

Muskegon Area Career Tech Center
Horticulture and Natural Resources
COURSE SYLLABUS

INSTRUCTORS NAME(S): Jennifer Woods

PARA-PROFESSIONAL: NA

DATE: 2006/2007

PROGRAM DESCRIPTION FOR HORTICULTURE AND NATURAL RESOURCES:

Are you interested in landscape design and maintenance, greenhouse crop production, floral design, hydroponics, or environmental issues such as water quality testing? Explore these careers and more in the Horticulture & Natural Resources program. Classroom study and hands-on opportunities will focus on plant and soil science, sales and marketing, floral and landscape design principles, land use issues, and watershed and environmental stewardship. The student run greenhouse and floral shop provide students with real-world experiences in customer relations, sales and marketing. Students in this program will also participate in leadership activities and competitions through the FFA Organization.

PROGRAM CIP CODE: 01.0000

P.S.N.#: 18525

TEXTBOOK(s): including edition(s), author(s), publisher(s), copyright(s):

- Managing Our Natural Resources 4th Edition – Camp/Daugherty, Delmar Thomson Learning, 2002
- Ornamental Horticulture: Science, Operations, and Management 3rd Edition – Ingels, Delmar Thomson Learning, 2004
- Leadership, Personal Development and Career Success 2nd Edition – Ricketts, Delmar Thomson Learning, 2003
- Floriculture: Designing & Merchandising 2nd Edition – Griner, Delmar Thomson Learning, 2004

SUPPLEMENTAL RESOURCE(s): including edition(s), author(s), publisher(s), copyright(s):

- Trees of North America: A guide to field identification – Brockman, St. Martin's Press, 2001
- Insects – Greenway, St. Martin's Press, 2000
- MNLA Michigan Certified Nurseryman Manual
- MNLA Landscape Specialist Manual
- MNLA Retail Specialist Manual
- Michigan Floral Association Manual
- FFA Student Handbook and Manual

SOFTWARE:

- Microsoft Office (Excel, Publisher, Word, PowerPoint)

ASSESSMENT:

- MNLA Certified Nurseryman Certification
- Michigan Floral Association Certification
- FFA Organization Career Development and Ag Skills Events

SPECIAL FEATURES OF THE PROGRAM: Students are prepared for industry recognized certification in Landscape Management, Retail Specialist, and Certified Nurseryman through the Michigan Nursery and Landscape Association, as well as floral certification through the Michigan Floral Association. Work-based learning opportunities are available through participating businesses throughout Muskegon County, along with field trips and "real world" projects through community and industry projects. Students have the opportunity to compete against local, regional, state and national FFA teams in the following career development and agricultural skill contests:

- Agricultural Issues
- Demonstration
- Extemporaneous Public Speaking
- Job Interview
- Parliamentary Procedure
- Public Speaking
- Agricultural Communications

- Agricultural Sales
- Crops
- Environmental Skills
- Floriculture
- Forestry
- Greenhouse Crop Production
- Land Conservation
- Landscape/Nursery
- Marketing
- Turf and Golf Course Management

***JOB TITLES AVAILABLE AT MACTC:**

Agricultural Workers, All Other	SOC-45-2099.99
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	SOC-45-2092.00
Floral Designers	SOC-27-1023.00
Forest and Conservation Workers	SOC-45-4011.00
General Farmworkers	SOC-45-2092.02
Grounds Maintenance Workers, All Other	SOC-37-3019.99
Landscaping and Groundskeeping Workers	SOC-37-3011.00
Nursery Workers	SOC-45-2092.01

* Because of the nature of HNR job titles available for training at MACTC, the student should highly consider post-secondary training or special certification programs to enhance employability.

JOB TITLES REQUIRING FURTHER TRAINING/CERTIFICATION

Sales Representative, Agricultural	SOC-41-4011.01
Biochemists	SOC-19-1021.01
Purchasing Agents and Buyers, Farm Products	SOC-13-1021.00
Agricultural Inspectors	SOC-45-2011.00
Microbiologists	SOC-19-1022.00
Environmental Engineers	SOC-17-2081.00
Agricultural Engineers	SOC-17-2021.00
Plant Scientists	SOC-19-1013.01
Biological Technicians	SOC-19-4021.00
Forest and Conservation Technicians	SOC-19-4093.00
Farm, Ranch, and Other Agricultural Managers	SOC-11-9011.00
Agricultural Sciences Teachers, Postsecondary	SOC-25-1041.00
Soil and Plant Scientists	SOC-19-1013.00
Biological Scientist	SOC-19-1020.00
Tree Trimmers and Pruners	SOC-37-3013.00
Farm and Home Management Advisors	SOC-25-9021.00
Loan Officers	SOC-13-2072.00
Reporters and Correspondents	SOC-27-3022.01
Sales Agents, Securities and Commodities	SOC-41-3031.01
Transportation, Storage, and Distribution Managers	SOC-11-3071.00
First-Line Supervisors/Managers of Production and Foresters	SOC-51-1011.00
Foresters	SOC-19-1032.00
Managers, All Other	SOC-11-9199.99
First-Line Supervisors and Manager/Supervisors-Landscaping Workers	SOC-37-1012.02
Nursery and Greenhouse Managers	SOC-11-9011.01
Agricultural Crop Farm Managers	SOC-11-9011.02
Farmers and Ranchers	SOC-11-9012.00
Natural Sciences Managers	SOC-11-9121.00
Forest and Conservation Technicians	SOC-19-4093.00
Environmental Scientists and Specialists, Including Health	SOC-19-2041.00
General and Operations Managers	SOC-11-1021.00

