## West Texas A&M University **Advising Services Degree Checklist** 2015-2016

(For assistance completing this form, contact Advising Services at 806-651-5300)

NAME:

WT ID:\_\_\_\_\_

\_\_\_\_\_

DATE:\_\_\_\_

## **Biotechnology—Science Option** Department of Life, Earth and Environmental Sciences ANS 348A 651-2570

CORE CURRICULUM COURSES: 42 HOURS +	HRS	
Communication (Code 10)		
ENGL 1301 Introduction to Academic Writing and Argumentation	3	
COMM 1315, 1318, or 1321	3	
Mathematics (Code 20)		
See University Core Requirements below	(3)	
Life and Physical Sciences (Code 30)	(2)	1
See University Core Requirements below Language, Philosophy and Culture (Code 40)	(6)	
ANTH 2351, ENGL 2321*, 2326*, 2331*, 2341*, 2343*; HIST 2311, 2323, 2372; PHIL 1301, 2374; SPAN 2311*, 2312*/**, 2313*, or 2315* Choose 1	3	
Creative Arts (Code 50)	1	1
ARTS 1303, ARTS 1304; DANC 2303; HUMA 1315; MUSI 1306 or 1208 and 1209* (extra MUSI hour moves to Code 90); Or THRE 1310 Choose 1	3	
American History (Code 60)	6	
HIST 1301, 1302, 2301, 2381 Choose 2 Government/Political Science (Code 70)	6	
POSC 2305 and 2306	6	
Social and Behavioral Sciences (Code 80)	Ŭ	
AGBE 2317*; COMM 2377; CRIJ 1301; ECON 2301, 2302;	3	
PSYC 2301; SOCI 1301 Choose 1		
Component Area Option (Code 90) See University Core Requirements below	(6)	T0
Component Area Option (Code 90)	EMEN	
Component Area Option (Code 90) See University Core Requirements below BIOTECHNOLOGY—SCIENCE OPTION MAJOR REQUIRI 83-89 HOURS	EMEN	
Component Area Option (Code 90) See University Core Requirements below BIOTECHNOLOGY—SCIENCE OPTION MAJOR REQUIR 83-89 HOURS A grade of "C" or better must be earned in all courses required for	EMEN	
Component Area Option (Code 90) See University Core Requirements below BIOTECHNOLOGY—SCIENCE OPTION MAJOR REQUIRI 83-89 HOURS A grade of "C" or better must be earned in all courses required for UNIVERSITY CORE REQUIREMENTS: 15 HOURS CORE 20	EMEN or majo	
Component Area Option (Code 90) See University Core Requirements below BIOTECHNOLOGY—SCIENCE OPTION MAJOR REQUIRI 83-89 HOURS A grade of "C" or better must be earned in all courses required for UNIVERSITY CORE REQUIREMENTS: 15 HOURS <u>CORE 20</u> MATH 2413*[3] Calculus I <u>CORE 30</u>	EMEN or majo	
Component Area Option (Code 90) See University Core Requirements below BIOTECHNOLOGY—SCIENCE OPTION MAJOR REQUIRI 83-89 HOURS A grade of "C" or better must be earned in all courses required for UNIVERSITY CORE REQUIREMENTS: 15 HOURS + <u>CORE 20</u> MATH 2413*[3] Calculus I <u>CORE 30</u> BIOL 1406[3] Basic and Contemporary Biology I <u>CORE 30</u>	EMEN or majo 3 3	
Component Area Option (Code 90)         See University Core Requirements below         BIOTECHNOLOGY—SCIENCE OPTION MAJOR REQUIRI         83-89 HOURS         A grade of "C" or better must be earned in all courses required for         UNIVERSITY CORE REQUIREMENTS: 15 HOURS ◆         CORE 20         MATH 2413*[3] Calculus I         CORE 30         BIOL 1406[3] Basic and Contemporary Biology I         CORE 30         BIOL 1407*[3] Basic and Contemporary Biology II         CORE 90         ENGL 1302* Research and Rhetoric OR         ENGL 2311* Introduction to Professional and Technical	EMEN or majo 3 3 3	
Component Area Option (Code 90)         See University Core Requirements below         BIOTECHNOLOGY—SCIENCE OPTION MAJOR REQUIRI         83-89 HOURS         A grade of "C" or better must be earned in all courses required for         UNIVERSITY CORE REQUIREMENTS: 15 HOURS ◆         CORE 20         MATH 2413*[3] Calculus I         CORE 30         BIOL 1406[3] Basic and Contemporary Biology I         CORE 30         BIOL 1407*[3] Basic and Contemporary Biology II         CORE 90         ENGL 1302* Research and Rhetoric OR         ENGL 2311* Introduction to Professional and Technical Communication         CORE 90	EMEN or majo 3 3 3 3 3 3	
Component Area Option (Code 90)           See University Core Requirements below           BIOTECHNOLOGY—SCIENCE OPTION MAJOR REQUIRI           83-89 HOURS           A grade of "C" or better must be earned in all courses required for           UNIVERSITY CORE REQUIREMENTS: 15 HOURS +           CORE 20           MATH 2413*[3] Calculus I           CORE 30           BIOL 1406[3] Basic and Contemporary Biology I           CORE 30           BIOL 1407*[3] Basic and Contemporary Biology II           CORE 90           ENGL 1302* Research and Rhetoric OR           ENGL 2311* Introduction to Professional and Technical Communication           CORE 90           BIOL 1406L[1], 1407L[1], and MATH 2413[1]	EMEN or majo 3 3 3 3 3 3	
