



HARTNELL COLLEGE
AGRICULTURAL BUSINESS
AND TECHNOLOGY INSTITUTE

Agricultural Business and Technology Institute Hartnell College

FALL 2011 SCHEDULE OF CLASSES
Aug 15 – December 16, 2011

If you are looking to start a career in the agriculture industry, improve your skills, get retrained or complete a certificate of achievement, we have a program for you.

**Classes are offered in the mornings, afternoons, evenings and Saturdays.
Scholarships and Financial Aid Available (see page 6).**

Classes will be held at the Alisal Campus, 1752 E. Alisal St., Salinas, CA 93905

CURRENT PROGRAMS

- **Agriculture Business**
- **Agriculture Production**
- **Ag & Industrial Technology**
 - **Industrial Mechanics and**
 - **Industrial Technician**
- **Food Safety**
- **Diesel Technology**
- **Welding Technology**

I. AGRICULTURAL BUSINESS & PRODUCTION

ABT-49 Section #1076 - Introduction to Agriculture Business

TH-2:00 pm-4:50 pm

A survey and basic understanding of the business and economics of the agriculture industry. It is an introduction to the economic aspects of agriculture and their implications to the agricultural producer, consumer and the food system. The management principles encountered in the day-to-day operation of an agricultural enterprise are stressed as they relate to the decision making process. Formerly AGR 49. Not open to students who have completed AGR 49 with a grade of "C" or better. [CSU; UC]

ABT-52 Section #1062 - Sales and Services in Agribusiness

Tue-6:00 pm-8:50 pm

Involves the study of principles and practices of the selling process: selling strategies and approaches, why and how people buy, prospecting, territory management, and customer service. Selfmanagement, communication, and interpersonal skills necessary in developing managerial abilities, leadership qualities, and facilitating teamwork within the agribusiness sector will be explored. Formerly AGR 52. Not open to students who have completed AGR 52 with a grade of "C" or better. [CSU]

ABT-54 Section #1063 - Agriculture Marketing

TH-6:00 pm-8:50 pm

Survey of marketing aspects of the agricultural industry. An overview of the structure and institutional aspects of the marketing system including global agricultural markets. Industry studies of the marketing of selected locally grown commodities will be made. Course designed for students interested in Agriculture Business and Agriculture Production major. Formerly AGR 54. Not open to students who have completed AGR 54 with a grade of "C" or better. [CSU]

ABT-90 Section #1060 - **Soil Science**

Wed-12:00 pm-4:50 pm

Provides a basic knowledge of the genetic, physical, chemical, and biological properties of soils. Explores principles involved in the interpretation of soils information for land use management, (including agricultural production and nonagricultural uses), and conservation. Includes a weekly laboratory activity. Formerly AGR 90. Not open to students who have completed AGR 90 with a grade of "C" or better. [CSU; UC; CSU-GE, AREA B1, B3; IGETC, AREA 5]

ABT-93 Section #1061 - **Product Processing and Cooling**

Tue-9:00 am-11:50 am

Introduction to the specializations of post harvest technology and cold chain management. Focuses on post-harvest handling, processing and cooling of fresh vegetable and fruit products as well as the cooling systems and equipment involved. Topics include post-harvest biology and physiology, harvesting systems, preparation for the fresh market, packaging, cooling systems and product processing. Food safety and sanitation will be introduced. Field trips will be required. Formerly AGR 93. Not open to students who have completed AGR 93 with a grade of "C" or better. [CSU]

ABT-99 Section #0622 – **Occupational Cooperative Work Experience Education** TBA

Occupational Work Experience is designed to assist students employed in a field related to their college major or career goals to develop on the job through structured opportunities for skill development and increased responsibilities. [CSU]

Students must attend a mandatory orientation session. For more information or to sign up for mandatory orientation please contact Steven Triano at (831) 755-6961.

ABT-110 Section #1071 - **Careers in Agriculture and Technology**

TH-9:30 am-11:20 am

ABT-110 Section #0404 - **Careers in Agriculture and Technology**

TH-12:00 pm-2:05 pm

Introduction to educational opportunities and career development in agriculture and related fields. Includes portfolio and educational plan development and curriculum requirements that pertain to educational goals as they relate to agriculture majors. Assists students in setting goals and developing intrapersonal skills necessary for life-long success in obtaining, maintaining, and advancing in agriculture careers. Current events that impact agriculture and society will be discussed. Formerly AGR 110. Not open to students who have completed AGR 110 with a grade of "C" or better. Section 0404 meets 16 weeks, 8/30/11-12/13/11. Students must enroll in the Academy for College Excellence. For more information, please contact Maria De Leon by email at theacademy@hartnell.edu or call (831) 755-6723. COHORT 4

II. AGRICULTURAL BUSINESS — FOOD SAFETY

ABT-130 Section #1064 - **Introduction to Food Safety**

Mon-6:00 pm-9:10 pm

An introductory course in food safety for those in agriculture majors and others interested in exploring career options. Covers conditions and practices that cause food borne illnesses, organisms responsible, elements of a food safety control system, worker sanitation, an introduction to best practices at the processing, retail and home kitchen. Field trips may be required.

