 Agencies That Serve Cooperatives.

CLF 1850 Government Agencies and Services.

- CLF 1851 Introduction to Government Agencies.
- CLF 1852 United States Department of Agriculture.
- CLF 1853 Primary Agencies Affecting Farmers.
- CLF 1854 Cooperative Extension.

Additional Selected Units to complete the two year high school Agribusiness Model Curriculum include the following units and topics:

CLF 1100 Computers in Agribusiness.

- CLF 1101 Review of Computers in Agriculture.
- CLF 1102 Database Management.
- CLF 1103 Agricultural Recordkeeping and Accounting.
- CLF 1104 Computer Glossary.

CLF 1150 Careers in Agribusiness.

- CLF 1151 Careers in Agribusiness.
- CLF 1152 Preparing for a Career in Agribusiness.

CLF 1300 Agribusiness Accounting.

- CLF 1301 Review of Recordkeeping.
- CLF 1302 Principles of Agribusiness Accounting.
- CLF 1303 Cash Flow Statements.
- CLF 1304 Spreadsheet Lab Activities.
- CLF 1305 Inventory and Depreciation.

CLF 1350 Financial Planning and Analysis.

- CLF 1351 Financial Analysis and Recordkeeping.
- CLF 1352 Budgeting and Financial Planning.
- CLF 1353 Enterprise Analysis.

CLF 1400 Finance and Credit.

- CLF 1401 Role of Credit in Agribusiness.
- CLF 1402 Public Sources of Credit.
- CLF 1403 Private Sources of Credit.
- CLF 1404 Applying for a Loan.
- CLF 1405 Costs of Credit.
- CLF 1406 Glossary.

CLF 1550 Sales and Selling

- CLF 1551 An Introduction to Selling in Agriculture.
- CLF 1552 Skills and Knowledge Needed for Selling in Agriculture.
- CLF 1553 Determining Needs and Wants of Customers.
- CLF 1554 Preparing for and Approaching Potential Customers.
- CLF 1555 Giving a Sales Presentation.

CLF 1556 Closing a Sale.

CLF 1600 Agribusiness Taxation

CLF 1601 Introduction to Taxes.

CLF 1602 Income Tax Management.

CLF 1650 Insurance in Agribusiness.

CLF 1651 Insurance Requirements for Agribusiness.

CLF 1700 Purchasing Options.

CLF 1701 Purchasing Options.

CLF 1750

CLF 1751 Major Farm Laws.

CLF 1752 Farm Leases.

CLF 1753 Ag. Liability Laws.

CLF 1754 Ag. Property Rights.

CLF 1800 Safety in Agribusiness Operations.

CLF 1801 Factors that Contribute to Farm Accidents.

CLF 1802 Machinery Safety.

CLF 1803 Management's Responsibility in Farm Safety.

Agriculture Business Skills

The agricultural business skills list is divided into seven areas. Certain skills are needed for all curriculum areas. These skills are noted below as generic business skills. Six additional skill areas include: finance, management, marketing, production, sales, and supervision. Dividing these skills accordingly is not clear cut. Many of the skills apply to a number of different areas, as well as various subject matter disciplines. Agricultural law and agricultural communications are two additional majors that are not specifically delineated, but fall under the agriculture business heading.

This skills list is very general. Each general heading (roman numeral) would have literally hundreds of specific skills that apply to that heading. As a consortium is organized, it is **extremely important to include business and industry people** from the start. Business and industry personnel will be invaluable resources needed to fill in specific skills for whatever agribusiness area a consortium chooses to pursue.

- I. Generic Business Skills** (across all curriculum areas)
 - A. Be able to design an office for computer use; both physical layout and applications
 - B. Be able to apply computer software skills.
 - C. Students will be able to select and purchase computer hardware and software.
 - D. Students will be able to use the internet.
 - E. Students will understand basic economic terminology (see appendix A).
 - F. Students will understand the following economic principles: (see references)
 - 1. Utility
 - 2. Competition
 - 3. Costs and Price
 - 4. Supply and Demand
 - 5. The Production Function
 - 6. Macroeconomics and how it affects agriculture
 - G. Students will be knowledgeable of government agencies that serve agriculture.
 - H. Students will be aware of the philosophy of local, state, and national public and private agricultural organizations.
 - I. Students will be aware of the philosophy of local, state, and national public and private organizations that serve and are antagonistic to agriculture and agriculture interests.

- J. Students will know and understand government agricultural programs.
- K. Students will be possessive of and able to apply communication skills
- L. Students will understand and exhibit those elements from the Agricultural Model Career Performance Standards not already noted above (See Appendix B)

II. Managerial Agricultural Business Skills

- A. Be familiar with sources of revenue and how to obtain it.
- B. Understand and be able to apply financial business skills noted in II. above.
- C. Be able to evaluate land and property on an applied basis
- D. Be able to organize and/or reorganize the layout and operation of an agriculture business.
- E. Be familiar with and able to obtain assistance when dealing with laws that specifically affect agriculture
- F. Be able to develop and administer a calendar of operations for a business.
- G. Understand business ethics.
- H. To understand how to and be able to delegate responsibility
- I. Be able to understand risk and how to manage it.
- J. To understand how creativity can turn problems into opportunity and be able to apply that concept.
- K. To be able to cope with change.
- L. To understand the components and interactions of the agribusiness system.

III. Marketing Agriculture Business Skills

- A. Understand the difference between marketing and sales and how each contribute to any agribusiness endeavor.
- B. Be able to apply basic economic concepts (i.e., supply, demand, etc.) to the principles of marketing.
- C. To have knowledge of all the potential players in the marketing process and understand each of their roles.
- D. To have knowledge of commodity marketing differences.
- E. Be able to apply the future market as a marketing tool.
- F. Be able to develop a marketing plan for a specific commodity that would include
 1. Analyzing the market
 2. Managing the market product
 3. Managing the market price
 4. Managing the market place
 5. Managing the market promotion
 6. Managing the market risk
- G. Understand the government's role in food marketing
- H. To experience the analysis of marketing scenarios through

case studies

- I. To understand how creativity can contribute to problem solving and enhanced marketing opportunities.
- J. To be able to cope with change.
- K. To understand the components and interactions of the agribusiness system.

IV. Production Agriculture Business Skills

- A. Be able to apply the skills from the other six agribusiness areas to a production situation.
- B. Be able to apply strategic and long range planning principles in a production setting.
- C. To understand and use enterprise review and selection for a production unit.
- D. To understand how to use risk management techniques as applied to a particular commodity or an entire farm.
- E. To understand and work within the laws and government regulations in regard to the commodity or commodities for a farm.
- F. To identify the positive potential creativity can have for any production unit.
- G. To be able to cope with change.
- H. To understand the components and interactions of the agribusiness system.

V. Sales Agricultural Business Skills

- A. Understand the differences between marketing and sales and how each contribute to any agribusiness endeavor.
- B. Be able to apply the techniques of selling
- C. An understanding of human behavior and how behavioral differences are significant in sales.
- D. Be able to apply the problem-solving approach to sales and selling.
- E. To have enhanced communication skills.
- F. Develop present sales presentations to buyers that range from individuals to groups.
- G. Be able to service sales accounts.
- H. Be able to manage a sales district and a cadre of sales people.
- I. Understand and apply advertising and promotion to the sales setting.
- J. To apply creativity to all aspects of a sales person's job.
- K. To be able to cope with change.
- L. To understand the components and interactions of the agribusiness system.

VI. Supervision of Agriculture Business Skills

- A. To understand and be able to apply tools for both self and personal evaluation

- B. To have knowledge of and understand human needs and how they apply to motivation
- C. To understand how communication skills are key to successful supervision, including:
 - 1. Analysis of various methods by which people communicate.
 - 2. Application of basic communication styles to the supervisory task.
 - 3. Assessment of effective and ineffective communication as applied to supervision.
- D. To utilize creative techniques in problem-solving situations.
- E. To understand that time is a resource that must be managed on behalf of the supervisor, as well as those being supervised.
- F. To learn what a code of ethics is and how these ethics apply to supervisors, the labor force, and the organization in general.
- G. To be able to analyze the relationships between the political and economic systems of the United States and their effect on the practice of supervision.
- H. To understand and be able to apply the decision making and problem solving process
- I. To identify, understand, and be able to apply the following elements:
 - 1. Fair compensation
 - 2. Written job descriptions
 - 3. The job evaluation process
 - 4. Performance standards
 - 5. A personnel control system
 - 6. Unions
 - 7. Affirmative action and minorities
- J. To understand information systems and how to apply and manage them.
- K. To be able to cope with change.
- L. To understand the components and interactions of the agribusiness system.

SECTION THREE

Community College

Current Status of California Community College Agriculture Business Curriculum

Community college agribusiness programs are similar to the situation that exists in high schools in that there is great variety, although perhaps not as great as high schools. Agriculture Business or Agriculture Economics is a popular major for many community college agriculture students. The majority of these students indicate that they will transfer to a four year school. Though not statistically verified, this is probably the case. A greater percentage of students who call their major Agriculture Business do transfer to four year schools than students from the other agricultural disciplines. A few of these Agriculture Business transfer students never take an agriculture course while at the community college.

Several community colleges, particularly the larger programs, have specific agriculture business courses. Modesto Junior College offers eight such courses: Agriculture Accounting, Agriculture Marketing, Agriculture Sales, Agriculture Computer Applications, Agriculture Labor Management, Farm Labor Supervision, Farm and Ranch Management, and Introduction to Agriculture Economics. Course outlines are included in this guide. Some of these courses transfer directly to four year agriculture schools. Other transfer as electives, but most do transfer to the California State University system.

