**Course Description:**

Students will use principles and elements of design to create various types and styles of floral arrangements with natural and artificial plants and plant products. Topics will include identification of ornamental plants and cut flowers, use of design materials, and storage and handling applications. Students will develop successful business, communication, marketing, and sales strategies for use in the floral industry.

**Strand 1. Business Operations/21st Century Skills**

Learners apply principles of economics, business management, marketing and employability in an entrepreneur, manager and employee role to the leadership, planning, developing and analyzing of business enterprises related to the career field.

**Outcome: 1.1. Employability Skills**

Develop career awareness and employability skills (e.g., face-to-face, online) needed for gaining and maintaining employment in diverse business settings.

**Competencies**

1.1.1. Identify the knowledge, skills and abilities necessary to succeed in careers.

1.1.2. Identify the scope of career opportunities and the requirements for education, training, certification, licensure and experience.

1.1.3. Develop a career plan that reflects career interests, pathways and secondary and postsecondary options.

1.1.4. Describe the role and function of professional organizations, industry associations and organized labor and use networking techniques to develop and maintain professional relationships.

1.1.5. Develop strategies for self-promotion in the hiring process (e.g., filling out job applications, resumé writing, interviewing skills, portfolio development).

1.1.6. Explain the importance of work ethic, accountability and responsibility and demonstrate associated behaviors in fulfilling personal, community and workplace roles.

1.1.7. Apply problem-solving and critical-thinking skills to work-related issues when making decisions and formulating solutions.

1.1.8. Identify the correlation between emotions, behavior and appearance and manage those to establish and maintain professionalism.

1.1.9. Give and receive constructive feedback to improve work habits.

1.1.10. Adapt personal coping skills to adjust to taxing workplace demands.

**Outcome: 1.2. Leadership and Communications**

Process, maintain, evaluate and disseminate information in a business. Develop leadership and team building to promote collaboration.

**Competencies**

1.2.2. Deliver formal and informal presentations.

1.2.3. Identify and use verbal, nonverbal and active listening skills to communicate effectively.

1.2.4. Use negotiation and conflict-resolution skills to reach solutions.

1.2.5. Communicate information (e.g., directions, ideas, vision, workplace expectations) for an intended audience and purpose.

1.2.6. Use proper grammar and expression in all aspects of communication.

1.2.7. Use problem-solving and consensus-building techniques to draw conclusions and determine next steps.

1.2.8. Identify the strengths, weaknesses and characteristics of leadership styles that influence internal and external workplace relationships.

1.2.9. Identify advantages and disadvantages involving digital and/or electronic communications (e.g., common content for large audience, control of tone, speed, cost, lack of non-verbal cues, potential for forwarding information, longevity).

1.2.10. Use interpersonal skills to provide group leadership, promote collaboration, and work in a team.

1.2.11. Write professional correspondence, documents, job applications and resumés.

1.2.12. Use technical writing skills to complete forms and create reports.

1.2.13. Identify stakeholders and solicit their opinions.

1.2.14. Use motivational strategies to accomplish goals.

**Outcome: 1.3. Business Ethics and Law**

Analyze how professional, ethical and legal behavior contributes to continuous improvement in organizational performance and regulatory compliance.

**Competencies**

1.3.1. Analyze how regulatory compliance (e.g., United States Department of Agriculture [USDA], Food and Drug Administration [FDA], United States Department of Interior [USDI], Ohio Livestock Care Standards, water quality standards, local water regulations, building codes) affects business operations and organizational performance.

1.3.2. Follow protocols and practices necessary to maintain a clean, safe and healthy work environment.

1.3.3. Use ethical character traits consistent with workplace standards (e.g., honesty, personal integrity, compassion, justice).

1.3.4. Identify how federal and state consumer protection laws affect products and services.

1.3.6. Identify deceptive practices (e.g., bait and switch, identity theft, unlawful door-to-door sales, deceptive service estimates, fraudulent misrepresentations) and their overall impact on organizational performance.

1.3.7. Identify the labor laws that affect employment and the consequences of noncompliance for both employee and employer (e.g., harassment, labor, employment, employment interview, testing, minor labor laws, Americans with Disabilities Act, Fair Labor Standards Acts, Equal Employment Opportunity Commission [EEOC]).