Social and Community Service Managers	SOC-11-9151.00
Fish and Game Wardens	SOC-33-3031.00
Fallers	SOC-45-4021.00
Geological Sample Test Technicians	SOC-19-4041.02
Geologists	SOC-19-2042.01
Biological Technicians	SOC-19-4021.00
Environmental Science and Protection Technicians	SOC-19-4091.00
Hydrologists	SOC-19-2043.00
Agricultural Sciences Teachers, Postsecondary	SOC-25-1041.00
Environmental Science and Protection Technicians	SOC-19-4091.00
Water and Liquid Waste Treatment Plant and System Operators	SOC-51-8031.00
Landscape Architects	SOC-17-1012.00
Agricultural Sciences Teachers, Postsecondary	SOC-25-1041.00
Environmental Science Teachers, Postsecondary	SOC-25-1053.00
Farm and Home Management Advisors	SOC-25-9021.00
Forestry and Conservation Science Teachers, Postsecondary	SOC-25-1043.00
Vocational Education Teachers, Secondary School	SOC-25-2032.00
Agricultural Inspectors	SOC-45-2011.00
First-Line Supervisors/Managers of Farming, Fishing, and Forestry Workers ¹	SOC-45-1011.00
First-Line Supervisors and Manager/Supervisors - Agricultural Crop Workers	SOC-45-1011.01
First-Line Supervisors and Manager/Supervisors - Horticultural Workers	SOC-45-1011.04
Lawn Service Managers	SOC-37-1012.01
Pesticide Handlers, Sprayers, and Applicators, Vegetation	SOC-37-3012.00
Tree Trimmers and Pruners	SOC-37-3013.00

Related Occupation Reprints from the *Occupational Outlook Handbook*, (<http://www.bls.gov/oco>) Bureau of Labor Statistics (<http://www.stats.bls.gov>) and the Dictionary of Occupational Titles (http://www.wave.net/upg/immigration/dot_index.html).

Farmers, Ranchers, Agricultural Managers, Crop Farm Managers	http://bls.gov/oco/ocos176.htm
Floral and Landscape Designers	http://bls.gov/oco/ocos090.htm
Agricultural and Food Scientists, Agronomist	http://bls.gov/oco/ocos046.htm
Biological Scientists, Botanist	http://bls.gov/oco/ocos047.htm
Agriculture, Forestry, and Fishing	http://bls.gov/oco/cg/cgs001.htm
Conservation Scientists and Foresters	http://bls.gov/oco/ocos048.htm
Sales Representatives, Wholesale and Manufacturing	http://bls.gov/oco/ocos119.htm
Agricultural Workers, Agricultural Inspectors	http://bls.gov/oco/ocos285.htm
Landscape Architects	http://bls.gov/oco/ocos039.htm
Forest, Conservation, and Logging Workers	http://bls.gov/oco/ocos178.htm
Grounds Maintenance Workers, Arborist, Pesticide Handlers	http://bls.gov/oco/ocos172.htm
Science Technicians	http://www.bls.gov/oco/ocos115.htm
Teacher (Agriscience)	http://www.bls.gov/oco/ocos069.htm
Cashiers	http://www.bls.gov/oco/ocos116.htm
Conservation Scientists and Foresters	http://www.bls.gov/oco/ocos048.htm
Federal Government, Excluding the Postal Service	http://bls.gov/oco/cg/cgs041.htm
Water and Liquid Waste Treatment Plant and System Operators	http://www.bls.gov/oco/ocos229.htm
Food-Processing Occupations	http://www.bls.gov/oco/ocos219.htm
Inspectors, testers, sorters, samplers, and weighers	http://www.bls.gov/oco/ocos220.htm
Grocery Store, Florist	http://bls.gov/oco/cg/cgs024.htm
Farm and home management advisors	http://bls.gov/oco/oco20052.htm
Advertising, Marketing, Promotions, Public Relations, and Sales Managers	http://bls.gov/oco/ocos020.htm
Sales Worker Supervisors	http://bls.gov/oco/ocos025.htm
Economists	http://bls.gov/oco/ocos055.htm
Demonstrators and Product Promoters	http://bls.gov/oco/ocos253.htm
Environmental Scientists and Geoscientists	http://bls.gov/oco/ocos050.htm
Teachers—Postsecondary	http://bls.gov/oco/ocos066.htm
Advertising and Public Relations Services	http://bls.gov/oco/cg/cgs030.htm

Securities, Commodities, and Other Investments	http://bls.gov/oco/cg/cgs029.htm
Environmental Engineers	http://bls.gov/oco/ocos263.htm
Top Executives	http://bls.gov/oco/ocos012.htm
Management, Scientific, and Technical Consulting Services	http://bls.gov/oco/cg/cgs037.htm

College Programs: The following post-secondary institutions allow for articulated college credit(s) through MACTC.

Ferris State University 7 credits (4 Biology & 3 Independent Study-Horticulture)