Articulated Course (Proposed)

AG-EC 210 - Elements of Agricultural Economics

Course Description:

The place of agriculture and farmers in the economic system; basic economic concepts and problems of agriculture; pricing and marketing problems, factors of production; state and federal farm programs affecting the farmer's economic position.

Objectives - The student will:

- A. Compare and contrast the role of agriculture in the economic structure of the country and world.
- B. Define economic terms
- C. Analyze market conditions and predict price.
- D. Interpret factors of production.
- E. Differentiate legislation affecting the farm system.
- F. Describe the monetary system in this country.
- G. Explain the country's fiscal policy.
- H. Contrast and criticize the different economic systems.
- I. Solve supply and demand schedules.
- J. Construct graphs to utilize given data on cost factors.

Content

- A. Nature of Agricultural Economics
 - 1. Definition
 - 2. Relationship to other sciences
 - 3. Relationship to farm accounting
 - 4. Economic history
- B. The Farmer and the General Economy
 - 1. Basic choices
 - 2. Problems of society
 - 3. Relationship of agriculture to GNP, national goals, and growth
 - 4. Money, wealth, capital
 - 5. Productivity and food supply
 - 6. Monetary system
 - 7. Fiscal policy

- C. Farm Prices
 - 1. Economic terms
 - 2. Demand
 - 3. Supply
 - 4. Market price
 - 5. Elasticity
 - 6. Practical uses of prices theories
 - 7. Seasonal price movements

- D. Farm Marketing
 - 1. The problem
 - 2. Marketing functions
 - 3. Factors affecting marketing of farm products
 - 4. Markets and middlemen
 - 5. Cooperative marketing
 - 6. Local cooperatives and their functions
 - 7. World markets

- E. Nature of Farming
 - 1. Characteristics of farming
 - 2. Farmer's control over production
 - 3. Demand and supply of farm products
 - 4. Fixed and variable costs
 - 5. Lack of control over price

- F. Factors of Production On the Farm

- G. Combination of Enterprises--Principles Involved

- H. Government Agencies and Policies Governing Production
 - 1. Tariffs
 - 2. Parity prices
 - 3. Agencies
 - 4. New legislation

- I. Social Economic Systems
 - 1. Capitalism
 - 2. Communism
 - 3. Socialism

The Pathway Specific Program Agreement

The Program Agreement

Of utmost importance in any Tech Prep articulation process is the agreement negotiated and established between the high school and community college. It establishes the responsibilities and provides the details of the working articulation procedure. It identifies the courses and outlines the competencies to be articulated. It establishes procedures for on-going review and evaluation and is signed in good faith by the executives of each institution. The guiding principle of the articulation agreement is to assure the program "in the best interest of the student" recognizes past learning experiences and minimizes repetition of instruction.

To establish a Tech prep curricular agreement, it is essential that the secondary school is using the State approved Model Curriculum Frameworks for the given pathway. The frameworks have been field tested, have the validation of the industry and assure the community college that the student has received instruction in the pathway specific competencies. The community college curriculum can then be developed or modified if necessary to prevent unnecessary repetition of instruction.

Granting of post secondary credits may vary from one community college to another and is a negotiable issue at the local level. Most community colleges require the student to complete at least one additional class in the same pathway before granting credits for the articulated high school program. Generally, students having completed the secondary portion of the four-year pathway sequence are granted "advanced standing" or "continuing student" status prior to registration for their first semester at the community college.

Additional information and specifics in developing articulation agreements can be found in the "Articulation System Guide" developed by the Central Valley Consortium for Agriculture Education Tech Prep.

The following pages show an example of a Program Agreement and certificate of Completion.

Sample Program Agreement

_____ Community College agrees to grant _____ units of credit for AG EC 210, Elements of Agricultural Economics, to the student meeting the following requirements:

1. Possesses the knowledge and understanding and has demonstrated the ability to perform the skills of the Advanced Core Curriculum of Agri-Business as determined by the high school agricultural teacher.
2. Has proven mastery of the following pathway specific competencies:
 - Compare and contrast the role of agriculture in the economic structure of the country and world.
 - Define economic terms.
 - Analyze market conditions and predict price.
 - Interpret factors of production.
 - Differentiate legislation affecting the farm system.
 - Describe the monetary system in this country.
 - Explain the country's fiscal policy.
 - Contrast and criticize the different economic systems.
 - Solve supply and demand schedules.
 - Construct graphs to utilize given data on cost factors.
3. In addition, the student will:
 - Have a basic understanding of agricultural concepts and skills.
 - Appropriately complete a job application.
 - Use language in accordance with standards of acceptable usage.
 - Identify the main idea of an article or publication.
 - Have a basic understanding of the research process.
 - Demonstrate proficiency in basic mathematical computations.
 - Effectively deliver an oral presentation.
 - Communicate effectively with individuals and groups.
 - Demonstrate basic computer proficiency.
 - Have a basic understanding of record keeping.
 - Have the ability to work effectively in a group.
 - Have a basic understanding of the metric system.

4. Has received the recommendation of the secondary school agriculture teacher.
5. Presents a portfolio which includes a minimum of:
 - A letter of introduction
 - Personal resume
 - A completed scenario with a "proficient" or better rating
 - Two work samples
 - Two letters of recommendation
 - A job or college application
 - A writing sample
 - SOE

Students meeting the above requirements will be granted post secondary credits after the completion of an additional class in the same pathway at the community college. The enrollment status of the student entering the community college will be that of a continuing student.

This agreement between _____ (Community College) and _____ (High School) shall remain in force for an indefinite period of time but shall be reviewed for consideration of continuation at the completion of each school year. This review will include an examination of up-to-date course outline and a discussion of current teaching methodologies. Either party to the agreement may terminate this agreement at the close of any school year by proper written notice delivered to the President of the Community College or to the Superintendent of the secondary institution.

College President

Date

High School Superintendent

Date

College Dean of Instruction

Date

High School Program
Administrator

Date

Sample Certificate of Completion

In accordance with the signed Articulation Agreement between

_____ and _____

(Community College)

(High School)

the below named student has successfully completed the agreed upon requirements and is hereby recommended for post secondary credits as indicated below with enrollment status of a continuing student.

(Name of Student)

___ - ___ - ___

(Social Security Number)

<u>High School Course Completed</u>	<u>Articulated Community College Class</u>	<u>Number of Credits</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

The student has fulfilled the Tech-Prep Agriculture Pathway requirements of:

- Maintaining a B or better for the competency curriculum
- Successfully completing 80% of the specified competencies
- Maintaining a portfolio that the student is prepared to present to his post secondary agriculture department

On this ____ day of ____ 199__, the undersigned parties certify the above to be true and accurate.

High School Instructor

Signature

Typed Name

School & District

High School Administrator

Signature

Typed Name & Title

School & District

Student

Signature

Typed Name

School & District

***Note:**

Student's high school transcript must be attached.

Additional Pathway Course Outlines

AG-EC 200 - Agricultural Accounting and Analysis

Course Description

Study of farm accounting and types of records, their use and how to compute and use measures of earnings and cost of production to improve farm efficiency. Farm income tax problems.

Objectives - The student will:

- A. Describe the value of farm records
- B. Select a recordkeeping system
- C. Define common farm bookkeeping terms
- D. Explain the basis for farm income tax computing
- E. Calculate measures of earnings applicable to farm records
- F. Compute net income, labor income, management income, capital income, and cost of production.
- G. Contrast the basic methods of depreciation.
- H. Calculate depreciation
- I. Create computer spreadsheet templates for common accounting analyses
- J. Design and explain a set of farm accounts
- K. Analyze farm accounts in terms of measure of earnings
- L. Determine efficiencies of a farm business through the use of accounts
- M. Summarize a farm account system
- N. Create a balance sheet
- O. Construct inventory analysis procedures

Content

- A. Types of farm records
 - 1. Accounting
 - 2. Production
- B. Farm income tax
 - 1. Deductions allowable
 - 2. Depreciation
- C. Purpose of farm accounts and their analysis

1. Net income
2. Labor income
3. Management income
4. Capital income
5. Cost of production

D. Kinds of farm accounts and recordkeeping system

1. Single-entry accounting systems
2. Double-entry accounting system
3. Accrual vs cash basis
4. Computerized accounting

E. Types of entries and their uses

1. Diary - Journal - Calendar
2. Inventory
3. Receipts
4. Expenses
5. Accounts payable
6. Accounts receivable
7. Financial statements/Balance sheets
8. Others

F. Computerized records and analysis

1. Computer spreadsheet programming
2. Records and analysis templates using computer spreadsheet programs

G. Complete problem from diary to income and cost analysis

AG-EC 225 - Agriculture Computer Applications

Course Description

Computer use in the workplace, emphasizing agribusiness situations, use of computer applications software, including word processors, spreadsheets, and databases. Includes information accessing, telecommunications, and other software appropriate to agribusiness.

Objectives - The student will:

- A. Demonstrate the operation of the microcomputer.
- B. Evaluate a variety of useful software.
- C. Apply above software to agricultural situations.
- D. Evaluate and select software.
- E. Choose hardware appropriate to their agriculture business.
- F. Apply international and national agricultural networks to agricultural classes.
- G. Evaluate the importance of computer applications as a management tool for agricultural businesses.
- H. Complete projects that will demonstrate their ability to use microcomputers in agricultural applications.