Section 1064 meets 9 weeks, 8/15/11-10/11/11, and will not meet on 9/5/11.

ABT-131 Section #1068 - Agriculture Practices for Food Safety

Wed-6:00 pm-8:50 pm

Focuses on establishing agricultural practices as they relate to the production of farm products from a food safety standpoint. Covers the specific guidelines for some key agricultural commodities, regulating and monitoring food safety guidelines, writing standard operating procedures, employee training, and technologies to assist in production of safe food. Field trips may be required.

Section 1068 meets 9 weeks, 8/17/11-10/12/11.

III. AGRICULTURAL & INDUSTRIAL TECHNOLOGY

AIT-70 Section #1080 - Introduction to Mechanized Agriculture

Tue-12:00 pm-4:50 pm

This course involves basic mechanical skills in woodworking, cold metal, electricity, plumbing, concrete, and project construction skills as related to farm maintenance and repair. Hand and power tool use skills will be developed. Safety practices for all mechanical areas will be covered. Formerly AGR 56. Not open to students who have completed AGR 56 with a grade of "C" or better. [CSU]

AIT-169 Section #1081 - Hazardous Materials and Industrial Safety

TH-6:00 pm-8:50 pm

A basic course in all aspects of safety as it relates to industry. The course will cover the following topics: Hazardous Materials as it pertains to the specific trades. Examples are construction, welding, auto repair, electronics, auto collision repair, health care services, personal protective equipment, materials handling and storage, industrial hygiene, safety inspections, and general industrial safety of proper use of tools and machines. Formerly MEC 169 and AGR 169. Not open to students who have completed AGR 169 or MEC 169 with a grade of "C" or better.

Section 1081 meets 6 weeks, 8/11/11-9/22/11.

AIT-172 Section #1075 - Agricultural Equipment Fabrication

Mon-12:00 pm-4:50 pm

Involves the design and fabrication of agricultural and industrial equipment. Students will design equipment, select materials, estimate costs and fabricate a project. Principles and application of safety will be stressed. May include field trips.

AIT-176 Section #1086 – Hydraulics and Pneumatics

Wed-6:00 pm-8:50 pm

Basic fundamentals of hydraulic and pneumatic systems: components, applications, troubleshooting malfunctions, maintenance and repair. Formerly MEC 56. Not open to students who have completed MEC 56 with a grade of "C" or better.

AIT-180 Section #1085 - Industrial Workplace Skills

Wed-12:00 pm-2:50 pm

Covers basic work and personal skills needed for success on the job in an industrial environment.

IV. DIESEL TECHNOLOGY (under Automotive Technology)

AUT-150 Section #1213 - **Introduction to Heavy Duty Diesel Technology** MW-6:00 pm-6:50 pm
MW-7:00 pm-9:50 pm

Covers the principles of operation and system service procedures for all systems found on today's diesel/heavy-equipment. Includes introduction to shop and personal safety, proper use of hand tools, shop equipment, and research for information related to the repairs being performed and vehicle specifications using service manuals and computer software format.

AUT-151 Section #1214 - **Heavy Duty Diesel Preventive Maintenance** TTH-6:00 pm-6:30 pm
TH-6:31 pm-9:20 pm

Introduces basic maintenance, diagnosis, and servicing of all heavy duty diesel systems, from tool and shop safety through the steps necessary to maintain a modern heavy duty diesel vehicle. Examines basic systems such as electrical, lubrication, heating, cooling, exhaust, and transmission systems in depth.

AUT-152 Section #1215 - **Heavy Duty Diesel Technology Electricity & Electronics** Sat-8:00 am-9:50 am
Sat-10:00 am-3:50 pm

Provides strong background in basic electricity and electronic concepts. Covers diesel/heavy-duty technology electrical and electronic systems, basic theories, electrical components, wiring and circuit diagrams, diesel heavy-duty technology batteries, starting systems, and ignition systems. Covers the principles of operation and system service procedures for all systems found on today's diesel/heavy-duty equipment.

AUT-153 Section #1200 - **Heavy Duty Diesel Brakes, Steering & Suspension** MW-8:00 am-8:30 am
MW-8:31 am-11:20 am

Introduces air brake components, hydraulic brakes and air-over-hydraulic brake systems, air brake servicing, steering and alignment, suspension systems, chassis systems/safety/brakes inspection, and brakes operation fundamentals. Includes discussion and hands-on servicing of suspensions system fundamentals, suspension system service, steering system service, wheel alignment fundamentals, and front and rear wheel drive fundamentals.

AUT-154 Section #1201 - **Heavy Duty Diesel Engine Performance & Diagnostics** TTH-8:00 am-8:50 am
TTH-9:00 am-11:50 am

Introduces techniques of performing diagnosis and repair of heavy duty diesel engines, including diesel electronic engine control systems, valve adjustment of in diesel engine block and overhead camshafts, diesel fuel injection system testing and servicing. Covers servicing turbochargers, service, diagnostics and repair of exhaust and intake systems, and emission controls diagnosis and repair. Heavy emphasis on proper use of tools and literature to perform all needed testing.

