

BFM BIOFUELS MANUFACTURING TECHNOLOGY

	Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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Courses

BFM.101 Biofuels Fundamentals	2		2
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This course is an overview of the biofuels industry. It introduces biodiesel and ethanol in relation to traditional transportation fuels, markets, and regulatory constraints. This course also includes discussion of careers in the biofuels industry, and is the first in a series of classes in the AAS Degree in Biofuels Manufacturing Technology.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education -- Not Applicable

BFM.201 Ethanol Production	3	2	4
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This course will cover the history, rationale, and overall fundamental process and quality control of ethanol production. The course is designed to study the relationship of science, technology and management areas in ethanol processing operations. A Process Flow Demonstrator of a typical dry mill ethanol plant will be used to examine the sequence of operations seen in various stages of production. This course will explain the rationale for feedstocks used in ethanol processing as well as product and co-product production and use. Labs will provide hands-on training of ethanol production with the Ethanol Trainer equipment.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education -- Not Applicable

BFM.202 Biodiesel Production	3	2	4
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This course will cover the history, rationale, and overall fundamental process and quality control of Biodiesel production. The course is designed to study the relationships of science, chemistry, technology, fuel standards, and management areas in Biodiesel processing operations. A Process Flow Demonstrator of a typical biodiesel plant will be used to examine the sequence of operations seen in various stages of production. This course will explain the rationale for feedstocks used in biodiesel processing. Labs will provide hands-on training of biodiesel production with the Biodiesel Trainer equipment.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education -- Not Applicable

BFM.203 Water Treatment & Control	3		3
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The course covers the basic understanding of primary water treatment systems and chlorination. Students will be able to describe problems that can be caused by impurities in the water and explain how they can be removed physically and chemically. This course will also familiarize students with the basic concepts of treating industrial water during biofuels manufacturing so it can be reused or discharged into the environment.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education -- Not Applicable

BFM.291 Professional Internship 1	15		3
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Students who are currently employed in the biofuels industry will perform a related research project on a topic of interest, outside the scope of normal job duties, to the student and his/her firm. The project will be supervised by the supervising instructor and a job site supervisor.

Consent of Instructor, Program Coordinator or Dean of Career Technical and Health Education is required to enroll in this course.

Offered: Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education -- Not Applicable

BFM.292 Professional Internship 2	15		3
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The objective of this course is to integrate classroom theory with business practice. Students will receive on-the-job training with select industry partners. All internship positions will be supervised by the supervising instructor and a job site supervisor. The positions associated with this internship will be non-paying positions. Consent of Instructor, Program Coordinator or Dean of Career Technical and Health Education is required to enroll in this course.

Offered: Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable