2014-2015

Bachelor of Science (BS) **Program of Study for**
Degree Code 118A **FERMENTATION SCIENCES**

I. GENERAL EDUCATION CURRICULUM 44

CHE 1101, 1110, 1102, and 1120 will fulfill the Science Inquiry Perspective. MAT 1110 will fulfill Quantitative Literacy. ECO 2030 may be used to meet Gen Ed Perspectives.

II. MAJOR REQUIREMENTS *(Not including 15 s.h. already counted in I, above)* **..... 70-72**

2.0 major GPA is required for graduation. Major GPA calculation includes <u>all</u> courses in the major department, plus any other courses under II.

A. Fermentation Science (18 semester hours)

FER 1000	_____ (3)	Principles of Fermentation Sciences
FER 2000	_____ (1)	Social Implications of Fermented Beverages
FER 3200	_____ (3)	Facility Design and Operation
FER 4300	_____ (3)	Sensory Analysis of Wine and Beer *(Pre: FER 4100 or FER/CHE 4200, STT 2810)*

Choose two of the following:

FER 3000	_____ (4)	Viticulture: Vine Physiology and Vineyard Establishment *(Pre: BIO 1801)*
FER 4100	_____ (4)	Wine Production and Analysis *(Pre: CHE 2210/2211)*
CHE/FER 4200	_____ (4)	Brewing Science and Analysis *(Pre: CHE 2210/2211)*

B. Chemistry (19 semester hours)

CHE 1101/1110	_____ (4)	Introductory Chemistry I & Introductory Chemistry I Lab
CHE 1102/1120	_____ (4)	Introductory Chemistry II & Introductory Chemistry II Lab *(Pre: CHE 1101/1110)*
CHE 2101	_____ (3)	Fundamentals of Organic Chemistry *(Pre: CHE 1102/1120; Co: CHE 2102)*
CHE 2102	_____ (1)	Fundamentals of Organic Chemistry Lab *(Pre: CHE 1102/1120; Co: 2101)*
CHE 2210	_____ (3)	Quantitative Analysis *(Pre: CHE 1102/1120; Co: CHE 2211)*
CHE 2211	_____ (1)	Quantitative Analysis Lab *(Co: CHE 2210)*
CHE 4580	_____ (3)	Biochemistry I *(Pre: CHE 2101 or 2202)*

C. Biology (11 semester hours)

BIO 1801	_____ (4)	Biological Concepts I *(Co: CHE 1101)*
BIO 2600	_____ (3)	Cell Biology *(Pre: BIO 1801, CHE 1102)*
BIO 3308	_____ (4)	Microbiology *(Pre: CHE 1102/1120)*

WID and CAP courses are required. *These courses are in development and, when approved, revisions will be made to the program of study.*

D. Mathematics and Economics (10 semester hours)

MAT 1110	_____ (4)	Calculus with Analytic Geometry I *(Pre: MAT 1025 w/min grade of C-)*
STT 2810	_____ (3)	Introduction to Statistics *(Pre: MAT 1010)*
ECO 2030	_____ (3)	Principles of Microeconomics *(may be used in Gen Ed depending on choices)*

E. Focus area courses (12 - 14 semester hours)

NUT 1202 _____ (3) Basic Food Science **AND** NUT 3210_____ (3) Beverage Management

Choose two of the following:

SD 3100	_____ (3)	Principles of Agroecology	S D 3150 _____ (4)	Soil & Soil Fertility Management
SD 4200	_____ (4)	Ecologically-Based Pest Mgmt *(Pre: SD 3100)*	TEC 3605_____ (3)	Sustainable Resrce Mgmt *(Pre: TEC 2029)*
TEC 3606	_____ (3)	Sust Water & Wastewater Tech *(Pre: TEC 2029)*	TEC 4700 _____ (3)	Biofuels Tech *(Pre: TEC 2601 & 3638; Sr. stndg)*

F. Business courses (15 semester hours)

BUS 1050	_____ (3)	Introduction to Business	ACC 1050 _____(3)	Survey of Accounting
ENG 3700	_____ (3)	Technical Writing (*Pre: ENG 3090 or 3100)*	MKT 3050 _____(3)	Principles of Marketing *(Pre: ECO 2030)*

Choose one of the following:

HOS 2000	_____ (3)	Survey of the Hospitality & Tourism Industry	MGT 3010_____(3) Survey of Management
MGT 3060	_____ (3)	Opportunity & Entrepreneurship	

III. MINOR (optional) Students are encouraged to pursue a minor in one of the following areas: Chemistry, Biology, Marketing, or Entrepreneurship.

IV. ELECTIVES (taken to total 122 hours for the degree) ..... <u>6-8</u>

2 semester hours of free electives must be outside the major discipline. **122**

Total major =85-87 hrs; Gen Ed courses may count in major (depends on choices) – up to 15; net major 70-72 hours.

Electives recommended by department:

MGT 3170 (3) Creativity & Design *(Pre: MGT 3060)*, MGT 3190 (3) Int'l Entrepreneurship *(Pre: MGT 3060)*, MGT 4650 (3) Venture Creation *(Pre: FIN 3680; MGT 3060; MKT 3050; "C" in WID)*, CHE 2526 (1) Chemical Safety *(Pre: 1101/1110)*, HOS 3700 (3) Hospitality Management Operations I *(Pre: HOS 2000)*, HOS 4040 (3) Destination Management