Delaware Technical Community College

Internal Career Education Pathway Agreement

Workforce Development and Community Education Non-Credit Certificate Programs to Instructional Division Credit Programs

To enhance students' access to educational programs, this agreement provides a pathway between the Workforce Development and Community Education non-credit certificate programs to Instructional Division credit programs for the purpose of awarding advanced credit.

1. Students must meet all admissions requirements for College Instructional Division credit programs and have successfully completed one semester as a declared student in an academic program prior to credit being awarded for their Workforce Development and Community Education non-credit certificate program.

2. Upon completion of requirements, students who have completed the Workforce Development and Community Education non-credit certificate program in (program title) will receive college credit as follows:

Course Number and Title Credits

FSY 110- Food Safety & Sanitation (3 c)

TOTAL 3 credits

APPROVALS

Workforce Development and Community Education Certificate Program:

ServSafe Food Safety Program for Managers

Instructional Division Degree/Diploma Program:

FSYAASFSY- Food Safety Degree

Workforce Development and Community Education Director(s):

Chris Moody Digitally signed by Chris Moody DN: cn=Chris Moody, o=Delaware Tech, ou, email=cmoody1@dtcc.edu, c=US Date: 2018.03.21 12:31:23 -04'00' Date:

Instruction Department Chairperson(s): Tamekia Broughton Digitally signed by Tamekia Broughton DN: cn=Tamekia Broughton, o, ou, email=tbrought@dtcc.edu, c=US Date: 2018.03.29 12:56:02 -04'00' Date:

Associate/Vice President for Academic Affairs: Joshua M Sapra Date: 3/29/18

INTERNAL CAREER EDUCATION PATHWAY FORM WORKSHEET

Divisions: Workforce Development and Instructional

Programs: ServSafe Food Safety for Managers and FSYAASFSY

Workforce Development and Community Education Course Competencies/Certification	Content Summary	Method of Assessment	AAS Degree Course Match
EYD583 ServSafe Food Safety Program for Managers	Food safety training, exams, and educational materials.	Food Protection Manager Certification credential (required)	FSY 110 Food Safety & Sanitation
			Credit Total = 3

ASSOCIATE DEGREE COMPLETION CURRICULUM

Divisions: Workforce Development and Instructional

Programs: Food Safety Program for Managers and FSYAASFSY

Core Courses			Technology/Technology Support Courses		
Course	Title	Cr	Course	Title	Cr
SSC100	First Year Seminar ✓	1	BIO115	Nutrition ✓	3
MAT145,MAT153, or MAT180	Math of Finance or College Math and Statistics or College Algebra ✓	3/4	FSY100	Introduction to Food Science ✓	3
BIO140 or BIO150	General Biology or Biology 1 ✓	4	FSY 120	Technology of Food Processing ✓	3
CIS107	Intro to Computers/Application ✓	3	FSY210	Food Safety & Defense ✓	3
ENG101	Crit Thiriking & Acad Writing ✓	3	FSY220	Food Chemistry ✓	4
CHM100 or CHM150	Basic Chemistry OR Chemical Principles 1 ✓	3/5	FSY225	Microbiology of Foods ✓	4
ENG102	Composition and Research ✓	3	FSY205	Principles of HACCP ✓	3
ECO111	Macroeconomics ✓	3	POS215	Poultry Production Management ✓	3
PSY121 OR SOC111	General Psychology OR Sociology ✓	3	FSY290	Food Safety Internship ✓	5
			FSY291	Seminar in Food Safety ✓	2
	Credit Total	26/29		Credit Total	33

Total credits remaining for completion of AAS Degree = 59/62

Food Safety

Food Safety Certificate

OWENS CAMPUS Fall 2018

Food safety is defined as a scientific discipline to handle, prepare, and store foods properly to prevent foodborne illness and disease. Employment in this vast field requires a need for a basic understanding of proper food safety techniques currently used in the food industry; these important skills will continue to increase over the next decade. Certificate completers will have the knowledge, skills, and ability to apply basic food safety practices, food laws, and regulations necessary to obtain entry to mid-level employment in the food industry.