Content

- A. Getting to Know your Microcomputer
 - 1. Orientation to equipment and set-up
 - 2. Terminology
 - 3. Loading a program
 - 4. Using a program
 - 5. File processing
 - 6. Trouble-shooting problems
- B. Review and Evaluation of Office Operations Programs in Agriculture
 - 1. Letters
 - 2. Phone/ mailing lists
 - 3. Reports
 - 4. Check-writing
- C. Review and Evaluation of Electronic Spreadsheets for Agriculture
 - 1. Best crop selection
 - 2. Livestock feeding
 - 3. Livestock production planners

4. Cash flow summaries
 5. Net worth and inventories
 6. Farm operation models
 7. Farm budgets
 8. Other software packages
- D. Database Applications in Agriculture
1. Crop management package
 2. Farm accounting systems
 3. Farm management decisions
 4. Economics of a farm enterprise
 5. Cash crop projections
 6. Least cost ration formulation
 7. Other software packages
- E. Other Agriculture Software
1. Soil test recommendations
 2. Liquid manure and fertilization
 3. Field size and population
 4. Crop history
 5. Weed control modeling and statistics
 6. Land leveling
 7. Heat detection in cattle
 8. Other software packages
- F. Agriculture Telecommunications
1. AgriData Resources/AgriStar Information Network
 2. Agnet Information Network
 3. Doane Agriculture Information Services
 4. Nowcasting Agriculture Weather Program
 5. Dairy Herd Management
 6. Other time sharing and network systems
- G. How to Buy a Computer System
1. Hardware for various agriculture applications
 2. Agricultural Software
- H. Structured Individual Projects

AG-EC 220 - Agribusiness Management

Course Description

Principles of farm organization and measures of earnings in determining production efficiency; property reports, study and reorganization of a given farm with application of above principles; term report and field laboratories

Objectives - The student will:

- A. Show and illustrate the historical background of California agriculture.
- B. Indicate the farmer's factors of production and principles applicable to them to increase farm earnings.
- C. Recognize the principles of testing farm organization and administration.
- D. Analyze the uses and value of a calendar of operations.
- E. Recognize common farm laws applicable to some enterprises.
- F. Define sources and principles of good farm credit.
- G. Analyze and compare the source and use of enterprise information that can be used for testing farm organizations.
- H. Explain the current problems connected with increasing earnings of farms.
- I. Plan and analyze the use of a calendar of operations as a means of testing farm organizations.
- J. Compare and analyze measures of earnings to determine efficiency of a farm.
- K. Analyze and solve problems of organization of a farm.
- L. Reorganize a given farm.
- M. Compare the organization of a farm for efficiency
- N. Select and plan a system of financing for a given farm.
- O. Analyze and plan the best possible use of land.

Content

- A. Nature of Farm Management
 - 1. Concepts
 - 2. Definition
 - 3. Relation to other sciences
- B. Terminology
- C. California Agriculture
 - 1. Historical basis
 - 2. Present position in US.
 - 3. Future possibilities
- D. Describing, Analyzing and Organizing Farms

1. Determinants of farm organization
 2. Describing and analyzing farms
 3. The resource inventory
 4. Evaluating the determinants in terms of suitable enterprises
 5. Selecting enterprises
- E. Analysis
1. Reorganization of a farm
 2. Testing with calendar operations
- F. Farm Earnings
1. Budgeting
 2. Determining earnings
 3. Computing measures of earnings and their use
 4. Analysis of a given organization
- G. Determining Capital Needs and Financing
1. Determining needs
 2. Selecting sources of credit, short and long term
 3. Principles of credit and use of capital
- H. Application of Principles of Organization to a Selected Farm
1. Term problem
 - a. Gathering data -- the property report
 - b. Reorganization
 - c. Testing organization
 - d. Analyzing results
 - e. Recommendations

AG-EC 215 - Agricultural Marketing

Course Description

Structure and framework of agricultural marketing, history and present trends; marketing principles, policies, channels, institutions, regulatory agencies, cooperatives marketing orders, cyclical and seasonal price variations, integration, and foreign and domestic trade; consideration of specific marketing problems affecting area commodities.

Objectives - The student will:

- A. Define the functions of marketing, where and how they are performed
- B. Describe general problems in agricultural marketing
- C. Identify problems of specific commodities of this area.
- D. Describe and diagram how to use marketing channels in our area.
- E. Identify changes occurring in agricultural marketing
- F. Define the role of government in agricultural marketing
- G. Define the role and operating methods of farm marketing cooperatives.
- H. Define risk as it pertains to agricultural marketing and develop plans for reducing the effects of risk
- I. Identify the options available to the individual as to marketing alternatives.
- J. Collect and analyze marketing information
- K. Identify and design a marketing strategy for a specific agricultural product
- L. Chart and interpret market information
- M. Analyze current agricultural marketing situations
- N. Analyze marketing reports and discuss these with peers

Content

- A. Introduction; the history of agricultural marketing; how we got where we are, where we are, a look at the future.
- B. Marketing problems and approaches to their solutions
- C. Agricultural production, the plant, characteristics of our products, the make-up of demand and factors affecting demand groups, population, trade, races, nationalities, living patterns.
- D. The processing industries -- what they are, where they fit, what their problems are.
- E. Wholesaling and retailing -- structures, chains, supermarkets, custom of specification production, the future.
- F. The costs of marketing
- G. The functions of marketing -- the exchange--price function, supply, demand,

elasticity, relations to cost.

- H. Competition
- I. Agricultural prices -- retail, farm, ag, non-ag, cyclical and seasonal fluctuations
- J. Government price and marketing programs-- kinds, their development, present status, future.
- K. Expanding demand
- L. Market organization--decentralization, integration, bargaining, market orders
- M. Standardizing and grading, objectives, criteria, problems--relation to consumer.
- N. Collecting and using market information
- O. Transportation and storage--the place of each
- P. Risk--futures, hedging, insurance
- Q. Specific commodity problems in poultry, dairy, livestock, crops
- R. Cooperatives -- what they are, do, their place, criteria for success.
- S. Government and agricultural marketing

AG-EC 305 - Supervision in Agriculture

Course Description

Training farm foremen, superintendents and crew leaders in principles of supervision, maintaining effective relationships, handling personnel problems, instructing new workers on job performance, and analyzing job efficiency. Nine weeks

Objectives - The student will:

- A. Assess the principles of good supervision
- B. Explain and comprehend the history of the farm labor movement.
- C. Determine the basic needs of workers.
- D. Demonstrate good listening and communication habits.
- E. Establish criteria to select, train, evaluate, and terminate workers.
- F. Supervise personnel and instruct new and inexperienced workers.
- G. Utilize visual aids for training workers.
- H. Make logical sequential management decisions.

Content

- A. Introduction
 - 1. History of seasonal labor in California
 - 2. Types of farm workers in California
 - 3. Common factors of these groups
 - 4. Current labor situations in California
- B. Basic needs of Humans/Workers
 - 1. Survival
 - 2. Cultural
- C. Meeting Needs of Humans on the Job
 - 1. Motivation
 - 2. Concern for workers -- fulfilling needs
- D. Communications
 - 1. Listening, speaking, writing
 - 2. Taking orders and voicing opinions
 - 3. Orderly conduct of work matters
- E. Problem-solving
 - 1. The four-step method of problem solving

- F. Worker Selection
 - 1. Establish criteria to select workers
 - 2. Techniques for selecting crews

- G. Instructing Workers
 - 1. Procedures
 - 2. Common pitfalls
 - 3. Breaking down a job for instruction and for work modification

- H. Worker Efficiency and Use of Time

- I. Working Conditions

- J. Employer-Employee Responsibilities

AG-EC 280 - Agriculture Sales and Service

Course Description

Introduction to sales and service profession with emphasis on, but not limited to, the agribusiness sector. Provides both theoretical background and experiential exercises on a variety of sales and service facets including: the sales industry, identifying and understanding personalities, motivating people, sales presentations, prospecting, sales management, and advertising and promotion. Designed to prepare for employment or augment a current sales job.

Objectives -- The student will:

- A. Acquire fundamental information about the agribusiness sales industry, including its scope, variety, historical perspectives, relationship to other industries, job opportunities, job requirements, and current and future role in the US. economy.
- B. Describe and identify various personality characteristics with an emphasis on sales.
- C. Compare agribusiness selling to non-agriculture selling
- D. Analyze the component parts and dynamics of a sales presentation.
- E. Demonstrate on ability to carry out an effective sales presentation on an agricultural project.
- F. Evaluate multi-media sales materials.
- G. Compare, contrast, and evaluate the effectiveness of different kinds of sales presentations and demonstrations.

Content

- A. Theoretical Background for Sales and Service
 1. Introduction to scope and variety of sales industry and profession for agribusiness
 - a. Agribusiness selling: why is it different?
 - b. Agribusiness selling and total sales profession: a comparison
 2. Transactional analysis and personality
 - a. Prospects and buyers
 - b. Sales and service personnel
 3. Profiles of successful agribusiness sales personnel
 4. Psyche of buying, with emphasis on the agribusiness sector
 5. The knowledge base of agribusiness sales
 - a. Agriculture background and experience
 - b. Product and technical knowledge
 - c. Understanding selling
 6. Future trends in agrisales
- B. The Agribusiness Selling Experience
 1. Planning and making sales presentations
 2. Planning and making demonstrations
 3. Prospecting for customers

4. Advertising and sales promotion
5. Multi-media selling
6. Evaluating sales performances
7. Information sources for agribusiness sales people
8. Job opportunities and demands in agribusiness sales
9. Industry sales and service examples

SECTION FOUR

Student Assessment

Introduction To Student Assessment In Tech Prep

What is Assessment? By definition*, assessment involves appraisal & evaluation. Assessment in education not only evaluates what a student understands or skills that he/she can demonstrate but additionally indicates the quality of instruction that was provided. So as we enter the age of "accountability" in education, assessment becomes extremely important to determine the level of a student's understanding and ability to complete a task, as well as the quality of instruction received. Too often in education, students are assessed using paper/pencil written examinations that involve multiple choice, true/false or short essay questions. Most of these assessment strategies utilize a student's short-term memory or ability to memorize facts. Therefore a more realistic approach to assessment has been selected for Tech Prep. Alternative assessment, performance assessment or authentic assessment are all terms that indicate this new approach to assessment.