Component Area Option (Code 90)         See University Core Requirements below         BIOTECHNOLOGY—SCIENCE OPTION MAJOR REQUIRI         83-89 HOURS         A grade of "C" or better must be earned in all courses required for         UNIVERSITY CORE REQUIREMENTS: 15 HOURS ◆         CORE 20         MATH 2413*[3] Calculus I         CORE 30         BIOL 1406[3] Basic and Contemporary Biology I         CORE 90         ENGL 1302* Research and Rhetoric OR         ENGL 2311* Introduction to Professional and Technical Communication         CORE 90         BIOL 1406L[1], 1407L[1], and MATH 2413[1]         BIOTECHNOLOGY CORE REQUIREMENTS: 68-74 HOURS	EMEN or majo 3 3 3 3 3 3 3 5	
Component Area Option (Code 90)           See University Core Requirements below           BIOTECHNOLOGY—SCIENCE OPTION MAJOR REQUIRI           83-89 HOURS           A grade of "C" or better must be earned in all courses required for           UNIVERSITY CORE REQUIREMENTS: 15 HOURS +           CORE 20           MATH 2413*[3] Calculus I           CORE 30           BIOL 1406[3] Basic and Contemporary Biology I           CORE 30           BIOL 1407*[3] Basic and Contemporary Biology II           CORE 90           ENGL 1302* Research and Rhetoric OR           ENGL 2311* Introduction to Professional and Technical Communication           CORE 90           BIOL 1406L[1], 1407L[1], and MATH 2413[1]           BIOTECHNOLOGY CORE REQUIREMENTS: 68-74 HOURS           BIOL 2572*, 2572L Microbiology	EMEN or majo 3 3 3 3 3 3 3 5 5	
Component Area Option (Code 90)         See University Core Requirements below         BIOTECHNOLOGY—SCIENCE OPTION MAJOR REQUIRI         83-89 HOURS         A grade of "C" or better must be earned in all courses required for         UNIVERSITY CORE REQUIREMENTS: 15 HOURS +         CORE 20         MATH 2413*[3] Calculus I         CORE 30         BIOL 1406[3] Basic and Contemporary Biology I         CORE 30         BIOL 1407*[3] Basic and Contemporary Biology II         CORE 90         ENGL 1302* Research and Rhetoric OR         ENGL 2311* Introduction to Professional and Technical         Communication         CORE 90         BIOL 1406L[1], 1407L[1], and MATH 2413[1]         BIOTECHNOLOGY CORE REQUIREMENTS: 68-74 HOURS         BIOL 2572*, 2572L Microbiology         AGRI/BIOL 3301 Genetics	EMEN or majo 3 3 3 3 3 3 3 5 3 5 3	
Component Area Option (Code 90)           See University Core Requirements below           BIOTECHNOLOGY—SCIENCE OPTION MAJOR REQUIRI           83-89 HOURS           A grade of "C" or better must be earned in all courses required for           UNIVERSITY CORE REQUIREMENTS: 15 HOURS +           CORE 20           MATH 2413*[3] Calculus I           CORE 30           BIOL 1406[3] Basic and Contemporary Biology I           CORE 90           ENGL 1302* Research and Rhetoric OR           ENGL 2311* Introduction to Professional and Technical Communication           CORE 90           BIOL 1406L[1], 1407L[1], and MATH 2413[1]           BIOTECHNOLOGY CORE REQUIREMENTS: 68-74 HOURS           BIOL 2572*, 2572L Microbiology           AGRI/BIOL 3301 Genetics           BIOL 3402*, 3402L Cell Biology	EMEN pr majo 3 3 3 3 3 3 5 5 3 4	
Component Area Option (Code 90)         See University Core Requirements below         BIOTECHNOLOGY—SCIENCE OPTION MAJOR REQUIRI         83-89 HOURS         A grade of "C" or better must be earned in all courses required for         UNIVERSITY CORE REQUIREMENTS: 15 HOURS +         CORE 20         MATH 2413*[3] Calculus I         CORE 30         BIOL 1406[3] Basic and Contemporary Biology I         CORE 30         BIOL 1407*[3] Basic and Contemporary Biology II         CORE 90         BIOL 1407*[3] Basic and Contemporary Biology II         CORE 90         BIOL 1302* Research and Rhetoric OR         ENGL 2311* Introduction to Professional and Technical Communication         CORE 90         BIOL 1406L[1], 1407L[1], and MATH 2413[1]         BIOTECHNOLOGY CORE REQUIREMENTS: 68-74 HOURS         BIOL 2572*, 2572L Microbiology       AGRI/BIOL 3301 Genetics         BIOL 3402*, 3402L Cell Biology       BIOL 4375 Immunology and Serology	EMEN or majo 3 3 3 3 3 3 5 5 3 4 3	