PROGRAM SPECIFIC ADVISEMENT STATEMENT

Courses - Semester 1	Credits	Lecture	Lab
FSY 100 - Introduction to Food Science	3	3	
FSY 110 - Food Safety & Sanitation	3	2	2

Courses - Semester 2	Credits	Lecture	Lab
FSY 205 - Principles of HACCP	3	2	2
FSY 210 - Food Safety & Defense	3	2	2

*To complete program requirements, you must pass the above courses and earn at least **12 credits**. The number of courses and credits required for graduation may be more depending on your need for developmental education courses and the elective choices you make (if electives are a part of the program). Some programs also have college-level courses that you must take if you do not score at a certain level on the College Placement Test. If this applies to your program, the courses are listed at the top of the sequence sheet before the first semester of the course list.*

Food Safety

Food Safety

OWENS CAMPUS Fall 2018

Employment demands for highly skilled Food Safety graduates are projected to continue to increase over the next decade. Food safety is the application of food science to the selection, preservation, processing, packaging, distribution, and use of safe food. The food consumed on a daily basis is the result of extensive food research - a systematic investigation by food scientists into a variety of foods' properties and compositions. It is through the application of the research that food reaches the consumer. Using the principles of food safety, food products are mass produced, and it is the food safety technicians who have the knowledge of selection, preservation, processing, packaging, and distribution resulting in safe food being consumed. All of these interrelated fields contribute to the food industry -- the largest manufacturing industry in the United States.

PROGRAM SPECIFIC ADVISEMENT STATEMENT

Courses - Semester 1	Credits	Lecture	Lab
SSC 100 - First Year Seminar	1	1	0
(MAT 145 - Math of Finance	3	3	0
OR MAT 153 - College Math and Statistics	4	4	0
OR MAT 180 - College Algebra)	4	4	1
(BIO 140 - General Biology	4	3	2
OR BIO 150 - Biology I)	4	3	2
CIS 107 - Intro to Computers/Application	3	2	2
FSY 100 - Introduction to Food Science	3	3	
14			

Courses - Semester 2	Credits	Lecture	Lab
ENG 101 - Crit Thinking & Acad Writing	3	3	
BIO 115 - Nutrition	3	3	0
(CHM 100 - Basic Chemistry	3	2	2
OR CHM 150 - Chemical Principles I)	5	4	3
FSY 110 - Food Safety & Sanitation	3	2	2
FSY 120 - Technology of Food Processing	3	2	2
15			

Courses - Semester 3	Credits	Lecture	Lab
ENG 102 - Composition and Research	3	3	
ECO 111 - Macroeconomics	3	3	0
FSY 210 - Food Safety & Defense	3	2	2
FSY 220 - Food Chemistry	4	3	2
FSY 225 - Microbiology of Foods	4	3	2
17			

Courses - Semester 4	Credits	Lecture	Lab
(PSY 121 - General Psychology	3	3	0
OR SOC 111 - Sociology)	3	3	0
FSY 205 - Principles of HACCP	3	2	2
POS 215 - Poultry Production Management	3	2	2
FSY 290 - Food Safety Internship	5	1	12
FSY 291 - Seminar in Food Safety	2	2	
16			

62

*To complete program requirements, you must pass the above courses and earn at least **62 credits**. The number of courses and credits required for graduation may be more depending on your need for developmental education courses and the elective choices you make (if electives are a part of the program). Some programs also have college-level courses that you must take if you do not score at a certain level on the College Placement Test. If this applies to your program, the courses are listed at the top of the sequence sheet before the first semester of the course list.*

DELAWARE TECHNICAL COMMUNITY COLLEGE

WORKFORCE DEVELOPMENT AND COMMUNITY EDUCATION

CAMPUS/COLLEGE WIDE: Owens **EFFECTIVE DATE: 5/21/18**

DEPARTMENT: Workforce Development and Community Education

COURSE NUMBER AND TITLE: EYD 583-ServSafe Food Safety Program for Manager (~8 hours)

PREREQUISITE: High School Diploma or equivalent

COURSE DESCRIPTION: The ServSafe Food Safety Program for Managers provides educational materials to foodservice managers, food safety training, and testing. Learn to implement essential food safety practices and create a culture of food safety. Delaware law requires the Person-In-Charge (PIC) to demonstrate Food Safety knowledge in order to comply with the 2014 Food Code.

REQUIRED TEXT(S): 7TH EDITION SERVSAFE MANAGER

ADDITIONAL MATERIALS: TBD

METHOD OF INSTRUCTION: Lecture & DVD's

Measurable Performance Objectives:

Students will be able to:

1. Understand how to provide safe food.
   i. Recognize foodborne illnesses.
   ii. Identify how foodborne illnesses occur.
   iii. Explain how to keep food safe.