Authentic Assessment (Performance assessment) is typically defined by a set of performance standards (instructional objectives). Students must show progress towards these standards. Authentic assessment may include many different types of testing approaches that are more typical of real - life settings and allow students to demonstrate their knowledge and skills through creating a product, demonstrating a skill or documenting a process.

Two different types of assessment have been selected for use in Tech Prep for Ag Education. They are Cumulative assessment; projects which develop over an extended time frame and have more than one component. The other form of assessment is administered or (on - demand) assessments which are short term examinations that determine a student's knowledge in a more specified area. We firmly believe that today's diverse student population can be better served by a flexible system of assessment that allows students to demonstrate a variety of knowledge and skills.

WORK SAMPLES

AG BUSINESS MANAGEMENT

- 1.) Interview an agribusiness professional - focus on management functions performed on the job.
- 2.) Construct a computer spreadsheet showing income and expenses for a locally grown commodity.
- 3.) Compare 3 lending institutions in their loan interest rates and qualifications for an equipment loan.
- 4.) Students analyze managerial services utilized by a local production ag operation
- 5.) Develop sales presentation which includes:
 - An outlines showing strategies and techniques
 - Written script
 - Critique
- 6.) Outline an insurance program that would met the needs of an agribusiness firm.
- 7.) Complete a bank loan application and net income summary.
- 8.) Design a marketing campaign for some ag product:
 - Develop a database of potential users
 - Develop an advertisement (mail flyer)
 - Expenses for the campaign
 - Written report on responses from potential users.
- 9.) Complete proper I.R.S. forms and determine the tax obligations for an agribusiness
- 10.) Analyze and compare the advantages and disadvantages of cooperative, corporate, single proprietorship and partnership as agricultural ownership structures

Written Scenarios

Written Scenario #1

Topic: International Marketing

Scenario: You have been selected to serve as a grower marketing representative of the State Almond Board. The industry has plans to increase the export sale of almond products. Your responsibility as a committee chairman is specifically to increase the sale of raw almonds in Japan.

Instructions: Prepare a list of recommendations to the Board. Explain each of your suggestions listing the risks and advantages as they may apply. Include information on current tariffs or quotas levied by Japan, shipping methods to be used, current events that may affect your plans, cultural differences that may affect sales in Japan, and tracking your commodity from grower to Japan.

To receive a proficient rating on this task, you must show all of the following:

1. Knowledge of:
 - Tariffs and quotas
 - Shipping methods
 - Current events
 - Cultural differences
 - Commodity tracking
2. Ability to logically organize your information
3. Ability to communicate effectively in writing

Written Scenario #2

Topic: Marketing Plan

Scenario: You are currently a board member of the United States Rice Millers Association. Japan has recently changed some of its tariffs and import quotas. The board decides to develop a marketing plan to increase rice sales in Japan.

Instructions: First list the characteristics of a good marketing plan. Then develop a marketing plan for selling rice to Japan. Include information on each of the following procedures:

1. An analysis of the market
2. Goal of the marketing plan
3. A plan of action
4. A projected budget
5. An evaluation of the success of your plan

To receive a proficient rating on this task, you must show all of the following:

1. Knowledge of:
 - Characteristics of a marketing plan
 - Rice market in Japan
 - How to develop a business proposition
 - How to develop a plan of action
 - How to develop a projected budget
 - How and why to evaluate your plan
2. Ability to logically organize your information
3. Ability to communicate effectively in writing

Written Scenario #3

- Topic:** Obtaining a loan
- Scenario:** You are a farmer who needs to obtain a production loan from a local bank. Your records are up-to-date and it appears that you have all the information needed to complete the loan application.
- Instructions:** Outline the considerations the bank will utilize to determine whether this will be a good loan that they would be willing to become involved in. Next outline the procedure that you would follow in preparing the materials necessary to convince the bank that this loan is a good risk. Include personal and financial information that would be helpful as well as any other procedures you would follow to enhance the chance that the loan would be approved.

To receive a proficient rating on this task, you must show all of the following:

1. Knowledge of:
 - Loans and lending institutions
 accounting and financial analyses
 - Desirable characteristics of loan applicants
2. Ability to logically organize your information
3. Ability to communicate effectively in writing

Written Scenario #4

- Topic:** Accounting
- Scenario:** You are hired by an Agribusiness firm to analyze their accounting and recordkeeping system. The firm's objective is to identify whether their system is providing the information necessary to make financial and production decisions. Your job is to determine if their system is adequate and make suggestions for improvement.
- Instructions:** Outline a procedure that could be used to determine the adequacy of any set of financial records. Indicate what analyses could be used to determine the financial health of the firm and make recommendations as to how those analyses could be used in the decision-making process. Include a discussion on different types of recordkeeping/ accounting systems.

To receive a proficient rating on this task, you must show all of the following:

1. Knowledge of:
 - Accounting and recordkeeping systems
 - Ability to analyze financial records ...
2. Ability to logically organize your information
3. Ability to communicate effectively in writing

SECTION FIVE

Appendices

Appendix A
Targeted Occupations

AGRIBUSINESS JOB TITLES

Note: Job titles in all caps are from the "targeted occupations lists. Also some jobs may require local and/or state certification, licensing, or advanced degree.

Job Title	Entry Level	Technical Level	Professional Level
ACCOUNTING ASSISTANT		X	
ADMINISTRATIVE ASSISTANT		X	
Advertising Manager/Technician		X	
ADVERTISING SPECIALIST		X	
AG INVENTORY/WAREHOUSE TECHNICIAN		X	
AG JOURNALIST			X
AG LOAN OFFICER			X
AG SALES AND SERVICE TECHNICIAN		X	
Agribusiness Firm Controller			X
AGRIBUSINESS MANAGER/SUPERINTENDENT			X
Agricultural Chemical Distributer			X
Agricultural Chemical Specialist		X	
Agricultural Commodity Association Manager			X
Agricultural Commodity Buyer			X
Agricultural Commodity Trading Firm Admin./Mgr.			X
Agricultural Commodity/Product Export-Import Trader			X
Agricultural Commodity/Product Marketing/Sales			X
Agricultural Finance Instructor			X
Agricultural Instructor			X
Agricultural Lawyer			X
Agricultural Marketing Researcher/Analyst			X
Agricultural Microbiologist			X
Agricultural Organization Lobbyist/Analyst			X
Agricultural Pest Control Advisor & Operator (Lic.)		X	
Agricultural Pest Control Supervisor		X	
Agricultural Research Scientist			X
Boner, Meat		X	
BOOKKEEPER	X		
Butcher, All Around		X	
Butcher, Apprentice	X		
Butcher, Crab		X	
Butcher, Poultry and Fish		X	
Cannery and Freezer Plant Worker	X		
Carcass Splitter		X	
COLLECTIONS CLERK	X		
COMMODITY TRADER/BROKER			X
Computer Operator/Programmer			X
CONSULTANT			X
Consumer Affairs Specialist			X
Cooperative Manager			X
Credit Manager			X
Crop Insurance Agent		X	
CUSTOMER SERVICE REP		X	

Dairy Processing Plant Equipment Operator	X		
DATA ENTRY PERSON	X		
Demonstrator/Promoter of Agricultural Products	X		
Driver, Sales	X		
Economist			X
Energy Specialist			X
Entomologist			X
Environmental Coordinator			X
Environmental Health Inspector			X
Estate and Tax Advisor			X
Fair Manager			X
Farm Accountant		X	
FARM ADVISOR			X
Farm Insurance Agent		X	
Farm Labor Specialist			X
FARM REALTOR		X	
Farm/Ranch Personnel Supervisor		X	
Farm/Ranch Superintendent/Manager			X
FEEDLOT MANAGER		X	
Field Rep		X	
Final Dressing Cutter		X	
Financial Services Advisor			X
Fish Cleaner	X		
Food Chemist			X
Food Processing Consultant			X
Food Processing Instructor/Professor			X
Food Processing Plant Manager			X
Food Processing Plant Shift Supervisor		X	
Food Technologist			X
Food Worker	X		
General Manager			X
Government Food Safety Agency Admn./Insp.			X
Government Trade Agency Admin./ Supervisor			X
Graders/Sorters - Agricultural Products	X		
Grain Elevator Clerk	X		
Grain Elevator Manager		X	
Hand Packager/Packer	X		
Head Trimmer	X		
INTERNATIONAL AG SPECIALIST			X
INTERNATIONAL SALES AND TRADE TECH.		X	
International Trade Specialist			X
Laboratory Technician		X	
Land/Environmental Use Specialist			X
LOBBYIST			X
MARKET RESEARCHER			X
Marketing, Public Relations Manager			X
Meat Butcher		X	
Meat Clerk	X		
Meat Cutter		X	
Meat Cutter, Apprentice	X		

