

## SECTION II: DEPARTMENT OF SUSTAINABLE BIOPRODUCTS

### 2017-2018 Sustainable Bioproducts Major

Total Hours = 124

#### Freshman Year

##### Fall Semester

EN 1103 English Composition I  
MA 1313 College Algebra (ACT subscore 19)\*  
SBP 1103 Intro to Sustainable Bioproducts  
CH 1043 Survey of Chemistry I\*  
Humanities Elective (3)

##### Spring Semester

EN 1113 English Composition II (EN 1103)  
MA 1323 Trigonometry (C in MA 1313 or ACT subscore of 24)\*  
SBP 1203 Anatomy of Wood and other Natural Materials  
CH 1053 Survey of Chemistry II (CH 1043) \*  
CH 1051 Exp. Chemistry Laboratory \*  
Social Science Elective (3)

#### Summer Program

SBP 2012 Introduction to Bioproduct Industries

#### Sophomore Year

##### Fall Semester

BIO 1134 Biology I  
SBP 2123 Materials and Processing  
CO 1003 Public Speaking  
ST 2113 or 3123 Statistics / Statistical Inference (C in MA 1313 or ACT math subscore of 24)\*  
Humanities Elective (3)

##### Spring Semester

BIO 1144 Biology II  
SBP 3113 Biomaterial Physics and Mechanics  
SBP 3123 Biomass to Bioproducts  
Economics Elective (3)  
Free Elective (2)

##### Fall Semester

SBP 4313 Bioproducts and the Environment  
SBP Professional Elective (3)  
Professional Elective (3)  
Free Elective (3)  
AELC 3203 Prof. Writing Ag, NR & Human Sci.

#### Junior Year

##### Spring Semester

SBP Professional Elective (3)  
SBP Professional Elective (3)  
Professional Elective (3)  
Professional Elective (3)  
Fine Arts Elective (3)

##### Fall Semester

SBP 4253 Quantitative Methods  
SBP Professional Elective (3)  
SBP Professional Elective (3)  
Professional Elective (3)  
Free Elective (3)

#### Senior Year

##### Spring Semester

SBP Professional Elective (3)  
SBP Professional Elective (3)  
SBP 4443 Capstone Sustainable Bioproducts  
Professional Elective (3)  
Professional Elective (3)

\*Higher level MSU core courses may be taken to complete MA, CH and ST course requirements.

## SECTION II: DEPARTMENT OF SUSTAINABLE BIOPRODUCTS

### 2017-2018 Sustainable Bioproducts Major Approved Elective List

#### Economics Elective

AEC 2713	Intro Food Resource Economics
EC 2113	Principles of Macroeconomics
FO 4113	Forest Resources Economics

#### Sustainable Bioproducts Professional Electives

SBP 3143	Biomass Characteristics and Production
SBP 4000	Individual Study
SBP 4023/6023	Lignocellulosic Biomass Chemistry
SBP 4113/6113	Adhesives and Biocomposites
SBP 4133/6133	Biorefinery Processes
SBP 4144/6144	Biocomposite Application and Manufacturing
SBP 4153/6153	Biological Conversion of Biomass
SBP 4213/6213	Deterioration and Preservation of Biomaterials
SBP 4243/6243	Sustainable Bioproducts
SBP 4263/6263	Strength Design of Furniture as Green Products
SBP 4333/6333	Bioproducts and Environmental Biotechnology
SBP 4450	Undergraduate Research in SBP

#### Social Science Electives

AN 1103	Intro. to Anthropology
AN 1143	Intro. to Cultural Anthropology
AN 1543	Intro. to Archaeology
CO 1223	Intro. to Comm. Theory (CO 1003 or 2253)
CO 1403	Intro. to Mass Media
EN 2403/AN 2403	Intro. to the Study of Language
EC 1033	Economics of Social Issues
EPY 2513	Human Growth and Development
FO 4113	Forest Resource Economics (AEC 2713 or equiv.)
GR 1123	Intro. to World Geography
GR 2013	Cultural Geography
HON 1173	The West & the Wider World
HON 3143	Honors Seminar in SS (So., EN 1103, EN 1113)
HS 1813	Individual & Family Dev. through the Lifespan
PS 1113	American Government
PS 1313	Intro. to International Relations
PS 1513	Comparative Government
PSY 1013	General Psychology
SO 1003	Intro to Sociology
SO 1103	Contemporary Social Problems
SO 1203	Marriage and Family

#### Fine Arts Elective

ARC 1013	Architectural Appreciation
ART 1013	Art History I
ART 1023	Art History II
ART 1113	Art Appreciation
CO 1503	Intro. to Theater
LA 1803	Landscape Architecture Appr.
MU 1103/AAS 1103	African American Music
MU 1113	History and Appr. of Music
MU 1123	American Music Appreciation
PE 1323	History and Appr. of Dance
PSS 2343	Floral Design
TKI 2413	Hist. and Appr. of the Arts

#### Humanities Elective

ARC 2313/3313	History of Architecture
EN 2203	Intro. to Literature (EN 1103, EN1113)
EN 2213/2223	English Literature (EN 1103, EN1113)
EN 2243/2253	American Literature I (EN 1103, EN1113)
EN 2273/2283	World Literature I (EN 1103, EN1113)
FL 1113/1123	Elem. Foreign Language <sup>1</sup>
HI 1063/1073	Early or Modern US History
HI 1163/1173	World History I or II
HI 1213/1223	Early or Modern Western World
HI 1313/1323	East Asian Civilizations I or II
PHI 1103	Intro. to Philosophy
PHI 1123	Intro. to Ethics
REL 1103	Intro. to Religion
REL 3213	World Religions I
REL 3223	World Religions II

<sup>1</sup> French, German, Greek, Japanese, Latin, Russian and Spanish

#### Professional Electives

Choose any class that is 3000 level or above from the following subjects: ABE (Ag Bio Eng), ACC (Accounting), AEC (Ag Econ), ARC 2713, BCH (Biochem), BCS (Build Const Sci), BIO (Biology), BIS (Bis Info Systems), BL (Bus Law), BQA (Business Quantitative Analysis), CE (Civil Eng), CH (Chemistry), CHE (Chemistry Engineering), EC (Economics), EE (Electrical Engr), EG (Engr Graphics), EM (Engr Mech), EPP (Entomology Plant Path), FIN (Finance), FO (Forestry), GR (Geography), IE (Industrial Eng), TKI (Industrial Tech), LA (Landscape Arch), MGT (Management), MKT (Marketing), MA (Math), ME (Mechanical Eng), NREC (Nat Res Environ Conser), PH (Physics), PS (Political Sci), PSS (Plant Soil Sci), SBP (Sustainable Bioproducts), ST (Statistics), WFA (Wildlife Fish Aquaculture)

Approved Substitutions List for Sustainable Bioproducts Major	
Required Courses	Approved Substitutions
AELC 3203 Professional Writing Ag, NR & Human Sci.	MGT 3213 Org Comm (Jr., EN 1113) or BIO 3013 Prof Writing for Bio (Jr., or consent of instructor)
CO 1003 Public Speaking	CO 1013 Intro to Communication
SBP 1203 Intro to Sustainable Bioproducts	FP 4013 Wood Anatomy
SBP 2123 Anatomy of Wood	FP 4123 Lumber Manufacturing
SBP 4443 Capstone Sustainable Bioproducts	FP 4413 Professional Practice