Diploma of Transfer Readiness
D1040000

This diploma is issued upon the successful completion of the Associate in Science (AS) general education core. The Comprehensive Articulation Agreement (CAA) states that students completing the general education transfer core will be considered to have fulfilled the institution-wide, lower division general education requirements of the receiving institution. This diploma shall include a minimum of 44 and a maximum of 47 semester hours of general education core courses approved for transfer to The University of North Carolina constituent institutions.

Program Length: 3 semesters

Career Pathway Options: Associate in Arts or Associate in Science Degree; Baccalaureate Degree at a Senior Institution

Program Sites: Chatham Campus - Day and Selected Evening Courses; Harnett Campus - Day and Selected Evening Courses; Lee Campus - Day and Evening Programs; Distance Education

Biological and Chemical Technologies

Alternative Energy Technology
Credential: Associate in Applied Science in Biofuels Technology
A20130

This curriculum is designed to provide students with the educational foundation and technical skills necessary to obtain employment in the biofuels industry, or ability to create a new business dealing with biofuels.

Coursework includes general education, alternative energy resource management, chemistry, industrial safety, and an array of coursework specific to all sectors of the biofuels industry.

Graduates should qualify for numerous positions within the industry. Employment opportunities include, but are not limited to, plant technician plant manager, lab technician, sales manager, process coordinator, fuel purchaser, or business owner.

Program Length: 5 semesters
Career Pathway Options: Associate in Applied Science in Biofuels Technology
Program Sites: Pittsboro Campus

Course Requirements for Biofuels Technician Degree

A. General Education Courses (16 SHC)  C-L-SHC
ENGL 111 Expository Writing  3-0-3
ENGL 111A Expository Writing Lab  0-2-1
*ENGL 114 Professional Research & Reporting  3-0-3
Humanities/Fine Arts Elective  3-0-3
**MATH 140 Survey of Mathematics  3-0-3
Social/ Behavioral Science Elective  3-0-3

B. Required Major Core Classes (20 SHC)
ALST 110 Biofuels I 3-0-3
ALST 120 Renewable Energy Technology  2-2-3
ALST 210 Biofuels II  3-2-4
ALST 211 Biofuels Analytics  2-4-4
ALST 230 Biofuels Waste Management  2-0-2

Chemistry (Select 4 SHC):
CHML 131 Intro to Chemistry  3-0-3
CHML 131A Intro to Chemistry Lab  0-2-1
CHML 151 General Chemistry I  3-3-4

*Students may substitute ENGL 113.
** Students may substitute MATH 171.

C. Other Major Required Hours (32)
CISL 110 Introduction to Computer  2-2-3
ELCL 112 AC/DC Electricity  3-6-5
ISCL 121 Environmental Health & Safety  3-0-3
MECL 110 Intro to CAD/CAM  1-2-2
MECL 130 Mechanisms  2-2-3
MNT 230  Pumps & Piping Systems  1-3-2  *Students may substitute ENG 113.  
** Students may substitute MAT 171.

Select one of the following courses:
CHM 132  Organic and Biochemistry  3-3-4  
CHM 152  General Chemistry II  3-3-4  

Total Semester Hours Credit:  68

Other Required Courses: (Select 9 SHC)
AGR 139  Intro into Sustainable Agriculture  3-0-3  
BPM 110  Bioprocessing Practices  3-4-5  
BUS 280  REAL Small Business  4-0-4  
ELC 128  Intro to PLC  2-3-3  

Select 1.0 hours from the following courses:
ALT 281  Biofuels Project Experience  0-6-2  
OR

COE 111  Co-op Work Experience I  0-10-1  

Total Required Credit Hours for Graduation:  68

Semester Curriculum for Biofuels Technology Degree

1st Semester (Fall)  
ALT 110  Biofuels I  3-0-3  
ALT 120  Renewable Energy Technology  2-2-3  
CIS 110  Introduction to Computers  2-2-3  
Chemistry Elective  4  
**MAT 140  Survey of Mathematics  3-0-3  
10-4-16  

2nd Semester (Spring)  
ALT 210  Biofuels II  3-2-4  
ENG 111  Expository Writing  3-0-3  
ENG 111A  Expository Writing Lab  0-2-1  
MEC 110  Intro to CAD/CAM  1-2-2  
Required Elective  3-0-3  
Chemistry Elective  3-3-4  
13-9-17  

3rd Semester (Summer)  
ALT 281  Biofuels Project Experience  0-6-2  
OR

COE 111  Co-op Work Experience I  0-10-1  

4th Semester (Fall)  
ALT 211  Biofuels Analytics  2-4-4  
ELC 112  AC/DC Electricity  3-6-5  
Humanities/Fine Arts Elective  3-0-3  
Required Elective  3-0-3  
ISC 121  Environmental Health & Safety  3-0-3  
14-10-18  

5th Semester (Spring)  
ALT 230  Biofuels Waste Management  2-0-2  
*ENG 114  Research and Reporting  3-0-3  
MEC 130  Mechanisms  2-2-3  
MNT 230  Pumps and Piping Systems  1-3-2  
Required Elective  3-0-3  
Social/Behavioral Science Elective  3-0-3  
14-5-16