

Course Number and Title: AGS 102 Agricultural Science

Campus Location:

Georgetown

Effective Date:

2021-52

Prerequisite:

SSC 100 or concurrent

Co-Requisites:

None

Course Credits and Hours:

3.00 credits

3.00 lecture hours/week

0.00 lab hours/week

Course Description:

This course introduces principles of scientific agriculture. Topics include an overview of the relationship of agriculture to human survival; interactions of society and the environment; and the roles of soil, plants, animals, history, and technology in agriculture.

Required Text(s):

Obtain current textbook information by viewing the [campus bookstore - https://www.dtcc.edu/bookstores](https://www.dtcc.edu/bookstores) online or visit a campus bookstore. Check your course schedule for the course number and section.

Additional Materials:

None

Schedule Type:

Classroom Course

Online Course

Disclaimer:

None

Core Course Performance Objectives (CCPOs):

1. Describe the historical discoveries, current issues, and projected technological advancements of the agricultural industry. (CCC 1, 2, 5; PGC BMT 2; PAG 1, 3)
2. Identify career opportunities related to the agricultural industry. (CCC 1, 2, 3, 4, 5; PGC BMT 1; LOH 3,4; PAG 5)
3. Describe basic plant science concepts. (CCC 1, 2, 6; PGC BMT 1; LOH 5; PAG 3)
4. Identify basic animal science concepts. (CCC 1, 2, 6; PGC BMT 1, 2, PAG 5)
5. Explore biotechnology applications in the agricultural industry. (CCC 1, 2, 3, 4, 5, 6; PGC BMT 1, 2; LOH 2, 5; PAG 2, 3, 5)
6. Explain relationships between agriculture and the environment. (CCC 1, 2, 3, 4, 5, 6; PGC BMT 1, 2; LOH 5; PAG 2, 3, 4)
7. Interpret safety practices related to careers in the agricultural industry. (CCC 1, 2, 3, 4, 5; PGC BMT 1, 2; LOH 1; PAG 2, 3, 4)

See Core Curriculum Competencies and Program Graduate Competencies at the end of the syllabus. CCPOs are linked to every competency they develop.

Measurable Performance Objectives (MPOs):

Upon completion of this course, the student will:

1. Describe the historical discoveries, current issues, and projected technological advancements of the agricultural industry.
 1. Summarize historical agricultural discoveries that increased global production of food and fiber.
 2. Identify current agricultural issues.
 3. Investigate projected technological advancements.
 4. Investigate agriculture organizations that seek to improve the agricultural industry.
2. Identify and discuss career opportunities related to the agricultural industry.
 1. Explore career opportunities in the agricultural industry.
 2. Investigate leadership development activities that prepare students for advancement in an agricultural career.
 3. Discuss professional communication skills necessary for gainful employment in the agriculture industry.
3. Identify basic plant science concepts.
 1. Explain the function of plant parts in relation to plant growth and health.
 2. Analyze relationships among air, soil, water, and plant nutrients required for plant growth.
 3. Identify common tools and technology used in the plant science industry.
4. Identify basic animal science concepts.
 1. Identify local types of animal production relevant to the agriculture industry.
 2. Examine tools related to the animal science industry.
 3. Compare animal digestive systems of beef, swine, and poultry.
5. Explore biotechnology applications in the agricultural industry.
 1. Describe methods of plant and animal improvement as a result of biotechnology.
 2. Explore concepts and safe practices of biotechnology used in the production of agricultural products.
6. Explain relationships between agriculture and the environment.
 1. Discuss soil as it relates to the production of food and fiber.
 2. Identify the properties of water as they relate to the production of food and fiber.
 3. Analyze conservation practices of forest, wildlife, fisheries, and environmental resources.
 4. Identify sustainable practices that can be used in agriculture.
7. Interpret safety practices related to careers in the agricultural industry.
 1. Examine personal safety hazards related to careers in the agriculture industry.
 2. Differentiate between safety color meanings as defined by the Occupational Safety and Health Administration (OSHA).
 3. Describe conditions necessary for combustion and the appropriate type of fire extinguisher for different types of fires.

Evaluation Criteria/Policies:

The grade will be determined using the Delaware Tech grading system:

90	-	100	=	A
80	-	89	=	B
70	-	79	=	C
0	-	69	=	F

Students should refer to the [Student Handbook - https://www.dtcc.edu/handbook](https://www.dtcc.edu/handbook) for information on the Academic Standing Policy, the Academic Integrity Policy, Student Rights and Responsibilities, and other policies relevant to their academic progress.

Final Course Grade:

Calculated using the following weighted average

Evaluation Measure	Percentage of final grade
Exams (2) (summative) (equally weighted)	20%
Quizzes (formative) (3-5) (equally weighted)	10%
Group presentations (2) (summative) (equally weighted)	20%
Career Project (summative)	20%
Formative Assessments (assignments/activities and labs)	30%
TOTAL	100%

Core Curriculum Competencies (CCCs are the competencies every graduate will develop):

1. Apply clear and effective communication skills.
2. Use critical thinking to solve problems.
3. Collaborate to achieve a common goal.
4. Demonstrate professional and ethical conduct.
5. Use information literacy for effective vocational and/or academic research.
6. Apply quantitative reasoning and/or scientific inquiry to solve practical problems.

Program Graduate Competencies (PGCs are the competencies every graduate will develop specific to his or her major):

AGSAASBMT

1. Distinguish among business career areas in agribusiness.
2. Examine current agricultural issues.
3. Prepare a business plan for an agricultural enterprise.
4. Apply management theories to agricultural business operations through practical experience.
5. Apply basic recordkeeping and accounting procedures to agribusiness operations.

AGSAASPAG

1. Apply basic agribusiness management procedures to production and marketing of agriculture products.
2. Integrate pest management procedures into crop production techniques.
3. Demonstrate production techniques related to sustainable agriculture.
4. Demonstrate scheduling, production, marketing, harvesting, and safe handling of crops.
5. Describe the importance of poultry, livestock, and crop production to the agriculture industry.
6. Assess breeding, care, and nutrition of livestock animals.

AGSAASTOH

1. Demonstrate professional behaviors that satisfy workplace expectations and include adherence to safety and environmental concerns related to the field.
2. Demonstrate basic management functions to include environmental controls, scheduling, production, pest control, and nutrient management of turf and ornamental plants.
3. Cultivate and maintain golf course landscapes.
4. Apply business principles and strategies to the turf and ornamental horticulture industries.
5. Explain the importance of environmental factors such as soil and water management to the turf and ornamental horticulture industries.
6. Apply basic installation and maintenance techniques for irrigation systems.
7. Design and install a finished landscape plan, using native plant materials when possible.
8. Examine current agricultural issues and topics.

Disabilities Support Statement:

The College is committed to providing reasonable accommodations for students with disabilities. Students are encouraged to schedule an appointment with the campus Disabilities Support Counselor to request an accommodation needed due to a disability. A listing of campus Disabilities Support Counselors and contact information can be found at the [disabilities services - https://www.dtcc.edu/disabilitysupport](https://www.dtcc.edu/disabilitysupport) web page or visit the campus Advising Center.