

B.S. Integrated Plant Sciences
Agricultural Biotechnology Major
Advising Sheet 2023-2024

University Common Requirements (UCORE):

34 credit minimum required, with no more than three, three-credit courses within the major.

UCORE	Credits	Term	Grade	Offered
First Year Experience (3 credits) [ROOT]				
HISTORY 105/305: Roots of Contemporary Issues	3			F, S, SS
Written Communication (3) [WRTG]				
ENGLISH 101: Introductory Writing (or based on placement)	3			F, S, SS
Communication (3) [COMM] [WRTG]				
H_D 205: Dev. Effective Com. or COM 102: Com. in Info. Soc.	3 - 4			F, S, SS
Quantitative Reasoning (3) [QUAN]				
STAT 212: Intro to Stat Methods	4			F, S, SS
Inquiry in the Social Sciences (3) [SSCI]				
ECONS 101 Fundamentals of Microeconomics	3			F, S, SS
Inquiry in the Humanities (3) [HUM]				
Elective	3			F, S, SS
Inquiry in the Creative and Professional Arts (3) [ARTS]				
Elective	3			F, S, SS
Diversity (3) [DIVR]				
Elective	3			F, S, SS
Equity and Justice (3) [EQJS]				
Elective	3			F, S, SS
Integrative Capstone (3) [CAPS]				
CROP_SCI 425: [M]Trends in Plant Science	3			S
Inquiry in the Natural Sciences (7 minimum) [BSCI] [PSCI] [SCI]				
BIOLOGY 106: Intro to Organismal	4			F, S, SS
CHEM 105: Principles Of Chem I	4			F, S, SS

Integrated Plant Sciences Core Requirements:

Course	Credits	Term	Grade	Offered
BIOLOGY 107: Intro to Cell Bio & Genetics	4			F, S, SS
CHEM 106: Princ. Of Chem II	4			F, S, SS
HORT/CROP_SCI 102: Cultivated Plants	3			F, S online
HORT/CROP_SCI 202: Crop Growth and Development	4			S
SOIL_SCI 201: Soil: A Living System	3			F, S
ENTOM 343: [M] General Entomology	3			F
ENTOM 351: Ecological & Integrated Pest Management	3			S
PL_P 429: General Plant Pathology	3			F
CROP_SCI 411: [M] Crop Environmental Interactions or HORT 416: Adv. Hort Crop Physiology	3			CROP_SCI 411: F HORT 416: S
HORT/CROP_SCI 495 or 498: Professional Work/Research Experience	1			F, S, SS

Agricultural Biotechnology Major Requirements:

Course	Credits	Term	Grade	Offered
CHEM 345: Organic Chemistry I	4			F, S, SS
CROP_SCI 445: [M] Plant Breeding	4			S even
BIOLOGY 420: Plant Physiology	3			F
HORT 480: Plant Genomics & Biotechnology	3			F even
MATH 106: College Algebra and MATH 108: Trigonometry or MATH 140 Calculus for Life Scientists**	4 - 5			MATH 140: F, S OTHER: F, S, SS
MBIOS 301: General Genetics or HORT 345 Crop Plant Genetics	4			F, S, SS: HORT 345 F
MBIOS 303: Intro Biochemistry	4			F, S, SS
MBIOS 305: General Microbiology	3			F, S, SS
MBIOS 401: Cell Biology***	3			F, S
MBIOS 404: Molecular Biology***	3			F
MBIOS 478: Bioinformatics	3			S
DATA 115 Intro to Data Analytics or STAT 412: Statistical Methods in Research	3			F, S, STATS 412: SS
400/500 level Seminar in any CAHNRS Dept.	1			S

Open Electives:

Course*	Credits	Term	Grade	Offered

CHECK LIST FOR THIS MAJOR:

Writing in the Major (2 [M] courses)	
Writing Portfolio	
40 Upper-Division Credits	
UCORE	34 minimum credits
IPS Core	31 credits
Agricultural Biotechnology Major	42-43 credits
Open Electives	12-13 credits
Total (at least 120 credits)	

NOTES:

*Electives are chosen by the student and are needed to reach the minimum 120 credits to graduate. Electives can be used towards a minor. Contact an advisor or the department for more information on courses for your minor interest.

**or higher calculus

***Instead of taking MBIOS 401 and 404, students can choose to take HORT 430 Plant Cell and Molecular Biology (should be approved by Spring 2023)

DATA 115 is recommended if STATS 212 was taken at WSU. STATS 412 is recommended if STATS 212 wasn't taken at WSU

SAMPLE FOUR-YEAR PLAN

	Fall Semester	Hours	Spring Semester	Hours
First Year	CHEM 105 [PSCI] ENGLISH 101 [WRTG] CROP_SCI/HORT 102 MATH 140 OR MATH 106/108 [QUAN]	4 3 3 4 OR 5	CHEM 106 [PSCI] ECONS 101 [SSCI] HISTORY 105 [ROOT] CROP_SCI/HORT 202	4 3 3 4
Second Year	BIOLOGY 106 [BSCI] or 107 [BSCI] COM 102 or HD 205 [COMM] STAT 212 [QUAN] Electives	4 3 or 4 4 3	BIOLOGY 106 [BSCI] or 107 [BSCI] Creative & Professional Arts [ARTS] ENTOM 351 Humanities [HUM] SOIL_SCI 201 Complete Writing Portfolio	4 3 3 3 3
Third Year	BIOLOGY 420 CHEM 345 ENTOM 343 [M] MBIOS 301 ⁵ PL_P 429	3 4 3 4 3	Diversity [DIVR] MBIOS 303 MBIOS 305 Elective	3 4 3 3 or 4
Fourth Year	HORT 480 ⁴ MBIOS 404 MBIOS 478 DATA 115 ³ Elective	3 3 3 3 4	CROP_SCI 445 [M] ⁴ CROP_SCI 495 400/500 level Seminar in any CAHNRS Dept. ¹ HORT 416 ² MBIOS 401 CROP_SCI 425 [CAPS]	4 1 1 3 3 3

Footnotes

¹Seminar in CAHNRS (1 credit): AGTM 451, CROP SCI/SOIL SCI 412, HORT/VIT ENOL 409, or as approved by advisor.

²CROP_SCI 411 [M] can be taken in the fall as an alternative to HORT 416.

³STAT 412 can be taken as an alternative to DATA 115.

⁴These are every-other year courses, so may need to be taken a different year than shown in 4-year plan

⁵ HORT 345 can be substituted for MBIOS 301