1.3.8. Verify compliance with computer and intellectual property laws and regulations.

1.3.9. Identify potential conflicts of interest (e.g., personal gain, project bidding) between personal, organizational and professional ethical standards.

**Outcome: 1.4. Knowledge Management and Information Technology**

Demonstrate current and emerging strategies and technologies used to collect, analyze, record and share information in business operations.

**Competencies**

1.4.1. Use office equipment to communicate (e.g., phone, radio equipment, fax machine, scanner, public address systems).

1.4.2. Select and use software applications to locate, record, analyze and present information (e.g., word processing, e-mail, spreadsheet, databases, presentation, Internet search engines).

1.4.5. Use information technology tools to maintain, secure and monitor business records.

1.4.6. Use an electronic database to access and create business and technical information.

1.4.7. Use personal information management and productivity applications to optimize assigned tasks (e.g., lists, calendars, address books).

1.4.8. Use electronic media to communicate and follow network etiquette guidelines.

**Outcome: 1.6. Business Literacy**

Develop foundational skills and knowledge in entrepreneurship, financial literacy and business operations.

**Competencies**

1.6.1. Identify business opportunities.

1.6.2. Assess the reality of becoming an entrepreneur, including advantages and disadvantages (e.g., risk versus reward, reasons for success and failure).

1.6.3. Explain the importance of planning your business.

1.6.4. Identify types of businesses, ownership and entities (i.e., individual proprietorships, partnerships, corporations, cooperatives, public, private, profit, not-for-profit).

1.6.5. Describe organizational structure, chain of command, the roles and responsibilities of the organizational departments and interdepartmental interactions.

1.6.6. Identify the target market served by the organization, the niche that the organization fills and an outlook of the industry.

1.6.7. Identify the effect of supply and demand on products and services.

1.6.8. Identify the features and benefits that make an organization’s product or service competitive.

1.6.9. Explain how the performance of an employee, a department and an organization is assessed.

1.6.10. Describe the impact of globalization on an enterprise or organization.

1.6.11. Describe how all business activities of an organization work within the parameters of a budget.

1.6.12. Describe classifications of employee benefits, rights, deductions and compensations.

**Outcome: 1.8. Operations Management**

Plan, organize and monitor an organization or department to maximize contribution to organizational goals and objectives.

**Competencies**

1.8.1. Forecast future resources and budgetary needs using financial documents (e.g., balance sheet, demand forecasting, financial ratios).

1.8.2. Select and organize resources to develop a product or a service.

1.8.3. Analyze the performance of organizational activities and reallocate resources to achieve established goals.

1.8.5. Use inventory and control systems to purchase materials, supplies and equipment (e.g., Last In, First Out [LIFO]; First In, First Out [FIFO]; Just in Time [JIT]; LEAN).

1.8.6. Identify the advantages and disadvantages of carrying cost and Just-in-Time (JIT) production systems and the effects of maintaining inventory (e.g., perishable, shrinkage, insurance) on profitability.

1.8.7. Collect information and feedback to help assess the organization’s strategic planning and policymaking processes.

1.8.8. Identify routine activities for maintaining business facilities and equipment.

1.8.9. Develop a budget that reflects the strategies and goals of the organization.

1.8.10. Analyze how business management and environmental management systems (e.g., health, safety) contribute to continuous improvement and sustainability.

**Outcome: 1.10. Sales and Marketing**

Manage pricing, place, promotion, packaging, positioning and public relations to improve quality customer service.

**Competencies**

1.10.1. Identify how the roles of sales, advertising and public relations contribute to a company’s brand.

1.10.2. Determine the customer's needs and identify solutions.

1.10.3. Communicate features, benefits and warranties of a product or service to the customer.

1.10.4. Identify the company policies and procedures for initiating product and service improvements.

1.10.5. Monitor customer expectations and determine product/service satisfaction by using measurement tools.

1.10.6. Discuss the importance of correct pricing to support a product’s or service’s positioning in the marketing mix.

1.10.7. Describe the importance and diversity of distribution channels (i.e., direct, indirect) to sell a product.

1.10.8. Use promotional techniques to maximize sales revenues (e.g., advertising, sales promotions, publicity, public relations).

1.10.9. Describe how product mix (e.g., product line, product items) maximizes sales revenues, market, share and profit margin.