2. Understand forms of contamination.
   i. Explain biological, chemical and physical contaminants.
   ii. Identify what is deliberate contamination of food.
   iii. Explain Illness-Outbreak.
   iv. Recognize food allergens.

3. Recognize the safe food handler.
   i. Explain how a food handler can contaminate food.
   ii. Recognize safe handwashing and hand care.
   iii. Explain safe personal hygiene practices.
   iv. Identify policies for reporting health issues.

4. Understand the flow of food.
   i. Recognize the hazards, time and temperature control.
   ii. Explain purchasing, receiving and storing food.

iii. Explain proper food preparation, cooking, cooling and reheating.
iv. Identify how to properly hold and serve food.

5. Maintaining safe facilities and pest management.
   i. Understand the interior requirements for a safe operation.
   ii. Recognize emergencies that affect the facility.

6. Cleaning and sanitizing.
   i. Identify the proper techniques for cleaning, sanitizing and dishwashing.
   ii. Recognize the importance of cleaning and sanitizing in the operation.

Evaluation Criteria/Policies:

Students will take the National Restaurant Association ServSafe for Manager Exam at the completion of the class. Students must pass the exam with a score of 75% or better to receive their certification.

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DELAWARE
TECHNICAL COMMUNITY
COLLEGE

Georgetown | Dover | Stanton | Wilmington

Campus Location:	Georgetown **Effective Date:** 2018-51
Course Number and Title:	FSY 110 Food Safety & Sanitation
Prerequisite:	ENG 090 or ENG 091, SSC 100 or concurrent
Course Credits and Hours:	3 credits 2 lecture hours/week 2 lab hours/week
Course Description:	This course covers food safety and sanitation practices and addresses consumer complaints and public health issues related to food service establishments. This course prepares students for the National ServSafe certification exam provided by the National Restaurant Association.
Required Text(s):	Obtain current information at https://www.dtcc.edu/student-resources/bookstores, or visit the bookstore. (Check your course schedule for the course number and section.)
Additional Materials:	None
Method of Instruction:	Classroom, Hybrid, Online
Disclaimer:	None

Core Course Performance Objectives (CCPOs):

1. Describe the role of food service managers and their responsibility to provide food safety training to employees. (CCC 1, 2, 3; PGC 1, 2, 5, 6, 7, 8)
2. Differentiate major foodborne pathogens, symptoms, and associated food sources. (CCC 1, 2, 3; PGC 1, 3, 4, 6, 7)
3. Identify food allergens, biological, chemical, and physical contaminants. (CCC 1, 2; PGC 1, 6, 7)
4. Discuss how food handlers can contaminate food through improper personal hygiene. (CCC 1, 2, 3; PGC 1, 6, 7)
5. Describe and use methods to prevent cross-contamination, and time/temperature abuse. (CCC 1, 2; PGC 1, 3, 5, 6, 7)

6. Explain the flow of food process throughout a foodservice operation. (CCC 1, 5; PGC 3, 5, 6, 7)
7. Discuss food safety management systems. (CCC 1, 2, 3, 6; PGC 1, 2, 6, 7)
8. Describe the sanitary design of food service facilities, equipment, and pest management procedures as it relates to food safety. (CCC 1, 2, 5; PGC 1, 6, 7)
9. Identify state and local regulatory agencies that require food safety compliance. (CCC 1, 2, 3, 5; PGC 5, 6, 7)

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 role of food service managers and their responsibility to provide food safety training to employees.

    1.1 Identify ways to ensure that all staff members are adequately trained.
    1.2 Name appropriate methods and training tools for teaching food safety to employees.
    1.3 Discuss methods to train specific staff regarding their duties and responsibilities required when working in a food establishment.

2. Differentiate major foodborne pathogens, symptoms, and associated food sources.

    2.1 List major foodborne pathogens, and describe their characteristics, including food sources that are involved in outbreaks and methods of prevention.
    2.2 Identify major foodborne illnesses with their symptoms.
    2.3 Differentiate among foodborne intoxications, infections, and toxin-mediated infections.
    2.4 List the factors that affect the growth of foodborne pathogens.
    2.5 Name high-risk populations that foodborne pathogens would most likely affect.