Meat Dresser		X	
Milk Receiver, Tank Truck	X		
Nematologist			X
Offal Separator	X		
OFFICE CLERK	X		
Office Manager		X	
Payroll Clerk		X	
Personnel Manager		X	
Pest Control Business Manager			X
Plant Pathologist			X
Plant Physiologist			X
Poultry Eviscerator		X	
Processing Plant Field Rep		X	
Processing Plant Pesticide Technician		X	
Processing Plant Shift Production Manager		X	
Production Credit Association Field Person			X
PRODUCTION MANAGER		X	
PUBLIC RELATIONS DIRECTOR			X
Public Relations Specialist/Writer		X	
Purchasing Agent/Buyer, Farm Products			X
Quality Control Inspector		X	
Radio/TV News Reporter			X
Real Estate Appraiser/Agent			X
RECEPTIONIST	X		
RETAIL MANAGER		X	
Retail Produce Sales Person	X		
RETAIL SALES CLERK	X		
Safety Engineer		X	
Sales Agent, Herbicide Service		X	
Sales Agent, Pest Control Service		X	
Sales Rep		X	
Sales Worker	X		
State/Federal Gvn't Program Admin./ Mgr./Analyst			X
State/Federal Gvn't Regulatory Field Rep			X
TEACHER, AGRIBUSINESS			X
Trade Association Manager			X
Turkey Roll Maker		X	
Warehouse Foreperson		X	
Warehouse Manager		X	
Warehouse Order Locator	X		
Warehouse Receiver	X		
Warehouse Stocker	X		
Waste Manager		X	
Water Quality Consultant			X
WHOLESALE MANAGER		X	
Wholesale Produce Sales Person		X	
Wine Maker (Enologist)			X

Appendix B
Students Will be Able to...

Students Will Be Able To...

Pathway Competencies

In Addition to the Pathway Specific Competencies Expected Throughout this Curriculum, The Student Will:

Entry - *

- Have a basic understanding of agricultural concepts and skills
- Appropriately complete a job application
- Use language in accordance with standards of acceptable usage
- Identify the main idea of an article or publication
- Have a basic understanding of the research process
- Demonstrate basic proficiency in basic mathematical computations
- Effectively deliver an oral presentation
- Communicate effectively with individuals and groups
- Demonstrate basic computer proficiency
- Have a basic understanding of record keeping
- Demonstrate the ability to work effectively in a group
- Have a basic understanding of the metric system

Technical -**

- All of the above
- Have proficient technical competencies
- Research an idea using a variety of resources
- Analyze problems and work toward solutions
- Communicate effectively in a variety of group situations
- Delegate job responsibilities effectively
- Use tables, graphs, and maps effectively
- Use algebraic principles
- Read, understand, and follow the instructions on a chemical label
- Have a proficient understanding of the metric system
- Have the ability to lead and follow

Professional-***

- All of the above
- Utilize statistical methods; Be able to analyze and interpret data from research and draw inferences from charts, tables, and graphs that illustrate data from real-world situations
- Design and develop experimental tasks
- Use experimental or theoretical probability as appropriate, to represent and solve problems involving uncertainty
- Have ability to retrieve, sequence, package and present information
- Have ability to supervise and evaluate personnel matters
- Possess and exhibit leadership skills
- Have basic oral communication skills in a second language

Entry level** jobs are those at the lowest level of responsibility and these workers generally work under the supervision of another. A high school diploma is usually required for employment, but that requirement is often waived if the applicant has sufficient experience. *Technical level** employees usually work in an occupation involving mid-level responsibility and decision making is nearly always a part of it. These occupations usually require an associate of arts/science degree or certificate/license providing evidence of two or more years of specialized training. *****Professional level** occupations normally require a baccalaureate or higher college degree. Some of these occupations may also require certification or licensure. These employees perform very complex tasks and serve in positions that require the responsibility for successful management of departments, enterprises, programs or projects.

Appendix C
Pathway Grids
for all
Agricultural Pathways

AGRICULTURAL EDUCATION TECH PREP
Career Pathways Core Lists

Career Pathway	A List	B List
Agricultural Business	Ag Business 1	Ag Business 2
Agricultural Mechanics	Ag Mechanics 3 <i>Power & Machinery or Metal Fabrication or Ag Structures</i>	Ag Mechanics 4 <i>Power & Machinery or Metal Fabrication or Ag Structures</i>
Animal Science	Animal Science 1	Animal Science 2
Forestry & Natural Resources	Natural Resources 1 Natural Resources 1	Forestry Natural Resources 2
Ornamental Horticulture	Ornamental Hort. 1 <i>Nursery Industry</i>	Ornamental Hort. 2 <i>Landscape Industry or Florist Industry</i>
Plant Science	Plant Science 1	Plant Science 2

Technical Elective C List

Ag Mechanics 1 or 2

Ag Mechanics 3 or 4

Power & Machinery

Metal Fabrication

Ag Structures

Ag Business or Ag Computers

Typing/Keyboarding

Ornamental Horticulture

Wildlife Production

Other Technical Courses related to the Career Pathway but not Agriculture:

ie. Industrial Technology

Business or Computers

Foreign Language

Drafting or Mechanical Drawing

Environmental Studies

This list is to be used in advising students using the generic Tech Prep Grids.

Appendix D
*Agribusiness
Pathway Grids
for Secondary*

TECH PREP AGRICULTURE CURRICULUM AGRICULTURAL BUSINESS

TECH PREP SUBJECT	<i>SECONDARY CURRICULUM</i>			
	Freshman	Sophomore	Junior	Senior
Technical Core	Agriculture 1 Core	Agriculture 2 Core	Ag Business 1	Ag Business 2
Technical Elective	*Tech Prep Elective C List	*Tech Prep Elective C List	*Tech Prep Elective C List	*Tech Prep Elective C List
Math	Applied Math 1 (Math 1 Algebra 1)	Applied Math 2 (Math 2 Geometry)	Applied Math 3 (Algebra 2 Trigonometry)	Work Place Learning
Science	Applied Biology	Applied Biology or Chemistry	Applied Physics 1	Applied Physics 2
Communications	English 1	English 2 Applied Communications	English 3 Applied Communications	English 4 Applied Communications
Social Science	Social Studies	World History	U.S. History	Government Economics
P.E. Humanities	Physical Education	Physical Education	Fine Arts **	Work Place Learning

SECONDARY TECH PREP SEQUENCE FOR SELECTED PATHWAY.

*TECH PREP ELECTIVES POSSIBLE ONLY WITH 7 PERIOD DAY.

** FINE ART CREDIT MAY BE GRANTED FOR CERTAIN AG COURSES.

UC/CSUC acceptance of Applied Academics courses for Math, English, Biology, and Physics will determine student eligibility for admission.

Depending on how closely the High School follows the Appropriate Curriculum, college credit may be awarded to successful completers.

TECH PREP AGRICULTURE CURRICULUM AGRICULTURAL BUSINESS

COLLEGE PREP/TECH PREP

SECONDARY CURRICULUM

SUBJECT	Freshman	Sophomore	Junior	Senior
Technical Core	Agriculture 1 Core	Agriculture 2 Core	Ag Business 1	Ag Business 2
Technical Elective	Tech Prep Elective C List	*	*	Tech Prep Elective C List
Math Humanities	Math 1 (Algebra 1)	Math 2 (Geometry)	Math 3 (Algebra 2 Trigonometry)	Fine Arts ** _____
Science/ Technical Elective	*	Biology	Chemistry	*
Communications	English 1	English 2	English 3	English 4
Social Science	Social Studies	World History	U.S. History	Government Economics
P.E. Foreign Language	Physical Education	Physical Education	Foreign Language	Foreign Language

SECONDARY TECH PREP SEQUENCE FOR SELECTED CAREER PATHWAY.

**FINE ART CREDIT MAY BE AWARDED FOR CERTAIN AG COURSES.

FULFILLS REQUIREMENTS FOR UC/CSUC ADMISSION FROM H.S.

* *Additional Technical Core Courses possible with 7 period day (C List)*

TECH PREP AGRICULTURE CURRICULUM AGRICULTURAL BUSINESS

Traditional Agriculture

SECONDARY CURRICULUM

SUBJECT	Freshman	Sophomore	Junior	Senior
Technical Core	Agriculture 1 Core	Agriculture 2 Core or Ag Biology	Ag Business 1	Ag Business 2
Technical Elective	*Tech Prep Elective C List	*Tech Prep Elective C List	*Tech Prep Elective C List	*Tech Prep Elective C List
Math Humanities	Algebra A Math 1 (Algebra 1)	Algebra B Math 2 (Geometry)	Fine Arts ** _____	
Physical Science	Physical Science	*	*	*
Communications	English 1	English 2	English 3	English 4
Social Science	Social Studies	World History	U.S. History	Government Economics
P.E.	Physical Education	Physical Education		

SECONDARY TECH PREP SEQUENCE FOR SELECTED CAREER PATHWAY.

****FINE ART CREDIT MAY BE AWARDED FOR CERTAIN AG COURSES.**

Minimum High School Graduation Requirements

* *Additional Technical Core Courses possible with 7 period day (C List)*

Ag Biology Accepted, allows for local graduation requirements differences.

TECH PREP AGRICULTURE CURRICULUM AGRICULTURAL BUSINESS

SUBJECT	College Tech Prep/Sports	Secondary Curriculum		
SUBJECT	Freshman	Sophomore	Junior	Senior
Technical Core	Agriculture 1 Core	Agriculture 2 Core or Ag Biology	Ag Business 1	Ag Business 2
Foreign Language/ Humanities	*Tech Prep Elective C List	Foreign Language	Foreign Language	Fine Arts** <hr style="width: 10%; margin: 0 auto;"/>
Math/ Physical Sciences	Math 1 (Algebra 1)	Math 2 (Geometry)	Math 3 (Algebra 2 Trigonometry)	Chemistry
Additional Technical Electives	*	*	*	*
Communica- tions	English 1	English 2	English 3	English 4
Social Science	Social Studies	World History	U.S. History	Government Economics
P.E.	Physical Education	Physical Education	Physical Education	Physical Education

SECONDARY TECH PREP SEQUENCE FOR SELECTED CAREER PATHWAY.