1.10.10. Demonstrate sales techniques.

**Outcome: 1.12. Site and Personal Safety Procedures**

Follow site and personal safety procedures in specific situations with specialized tools and equipment, evaluate the situation and take corrective action.

**Competencies**

1.12.1. Use Occupational Safety and Health Administration (OSHA) defined procedures for identifying employer and employee responsibilities, working in confined spaces, managing worker safety programs, using ground fault circuit interrupters (GFCIs), maintaining clearance and boundaries and labeling.

1.12.2. Interpret safety signs and symbols.

1.12.3. Interpret personal safety rights according to the employee Right to Know plan.

1.12.4. Describe how working under the influence of drugs and alcohol increases the risk of accident, lowers productivity, raises insurance costs and reduces profits.

1.12.5. Identify the location of emergency flush showers, eyewash fountains, Safety Data Sheets (SDSs), fire alarms and exits.

1.12.6. Identify procedures for the handling, storage and disposal of hazardous materials.

1.12.7. Select, use, store, maintain and dispose of personal protective equipment (PPE), appropriate to job tasks, conditions and materials.

1.12.8. Identify safety hazards and take corrective measures.

1.12.9. Identify, inspect and use safety equipment appropriate for the task.

1.12.10. Follow established procedures for the administration of first aid and contact emergency medical personnel when necessary.

*An “X” indicates that the pathway applies to the outcome.*

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| **Pathways** |  | Agribusiness and Production Systems |  | Animal Science and Management |  | Bioscience | | X | Horticulture |
|  | Natural Resource Management |  | Power Technology | |  |  | | |
| **Green Practices** |  | Green-specific |  | Context-dependent | |  | Does not apply | | |

**Strand 4. Power Systems**

Learners apply principles of tool use, power transmission, hydraulics, two- and four-stroke cycle combustion, heating and cooling, exhaust, ignition, starting and charging, steering and lubrication systems to operate, to maintain or repair equipment.

**Outcome: 4.2. Equipment Operations**

Operate and maintain mechanical equipment and power systems.

**Competencies**

4.2.1. Follow manufacturer’s recommended operating procedures and adjustment specifications.

4.2.2. Differentiate among the functions, limitations and proper use of equipment, equipment controls and instrumentation.

4.2.5. Select and operate the equipment and attachments needed to complete the task including levers, pedals or valves.

*An “X” indicates that the pathway applies to the outcome.*

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| **Pathways** |  | Agribusiness and Production Systems |  | Animal Science and Management |  | Bioscience | | | X | Horticulture |
|  | Natural Resource Management |  | Power Technology | | |  |  | | |
| **Green Practices** |  | Green-specific |  | Context-dependent | | |  | Does not apply | | |

**Strand 5. Structural Engineering**

Learners apply the principles of engineering related to electricity, structural repair and design, use of brick, block and concrete, water distribution, and metal working to design, construct, manage and maintain structures and biological systems used in agriculture, food and natural resources.

**Outcome: 5.3. Design and Estimate**

Plan and design a basic site plan for a desired outcome.

**Competencies**

5.3.2. Apply proportional reasoning and indirect measurement techniques.

5.3.4. Develop a program list, including intended use, budget, economics, customer wants and needs and maintenance.

5.3.5. Apply the principles of balance, proportion, scale, focal point, emphasis, rhythm, harmony and unity to create a design.

5.3.6. Apply the elements of line, function, form, texture and color to create a design.

5.3.7. Incorporate design, organizational and spatial principles into a design.

5.3.12. Estimate material, construction and equipment needs, availability and costs.

5.3.13. Establish the sequential steps of construction and installation.

*An “X” indicates that the pathway applies to the outcome.*

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| **Pathways** |  | Agribusiness and Production Systems |  | Animal Science and Management |  | Bioscience | | | X | Horticulture |
|  | Natural Resource Management |  | Power Technology | | |  |  | | |
| **Green Practices** |  | Green-specific |  | Context-dependent | | |  | Does not apply | | |

**Strand 6. Environmental Science**

Learners apply earth, life, and physical sciences to the production, extraction, processing, protection, use, and renewal of both renewable and non-renewable resources.

**Outcome: 6.9. Hazardous Materials and Waste Management**

Follow and apply handling, storage and recording procedures for hazardous materials and waste.