3. Identify food allergens, biological, chemical, and physical contaminants.

    3.1 List the eight most common food allergens, their symptoms, and methods of prevention.
    3.2 Identify biological contaminants that may cause foodborne illness.
    3.3 Name physical contaminants that could be unintentionally introduced into food.
    3.4 Describe chemical substances that may cause foodborne illness.
    3.5 Explain the deliberate contamination of food and how to develop a food defense program.

4. Discuss how food handlers can contaminate food through improper personal hygiene.

    4.1 Give examples of policies that should be implemented for food handlers regarding personal hygiene practices.
    4.2 Apply proper hand washing procedures.
    4.3 List personal hygiene behaviors that may contaminate food.
    4.4 Differentiate between excluding and restricting employees from a food service operation.
    4.5 Identify the illnesses that must be reported to regulatory health agencies.

5. Describe and use methods to prevent cross-contamination and time/temperature abuse.

    5.1 Define *cross-contamination,* and identify prevention methods for cross-contamination.
    5.2 Identify prevention methods for time-temperature abuse.
    5.3 List various types of temperature-measuring devices, and describe their uses.
    5.4 Calibrate various temperature-measuring devices.

6. Explain the flow of food process throughout a food service operation.

    6.1 Define key terms related to the flow of food and identify accept, reject, and recall criteria for various foods.
    6.2 Discuss the importance of using a reputable food supplier.
    6.3 Describe general storage guidelines for dry, refrigerated, and frozen foods.
    6.4 List the proper procedure for purchasing, receiving, preparing, cooking, cooling, storing, thawing, and reheating foods.
    6.5 Describe holding food for service, serving food safely, and handling food in an off-site service.
    6.6 List the minimum internal cooking temperatures for temperature control for safety (TCS) foods.

7. Discuss food safety management systems.

    7.1 Define food safety management system.
    7.2 List the seven Hazard Analysis Critical Control Points Systems (HACCP) principles.
    7.3 Describe how active managerial control can impact food safety.
    7.4 Describe crisis management, and explain how to prepare, respond, and recover from a crisis.

8. Describe the sanitary design of food service facilities, equipment, and pest management procedures as it relates to food safety.

    8.1 Discuss the layout of a well-designed food service operation.
    8.2 Describe the importance of installing and maintaining equipment.
    8.3 Explain the difference between cleaners and sanitizers.
    8.4 Describe the factors that affect the efficiency of sanitizers.
    8.5 Discuss how to clean and sanitize food-contact surfaces, and describe the frequency of cleaning.
    8.6 Discuss the use, storage, and disposal requirements for chemicals, and use material safety data sheets (MSDS).
    8.7 List the requirements for an integrated pest management program (IPM).
    8.8 Identify the signs of pest activity and infestations.
    8.9 Name prevention methods for denying pests access to an operation, food, and shelter.

9. Identify state and local regulatory agencies and regulations that require food safety compliance.

    9.1 Distinguish between government agencies responsible for preventing foodborne illness.
    9.2 Explain the regulatory inspection process.

9.3 Describe the importance of regulatory inspections and self-inspections.
9.4 Interpret corrective action procedures if a regulatory violation occurs.

Evaluation Criteria/Policies:

Students must demonstrate proficiency on all CCPOs at a minimal 75 percent level to successfully complete the course. The grade will be determined using the DTCC grading system:

92 – 100	=	A
83 – 91	=	B
75 – 82	=	C
0 – 74	=	F

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

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):

1. Apply knowledge of the theories and principles of biology, chemistry, and food microbiology.
2. Analyze food samples by common and quantitative and qualitative techniques.
3. Identify emerging technologies and ingredient innovations that have the potential to transform product and process development.
4. Analyze market trends associated with the development of foods to maintain and improve health.
5. Apply knowledge of food processing to improve the quality, efficiency, and sustainability of processing and packaging efforts.
6. Apply knowledge of best practices, risk analysis, traceability, and analytical tools in the areas of microbial and chemical food safety and defense.
7. Apply knowledge of public policy, food laws, and regulations that have national and international implications for the food industry, research, and consumer food safety.
8. Demonstrate professional behavior and communication skills.

Disabilities Support Statement

The College is committed to providing reasonable accommodations for students with disabilities. You are encouraged to schedule an appointment with your campus Disabilities Support Counselor if you feel that you may need an accommodation based on the impact of a disability. A listing of campus Disabilities Support Counselors and contact information can be found at go.dtcc.edu/DisabilityServices or visit the campus Advising Center.