**FINE ART CREDIT MAY BE AWARDED FOR CERTAIN AG COURSES.

FULFILLS REQUIREMENTS FOR UC/CSUC ADMISSION FROM H.S. with Ag Biology Credit

* *Additional Technical Core Courses possible with 7 period day (C List)*

Sports Option

TECH PREP AGRICULTURE CURRICULUM AGRICULTURAL BUSINESS

Ag Mech Option	<i>Secondary Curriculum</i>			
SUBJECT	Freshman	Sophomore	Junior	Senior
Technical Core	Agriculture 1 Core	Agriculture 2 Core or Ag Biology	Ag Business 1	Ag Business 2
Ag Mechanics Option	Ag Mechanics 1	Ag Mechanics 2	*	Ag Mechanics 3 or 4
Math/ Humanities	Math 1 (Algebra 1)	Math 2 (Geometry)	Math 3 (Algebra 2 Trigonometry)	Fine Arts ** _____
Science	*	*	Chemistry	*
Communica- tions	English 1	English 2	English 3	English 4
Social Science	Social Studies	World History	U.S. History	Government Economics
P.E. Foreign Language	Physical Education	Physical Education	Foreign Language	Foreign Language

SECONDARY TECH PREP SEQUENCE FOR SELECTED CAREER PATHWAY.

**FINE ART CREDIT MAY BE AWARDED FOR CERTAIN AG COURSES.

Science credit for AG Biology expected

FULFILLS REQUIREMENTS FOR UC/CSUC ADMISSION FROM H.S. with Ag Biology Credit

* *Additional Technical Core Courses possible with 7 period day (C List)*

Ag Mechanics Option

WORKPLACE LEARNING AND TECH PREP

Workplace learning is an integral part of all Tech Prep Programs in Agriculture. As such, the specific Tech Prep Grid allows for time in the school day for these activities in the Senior year. The remaining grids offer options that allow a student to be involved in Tech Prep and meet other personal and educational objectives. For these students, there may not be sufficient time within the school day to be involved with Workplace Learning. In both of these cases, workplace learning could occur after the school day is finished, on weekends, during vacations, and summer breaks.

Workplace learning begins in the Freshman year with Supervised Practical Experience opportunities which is also a requirement of Ag Tech Prep. These are often entrepreneurial enterprises and usually continue throughout High School. Paid Work Experience SPE usually commences during the Junior year and continues through college. This procedure is outlined in the Workplace Learning Guide, "Learning to Work - Working to Learn."

AGRICULTURAL EDUCATION TECH PREP

COMMUNITY COLLEGE AGRICULTURE TECHNICIAN PROGRAMS

The Technician programs in Agriculture include an extended period of specialized training beyond high school, but less than that required for a Bachelor of Science. An individual in the technician program will acquire the skill and ability to make practical application of his/her theoretical knowledge in performing specific tasks in the production of goods and services in agriculture and related fields.

Certificates are awarded to students in technical programs in recognition of completion of specified requirements which indicate proficiency. All certificate core courses must be passed with a "C" grade or better.

The technician programs are as follows:

Agricultural Business Pathway

Agricultural Sales, Service Technician

Agricultural Mechanics Pathway

Agricultural Mechanics Technician

Animal Science Pathway

Artificial Insemination Technician

Forestry and Natural Sciences Pathway

Forestry Technician

Recreational Land Management Technician

Ornamental Horticulture Pathway

Commercial Floristry Technician

Landscape Design Technician

Landscape and Park Maintenance Technician

Nursery Production Technician

Plant Science Pathway

Agricultural Laboratory Technician

Food Processing Technician

**TECH PREP AGRICULTURE CURRICULUM
AGRICULTURAL SALES AND SERVICE TECHNICIAN CERTIFICATE**

ASST.

Community College Curriculum

SUBJECT	<i>Freshman 1st Semester</i>	<i>Freshman 2nd Semester</i>	<i>Sophomore 1st Semester</i>	<i>Sophomore 2nd Semester</i>
Technical Core	AG 315 * Intro to Agriculture Guidance		AG 285* Communications in Agriculture <i>suggested from Core Option list</i>	AG-EC 280* Ag Sales and Services
Technical Core	AG EC 200 Ag Accounting	AG-EC 225* Ag Computers <i>suggested from Core Option list</i>	AG-EC 215* Ag Marketing	AG-EC 220 Agribusiness Managements <i>uggested from Core Option list</i>
Technical Core	AG-EC 210* Elements of Ag Economics	AG 280* Agriculture Computations <i>suggested from Core Option list</i>		
Technical Core	SPCOM 100* Fundamentals Public Speaking or SPCOM 102 Intro. Human Communication			
General Education	English Comp _____	GE Natural Science _____	GE Social Science _____	GE Humanities _____
General Education	GE Activities _____	GE Activities _____	Health Education _____	Communications Analytical Thinking _____
Work- Place Learning	Work Experience Minimum 6	Work Experience	Work Experience	Work Experience

***Specific Technician Certificate Requirement**

Minimum competency must be demonstrated in Reading, Written Expression, Mathematics as referred to in the Specific Graduation Requirements.

Successful completion of additional courses for the Intersegmental General Education Transfer Core Curriculum will GE Certify the lower division B.S. requirements for U.S. and C.S.U.C.

Successful completion of additional courses for the C.S.U.C. Transfer Core Curriculum will GE Certify the lower division B.S. Requirements for C.S.U.C.

Maximum 62 units completion for the Associate in Science (A.S.) Degree (30 units must be in Agriculture)

TECH PREP AGRICULTURE CURRICULUM
ASSOCIATE DEGREE/CSU TRANSFER PATTERN

AS/CSU *Community College Curriculum*

SUBJECT	<i>Freshman 1st Semester</i>	<i>Freshman 2nd Semester</i>	<i>Sophomore 1st Semester</i>	<i>Sophomore 2nd Semester</i>
Technical Core	AG 315 * Intro to Agriculture	Career Path Core Option	Career Path Core Option	Career Path Core Option
Technical Core	Career Path Core Option	Career Path Core Option	Career Path Core Option	Career Path Core Option
Technical Core Elective	Career Path Core Option	Career Path Core Option	Elective	
General Education	English Comp	Communications Analytical Thinking	GE Humanities	Elective
General Education	Guidance	GE Activities	GE Activities	Elective
General Educaion	Health Education	GE Math	GE Natural Science	GE Social Science
Work- Place Learning	Work Experience Minimum 6	Work Experience	Work Experience	Work Experience

Minimum competency must be demonstrated in Reading, Written Expression, Mathematics as referred to in the Specific College Graduation Requirements

Successful completion of additional courses for the intersegmental General Educaiton Transfer Core Curriculum will GE certify the lower division B.S. Requirement for U.C. and C.S.U.C.

Successful completion of additional courses for the C.S.U.C. Transfer Core Curriculum will GE Certify the lower division B.S. Requirements for C.S.U.C.

Minimum 62 unit completion for the Associate in Science (A.S.) Degree (30 units must be in Agriculture)

Agriculture Sales and Service Technician Certificate Core Options

Requires nine (9) units from the following:

AG-EC 220	Agribusiness Management - 3
AG-EC 225	Agriculture Computer Applications - 3
AG 280	Agricultural Computations - 3
AG 285	Communications in Agriculture -3
AN-SC 200	Introduction to Animal Science - 3
PL-SC 200	Introduction to Plant Science - 3
FD-P 200	Basic Food Processing - 3
NR 200	Soils - 3
NR 215	Wildlife Production - 3
NR 220	Introductory Forestry - 3
OH 210	Introduction to Ornamental Horticulture - 3
AG-M 200	Basic Mechanics - Ag - 3
	Other courses as approved by the Ag advisor

Total Core Units Required for A.S. Degree - 32

Total Core Units Required for Certificate - 32

Insert Tech Prep 4 year plan here

Appendix E
*Pathway Grids for Community
College*

Appendix F
*Glossary of Agricultural
Economic Terms*

Glossary of Agricultural Economic Terms

1. **Agribusiness** - involves the manufacture and distribution of farm supplies; production operations on the farm; and the storage, processing, and distribution of farm commodities and items made from them.
2. **Agricultural economics** - an applied social science dealing with how mankind uses technical knowledge and scarce productive resources to produce food and fiber and to distribute them tosociety for consumption over time.
3. **Annuity** - a specified income payable at stated intervals for a fixed period of time, often for life, for which the recipient has made premium payments in installments or a single payment.
4. **Appreciation** - an increase in the value of property.
5. **Assets** - items of money value owned by a business, including land, buildings, tractors, combines and so on.
6. **Average fixed cost (AFC)** - fixed cost per unit of output, determined by dividing total fixed cost by output at each level of output.
7. **Average total cost (ATC)** - total cost per unit of output, determined by dividing total cost by output at each level of output.
8. **Average variable cost (AVC)** - variable cost per unit of output, determined by dividing total variable cost by output at each level of output.
9. **Balance of trade** - the value of merchandise exports minus the value of merchandise imports,
10. **Bear Market** - a falling market with slower trading leading to lower prices,
11. **Bonds** - certificates representing loans made to a business or government.
12. **Broker** - an individual who is licensed to buy and sell for investors, but who does not have title to the items himself.
13. **Bull Market** - a rising market with active trading leading to higher prices.
14. **Capital** - all wealth in money or property owned or used in business.
15. **Capitalism** - a type of economic organization in which private individuals or groups own and manage all resources.
16. **Capitalized value** - the present value of a resource obtained by discounting the value of its future net income stream.
17. **Cartel** - a pool of companies from different nations to control prices and production of commodities.