**Competencies**

6.9.2. Describe health and safety practices for reducing risks from hazardous materials (e.g., safety data sheet [SDS], employer notification forms, personal protective equipment [PPE]).

6.9.3. Demonstrate appropriate responses for major types of hazardous materials disasters (e.g., chemical releases, fires, explosions).

6.9.9. Prepare and maintain hazardous material handling documentation.

*An “X” indicates that the pathway applies to the outcome.*

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| **Pathways** |  | Agribusiness and Production Systems |  | Animal Science and Management |  | Bioscience | | | X | Horticulture |
|  | Natural Resource Management |  | Power Technology | | |  |  | | |
| **Green Practices** |  | Green-specific |  | Context-dependent | | |  | Does not apply | | |

**Strand 8. Plant Science**

Learners apply principles of plant anatomy, physiology, nutrition and genetics to the research and development, selection and reproduction, planting, fertilization, health, harvesting and management of plants in a domestic and/or natural environment.

**Outcome: 8.3. Pest Management**

Develop and implement an integrated pest management (IPM) plan by scouting and identifying specific plant pests and the damage they cause and apply specialized control methods.

**Competencies**

8.3.1. Identify and classify insect, weed, disease and animal pests.

8.3.2. Examine the interrelationships among plants, pests, humans and the environment.

8.3.3. Analyze and calculate the economic threshold of pest damage.

8.3.4. Determine and implement pest management safety practices (e.g., safety data sheets [SDSs], United States Environmental Protection Agency [EPA], United States Occupational Safety and Health Administration [OSHA], personal protective equipment [PPE], worker protection standards [WPS], refuge management strategy).

**Outcome: 8.4. Growth and Management**

Manage and manipulate plant development through the selection, planting and growing of seeds and plants, based on global demand, economic importance and growing conditions.

**Competencies**

8.4.1. Identify and classify plants using taxonomy.

8.4.2. Identify plant anatomical structures and tissues.

8.4.3. Identify and classify seeds and plants at all stages of growth.

8.4.4. Explain requirements necessary for photosynthesis to occur and identify the products and byproducts of photosynthesis.

8.4.11. Understand and evaluate the process by which plants are selected.

8.4.15. Analyze plant water requirements and provide water through artificial or natural means.

**Outcome: 8.5. Harvesting**

Evaluate and implement harvesting methods to maximize yield.

**Competencies**

8.5.1. Identify characteristics of grains, seeds, vegetables, fruits and ornamental plants that indicate crop maturity.

8.5.2. Describe safety precautions to take when harvesting.

8.5.6. Evaluate the impact of harvest techniques on the quality of plants and plant products.

8.5.8. Assess the stage of growth to determine the maturity and salability of grains, seeds, vegetables, fruits and ornamental plants.

8.5.12. Implement management practices to reduce loss.

**Outcome: 8.6. Handling and Storage**

Handle and store plants and plant products to maximize quality.

**Competencies**

8.6.1. Describe safety precautions in handling and storage practices.

8.6.2. Adjust to environmental conditions to enhance the handling and storage of plant products.

8.6.3. Apply harvesting, handling and storage techniques to minimize loss and maximize economic return.

8.6.4. Calculate potential yield and loss due to processing and storage.

8.6.5. Explain the proper conditions to maintain the quality of plants and plant products held in storage.

8.6.6. Maintain and enhance the quality of plant products through the manipulation of handling and storage techniques (e.g., temperature, humidity, retardants, light, chemicals, contamination).

8.6.7. Prepare products for sale, transportation and storage.

8.6.8. Identify storage methods for plants and plant products.

8.6.9. Monitor environmental conditions in storage facilities for plants and plant products.

8.6.10. Explain the reasons for preparing plants and plant products for distribution.

8.6.11. Implement and evaluate techniques for grading, handling, packaging and loading plants and plant products for distribution or transportation.

*An “X” indicates that the pathway applies to the outcome.*

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| **Pathways** |  | Agribusiness and Production Systems |  | Animal Science and Management |  | Bioscience | | | X | Horticulture |
|  | Natural Resource Management |  | Power Technology | | |  |  | | |
| **Green Practices** |  | Green-specific |  | Context-dependent | | |  | Does not apply | | |