V. WELDING TECHNOLOGY

WLD-52 Section #1750 - **Sheet Metal Fabrication** M-5:00 pm-5:50 pm
M-7:00 pm-9:50 pm

Introduction and basic training in sheet metal forming, fastening and pattern making skills. Students learn to develop patterns and fabricate a variety of sheet metal projects. Skills training in the safe and proper use of sheet metal related equipment. [CSU]

WLD-53 Section #1751 - **Welding Fabrication**

W-5:00 pm-5:50 pm

W-7:00 pm-9:50 pm

Practical experience in metal fabrication, production welding and maintenance welding techniques. Study and practice in measurement, blue print reading, layout techniques, material selection, weight and cost estimation. Students are assigned various fabrication projects on industrial and agricultural equipment that require the use of the oxy-fuel, plasma, GMAW and GTAW processes. [CSU]

WLD-54 Section #1752 - **Advanced Welding**

W-6:00 pm-6:50 pm

W-7:00 pm-9:50 pm

Advanced study of theory and practice of SMAW, GTAW, GMAW, FCAW, and various cutting practices. A course designed to prepare students for qualification in welding methods used in the agriculture, construction, pipeline and pressure vessel welding industries. Emphasis on destructive and nondestructive testing. [CSU]

WLD-150 Section #1758 - **Basic Welding**

T-6:00 pm-6:50 pm - T-7:00 pm-9:50 pm

WLD-150 Section #1753 - **Basic Welding**

TH-1:00 pm-1:50 pm - TH-2:00 pm-4:50 pm

WLD-150 Section #1754 - **Basic Welding**

TH-6:00 pm-9:50 pm

Introductory level study and safe practice in shielded metal arc welding, gas metal arc welding and oxy-fuel cutting of steel materials. Introduction to metallurgy, metal identification, destructive and nondestructive weld testing, welding symbols and basic practices in metal repair and maintenance. A service course for other trades.

WLD-151 Section #1755 - **Gas & TIG Welding**

M-6:00 pm-9:50 pm

Introductory level study and safe practice in oxy-acetylene and gas tungsten arc welding. Emphasis will be placed on the out of position welding of steel, aluminum and stainless steel joints and pipe fittings. Included will be study of ferrous and nonferrous metallurgy and common practices of metal repair and maintenance.

WLD-155 Section #1756 - **Ornamental Ironwork**

F-1:00 pm-4:50 pm

Introductory level study to the practical application of traditional and modern metal working techniques. Focus is on the history, development and present day practices used in the fabrication of architectural ornamental ironwork. Emphasis is on applied safety and process fundamentals including mig welding, oxyfuel and plasma cutting, metal forming and traditional hot forging practices.

WLD-156 Section #1757 - **ToolMaking**

F-2:00 pm-6:00 pm

An introductory level metalworking course that focuses on the making of basic hand tools for the trades. Introduction to basic steel metallurgy, hot forging, heat treating and grinding operations performed on tooling. Emphasis is on safety in the use of metalworking equipment and understanding of process fundamentals. Not open to students who have successfully completed WLD 56.

For registration or further course description please go to www.hartnell.edu (click on Students Tab and choose New Students Start Here).

Catalogue and application for admission at Hartnell College are also available at the Office of Admissions and Records located at 411 Central Ave., Salinas, CA 93901.

For Registration questions, please call (831) 755-6711.

**** SCHOLARSHIPS ****

The Ag Business and Technology Institute will award up to **30 scholarships** of \$1,000 each for incoming students majoring in the areas listed below:

Ag Business - Ag Production - Ag & Industrial Technology - Food Safety - Diesel Technology - Welding Technology

For guidelines and application forms please contact (831) 755-6960/6965

Forms are also available online at **www.hartnell.edu/agriculture**

Hartnell College Scholarship Program

Hartnell College offers a variety of scholarships for new, continuing, and transfer students. Scholarships are available for students who show academic interest, financial need, scholastic achievement, a desire to succeed, and community or campus involvement. A single application places students in consideration for many scholarships. For further information please visit www.hartnell.edu/financial_aid or call us at (831) 755-6811.

**** FINANCIAL AID ****

We offer a variety of financial aid programs that are funded by government and private sources to help you get through college. These include grants, work-study opportunities, scholarships, and loan programs. Since there are so many ways to finance your education, Hartnell's Financial Aid Office can provide key information to help you access the kind of assistance to meet your unique needs. For further information please visit www.hartnell.edu/financial_aid/scholarships or call us at (831) 755-6806.

Financial and Scholarship Office Location

Main Campus
CALL Building
411 Central Avenue
Salinas CA 93901

Questions about the Ag Business and Technology Institute certificate programs, degree, short courses and scholarships?

Please contact the Alisal Campus – Center for Advanced Technology at 1752 Alisal Street, Salinas CA 93905

Zahi Atallah Kanaan - Dean of Advanced Technology (831) 755-6965 or zatallah@hartnell.edu

Elizabeth Stern - Division Administrative Assistant (831) 755-6960 or estern@hartnell.edu

Fax: (831) 758-6017 - Visit us at www.hartnell.edu/agriculture