18. **Ceteris paribus** - holding some variables constant, while letting specific variables change.
19. **Collective bargaining** - the process by which union representatives bargain with employers concerning working conditions, rules, wages, and hours.
20. **Collective farm** - typically, a farm in the USSR, owned by the government, but operated by a number of families, which share in the farm-derived revenue.
21. **Commodity** - any article of commerce or trade, used instead of the singular for "goods".
22. **Comparative advantage** - a situation in which nation, relatively superior at producing some goods, gains by trading for goods that another nation is relatively more proficient at producing.
23. **Complements** - using two goods in combination because the presence of one enhances the benefit obtained from the other.
24. **Conservation** - preserving or extending the productive life of a resource.
25. **Constant returns** - a constant input-output ration
26. **Consumption** - the using of goods or services
27. **Cooperative** - an association of member-owners operating a business that provides services at cost to its patrons.
28. **Corporation** - a business enterprise owned and operated by a group of persons authorized to do business as a single individual under a state charter.
29. **Credit** - receiving the present use of money, goods, or services for a promise to pay for them in the future.
30. **Credit Union** - a cooperative group operating a savings plan from which members may borrow money.
31. **Cross price elasticity** - the responsiveness of the quantity demanded of one commodity to a 1% change in the price of another commodity, *ceteris paribus*.
32. **Currency** - anything that is in current use as a medium or exchange. Money.
33. **Debtor** - one who owes money or an obligation to another
34. **Deflation** - an abnormal decline in the price level of commodities
35. **Demand** - the amount of any good or service that will be taken at all possible prices.
36. **Demand curve** - shows the quantities of a good that a consumer will buy at different prices for that good, everything else unchanged.
37. **Dependent variable** - one whose quantity changes as a result of a change in another (independent) variable.
38. **Depreciation** - a decline in the value of an article due to use or obsolescence.

39. **Depression** - a period of little business activity and great pessimism among the people of a nation.
40. **Derived demand** - is used to specify demand schedules for resources that are used in producing final products. The demand for land depends upon the intensity of our demand for its products.
41. **Discount** - the amount that is subtracted from a loan as an interest charge in advance. The process of determining the present value of future goods.
42. **Dividend** - a sum of money to shareholders of a corporation out of profits.
43. **Durable consumer goods** - goods that last a relatively long time such as kitchen ranges, refrigerators.
44. **Economic** - pertaining to any action which has to do with the creation of goods and services designed to satisfy human wants, the science or production and distribution of goods and services.
45. **Embargo** - a complete prohibition against the imports or exports of a commodity.
46. **Equilibrium** - a condition in which opposing forces within a system just offset one another.
47. **Equilibrium price** - the price in a market at which quantity supplied and quantity demand are equal.
48. **European Community (EC-10)** - a group of countries which have reduced or abolished tariffs among themselves and established a common and uniform tariff to outsiders. The EC includes 10 countries: West Germany, France, Italy, Belgium, the Netherlands, Luxembourg, Great Britain, Denmark, Ireland, and Greece.
49. **European Free Trade Association (EFTA)** - a group of countries which have reduced or abolished tariffs among themselves, but have not established a common tariff to outsiders. The EFTA includes: Sweden, Norway, Switzerland, Austria, Portugal, Iceland, and Finland.
50. **Excise tax** - a tax levied on the manufacture, sale, or consumption of certain commodities within a country.
51. **Explicit cost** - an expenditure made for the use of a resource.
52. **Farm (1974 census of agriculture)** - any establishment which, during the census year, had or normally would have had agricultural product sales of \$1,000 or more.
53. **Federal Reserve Banks** - a system of twelve banks designed to operate as a central banking system for the purpose of adjusting banking practices to the needs of the country.
54. **Fiat money** - paper money legal tender by decree of the government, but not convertible into coin. Money created by banks (check book money).

55. **Fixed costs** - those costs incurred for resources which do not change as output is increased or decreased.
56. **Free market** - a market system in which buyers and sellers decide and act their own initiative and in their own economic interests.
57. **Future contracts** - standardized contracts for future delivery of commodities that are traded on organized exchanges.
58. **Gross national product (GNP)** - the total value of all final goods and services produced in an economy during a given period of time.
59. **Hectare** - a metric measure of land area (one hectare equals 2.4710 acres).
60. **Heterogeneous** - units within a group have dissimilar characteristics
61. **Homogeneous** - all units within a group are alike in their characteristics.
62. **Inflation** - undue expansion of the currency of a country, usually accompanied by the issuing of fiat money and rapidly rising prices.
63. **Implicit cost** - a cost for which there is no cash outlay at the time a resource is being used, or for which no cash payment is required.
64. **Import quota** - a maximum limit on the quantity of a commodity that can be imported.
65. **Imports** - goods and services purchased from foreign countries.
66. **Income elasticity** - the responsiveness of quantity purchased to a 1% change of income, *ceteris paribus*.
67. **Indifference curve** - shows all the combinations of goods that yield an individual the same amount of satisfaction or utility.
68. **Independent variable** - a variable whose change cause the quantity of another variable to be changed.
69. **Insurance hedging or hedging** - establishing an equal but opposite position in the futures market from the one taken in the cash market.
70. **Interest** - a charge made for borrowed money. The rate at which we discount future economic goals.
71. **Interest rate** - the price of borrowed money
72. **International Monetary Fund (IMF)** - a specialized agency of the United Nations with more than 100 members, including the United States.
73. **Isocost line** - shows the various combinations of resources that can be purchased with a given dollar outlay.
74. **Isoquant** - shows the different combination of products sold that will bring in the same total revenue
75. **Labor Union** - an organization of workers for the purpose of bargaining as a group with employers.

76. **Laissez Faire** - lets things proceed without interference, the assertion that the individual is most productive when allowed to follow his own self-interest without external restrictions.
77. **Law of diminishing marginal utility** - as an individual consumes additional unit of a specific good, holding everything else constant, the amount of satisfaction from each additional unit of that good decreases.
78. **Law of diminishing returns** - as successive amounts of a variable input are combined with a fixed input, the total product will increase, reach a maximum and eventually decline.
79. **Liabilities** - the total claims of creditors against the value of assets owned by a business.
80. **Long-run** - a time period so long that all factors of production can be varied.
81. **Macroeconomics** - the area of economics that deals with output, employment, incomes, or other activities in the aggregate.
82. **Marginal** - additional or extra, either positive or negative
83. **Marginal cost (MC)** - the change in total cost when output is changed by one unit.
84. **Marginal factor cost (MFC)** - the amount added to total cost when one more unit of variable input is used in production.
85. **Marginal physical product (MPP)** - the amount added to total physical product when another unit of the variable unit is used in production.
86. **Marginal rate of product substitution (MRPS)** - the rate at which one product substitutes for another, measured along the production possibilities curve.
87. **Marginal rate of substitution (MRS)** - the rate at which one resource can be substituted for another at the margin without changing output.
88. **Marginal value product (MVP)** - the amount added to total value product when another unit of the variable input is used.
89. **Marginal revenue** - the amount added to total revenue when an additional unit of output is produced and sold.
90. **Market** - consists of buyers and sellers with facilities to communicate with each other.
91. **Market price** - the price at which goods, services, or securities are being exchanged in the market at a given time.
92. **Market demand curve** - a horizontal summation of individual demand curves for a product.
93. **Market equilibrium** - that point where the market demand curve intersects the market supply curve. The market clearing price where quantity demand equals quantity supplied.

94. **Market orders and agreements** - government authorized programs that producers can use to determine the terms and conditions under which a commodity can be marketed.
95. **Merger** - when one or more corporations are absorbed by another corporations.
96. **Metric ton** - a metric measure of weight (one metric ton equals 2204.622 lbs.)
97. **Microeconomics** - the area of economics that deals with individual decision units -- people, firms, or markets -- within the economy.
98. **Middleman** - functions performed in moving goods and services from producer to consumer.
99. **Money** - anything generally accepted in exchange for other things within more or less definite areas.
100. **Monopoly** - single seller in an industry.
101. **Monopsony** - single buyer in an industry.
102. **Net worth** - the excess of assets over liabilities representing the owner's residual claim to assets.
103. **Opportunity cost** - the value of other opportunities given up in order to produce or consume any good.
104. **Optimum** - a condition in which the economic outcome cannot be improved upon
105. **Parity** - that price which gives a unit of agricultural commodity the same purchasing power as it had in a specified base period.
106. **Partnership** - a business enterprise owned and operated by two or more persons.
107. **Price** - the dollar value per unit of resource, good or service as determined in the market or by other means.
108. **Price elasticity of demand** - the percentage change in quantity demanded due to a one percent change in price, *ceteris paribus*.
109. **Price elasticity of supply** - the percentage change in quantity supplied due to a one percent change in price, *ceteris paribus*.
110. **Price-searcher** - a seller in an imperfectly competitive market structure. A seller that has market power and can determine the price or quantity sold.
111. **Price-support** - a government determined price that is above the equilibrium price.
112. **Price-taker** - a buyer or seller in a purely competitive market without market power.

113. **Private corporation** - a corporation created to conduct enterprises for private profit; a legal entity.
114. **Productivity** - a rate of output, such as the ration of output to input services.
115. **Profit** - a surplus over all opportunity costs.
116. **Pure competition** - a market organization of many firms in an industry, a homogeneous product, and the freedom of firms to enter or leave the industry. No firm in this type of industry can influence the market price of its product by the amounts they buy or sell.
117. **Pure monopoly** - a market organization of one firm in an industry. Competition in the product market is absent.
118. **Rediscount (or discount) rate** - the rate of interest charged by the federal reserve bank on loans to member banks.
119. **Scarcity** - a basic economic condition in which our wants exceed the resources available to satisfy those wants.
120. **Short-run** - a time period where one or more of the factors of production are fixed.
121. **Socialism** - a type of economic organization in which the government owns all resources and directs all economic activity.
122. **Speculation** - the purchase or sale of title to goods or financial obligations in the expectations of favorable price movements.
123. **Supply curve** - the amount of a good or service a producer is willing to offer for sale at different prices, holding everything else constant.
124. **Tariff** - a tax on imported goods.
125. **Title** - ownership of goods. Usually recorded on legal document.
126. **Utility** - the satisfaction an individual gets from consuming goods and services.
127. **Variable costs** - those costs which increase or decrease as varying amounts of the resources are used.
128. **Vertical integration** - the linkage of firms in different stages of production or marketing under the ownership of single firm.
129. **Wealth** - all useful material things owned by human beings; also the highest standard of living when such standards are classified.

Appendix G
State Model Curriculum
Order Sheet

Agriculture Learning Activities Packets

The University of California, Davis is pleased to offer a diverse group of Learning Activity Packets (LAPS) for individualized instruction. These packets include student and teacher manuals. Most packets are available in Spanish and/or English, and are sold separately. The LAPS are written at a low reading level (4th to 5th grade) and are particularly good for sheltered agriculture courses, junior high school, and students who are learning handicapped.

Items	Quantity in English	Quantity in Spanish	Unit Price	Total Amount
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EXPLORING ANIMALS

Sheep			\$20.00	
Wildlife			\$15.00	
Poultry			\$20.00	
Animal Science			\$20.00	
Small Animal			\$15.00	
Dairy Cattle			\$15.00	
Beef			\$20.00	
Swine			\$15.00	
Horses			\$15.00	

EXPLORING PLANTS

Vegetable Crops			\$20.00	
Field Crops			\$20.00	
Ornamental Horticulture			\$20.00	
Tree Crops			\$20.00	
Plant Science			\$20.00	
Forestry			\$20.00	

OTHER SUBJECTS

Agriculture and Society				
Careers in Agriculture				
FFA				
Supervised Occupational Experience				

Subtotal from Page 2	\$
Subtotal from Page 1	\$
ORDER TOTAL	\$

Send completed order form, along with school purchase order or check. (Make checks payable to The Regents of the University of California.) Mail completed order to:

Agriculture Model Curriculum Project
 Agriculture Education Program
 Dept. of Agronomy and Range Science
 University of California
 Davis, CA 95616

Curriculum Office (916) 752-8002
 J. Leising (916) 752-1808
 FAX (916) 752-4361

Model Curriculum Order Form

Name:	School:
School District:	Phone:
Address:	
City:	State: Zip:

Items	Disk Version Price	Disk Types Avail	Specify Disk Type	Disk Qty. Wanted	Printed Version Price	Printed Qty. Wanted	Total Amt.
Agriculture Model Curriculum Guide					\$15.00		

LESSON PLANS

Basic Core (9th & 10th grades)	\$30.00	DOS or Mac			\$80.00		
First Year Basic Core Lab Manual					\$10.00		

ADVANCED CLUSTERS

Animal Science	\$30.00	DOS or Mac			\$60.00		
Plant & Soil Science	\$30.00	DOS or Mac			\$60.00		
Ag. Mechanics	\$30.00	DOS or Mac			\$60.00		
Ag. Business Management	\$30.00	DOS or Mac			\$60.00		
Integrated Agriculture Biology Syllabus & Resource Materials					\$60.00		
Forestry					\$80.00		
Natural Resources & Rural Recreation					\$80.00		

OTHER MATERIALS

Animal Health Core Curriculum					\$80.00		
International Infusion Packet					\$15.00		
California Vocational Agriculture Record Book Manual					\$7.00		
California Vocational Agriculture Record Book Problems					\$7.00		

*\$

* Subtotal (Shipping included; sales tax not required)
Please carry subtotal to previous page

Appendix H
Tech Prep Curriculum
Order Form

Central Valley Consortium Agriculture Education Tech Prep Order Form

ITEM	UNIT COST	QUANTITY REQUESTED	TOTAL
A Project Overview	\$3.00		
Advisory Committee Manual	\$3.00		
Articulation Guide	\$3.00		
<i>Choose Agriculture and Win</i> A Recruitment Guide	\$3.00		
Counseling and Guidance Guide	\$3.00		
Curriculum Guides (Supplements to the State Frameworks)			
Agribusiness	\$3.00		
Agricultural Mechanics	\$3.00		
Animal Science	\$3.00		
Forestry & Natural Resources	\$3.00		
Ornamental Horticulture	\$3.00		
Plant & Soil Science	\$3.00		
<i>Getting a Job and Keeping It</i> A Placement Guide	\$5.00		
Integration of Academics Guide	\$5.00		
<i>Learning to Work -- Working to Learn</i> A Workplace Learning Guide	\$3.00		
Portfolio Guidelines for Grade 13-14	\$3.00		
Program Assessment and Certification Guide	\$3.00		
<i>Special Needs Not Different People</i> A Special Needs Populations Guide	\$3.00		
Student Tracking and Follow-up Guide	\$3.00		
Targeted Occupations in Agriculture Guide	\$3.00		
The Role of Student Assessment in Tech Prep	\$3.00		
TOTAL (Prices Include Tax & Shipping)			

<p><u>Make Checks or Purchase Order Payable to:</u></p> <p>Stanislaus County Office of Education Agriculture Education Tech Prep 801 County Center III Court Modesto, CA 95355 For Information: (209) 525-5020</p>	<p>Ship to:</p> <p>School: _____</p> <p>Attention: _____</p> <p>Street: _____</p> <p>City: _____</p> <p>State: _____</p> <p>Zip: _____</p> <p>Phone: _____</p> <p>Your Purchase Order#: _____</p>
<p><u>MATERIALS MAY NOT BE DUPLICATED FOR COMMERCIAL PURPOSES</u></p>	

Appendix I
Agriculture
Business
References

Agriculture Business References

Agriculture Education Department at UC Davis and Agriculture Education Unit at CA State Dept. of Education, Agriculture Model Core Curriculum for Agriculture Business Management, University of Calif., Davis, 1991. This is the definitive document for high school agriculture business education. Also available on computer disk.

Beierlein, James and Woolverton, Michael, Agribusiness Marketing: The Management Perspective, Prentice Hall, 1991. This reference emphasizes the systems approach to marketing. It also deals primarily with microeconomic marketing or marketing from the firm's point of view.

Case, James, and Purcell, Wayne, Farm and Ranch Business Management, Deere and Company, 1992. This book is a practical guide for the agribusiness manager. It covers the typical business management topics but has especially useful chapters on agriculture law and whole farm case study. This has potential _____.

Cramer, Gail and Jensen, Clarence, Agriculture Economics and Agribusiness, 6th ed., John Wiley and Sons, 1994. A basic reference and text that presents terminology and basic economic principles.

Edling, Walter, Creating a Tech Prep Curriculum, Center for Occupational Research and Development, 1992. This is a resource guide for individuals who wish to design a Tech Prep curriculum. This book is a must for any Tech Prep library.

Franklin, Stephen and Fulmer, Robert, Supervision: Principles of Professional Management, Macmillan Publishing Co., 1982. This is a very useful reference on managing people. Its perspective is on behalf of the first line supervisor and the day-to-day functions of leading people in the workplace. The book's orientation is business but all principles apply to agriculture.

Hair, Joseph, Lamb, Charles, and McDaniel, Carl, Principles of Marketing, Southwestern Publishing Company, 1992. This non-agriculture reference source is the typical marketing text but has useful sections on promoting products, international marketing, and strategies for marketing new products.

Hull, Dan, Getting Started in Tech Prep. Center for Occupational Research and Development, 1992. This is a how to book on designing a Tech Prep associate degree program. This is an excellent resource that has numerous case studies.

Kohls, Richard, and Uhl, Joseph, Marketing of Agricultural Products, 7th edition, Macmillan, 1990. This is one of the standard agriculture marketing texts. Part IV is useful because it deals with the marketing of commodities from seven different areas. It also has a good section on the use of the futures market as a commodity marketing tool.

Powell, Tom, Agricultural Marketing, Farm Credit Services, 1987. This is an extremely practical reference for someone teaching adults. It deals with marketing from the producer perspective, has many interactive exercises, and each section is supported by a video.

Shiery, Carolyn, Professional Selling: A Relationship Approach, Harcourt Brace Jovanovich, Inc., 1993. Shiery's book is a well written text but also is a good reference book for any professional sales person. It is well supported by student and teacher guides and has a worthwhile interactive teaching video.

Skidmore, Richard, Accounting for Agriculture, Softdata, Lancaster, CA, 1995. A newly published book that covers basic accounting concepts and applications as applied to agriculture.

Smith, Deborah, ed., 1989 Yearbook of Agriculture: Farm Management, United States Department of Agriculture, 1989. This easy to read book is a compilation of case studies, examples and ideas, and statistics about managing production agriculture businesses.