## **Bachelor of Science Degree BS.BIOT (101)**

BIOL 4416, 4416L Introductory Biometry <b>OR</b> AGRI 3318* Agricultural Statistics	3-4		
	3		
BIOT 4385* Biotechnology	-		
CHEM 1411*, 1411L Chemistry I	4		
CHEM 1412*, 1412L Chemistry II	4		
CHEM 2523*, 2523L Organic Chemistry I <b>OR</b> CHEM 2533*, 2533L Elementary Organic Chemistry	5		
CHEM 4323*, 4223L Biochemistry I	5		
CHEM 4324*, 4224L Biochemistry II	5		
PHYS 1401*, 1401L General Physics I	4		
PHYS 1402*, 1402L General Physics II	4		
Take two courses from: BIOT 4095* Problems in Biotechnology BIOT 4098*/*** Internship in Biotechnology BIOL 3350, 3350L Hematology BIOL 3440, 3440L Anatomy and Physiology of Humans BIOL 3451*, 3451L Histology BIOL 3452*, 3452L Embryology CHEM 3511*/****, 3511L Analytical Chemistry MATH 2414* Calculus II	4-9		
ELECTIVES: 4-10 HOURS BY ADVISEMENT—SEE NOTE +			
ELECTIVES	4-10		
MINIMUM HOURS REQUIRED TO COMPLETE DEGREE	120		

+ NOTE: The core curriculum must total exactly 42 hours; excess hours must be moved to the major as an elective or a major requirement and stay within the 120-hour requirement or approved total submitted to the Coordinating Board for degree requirements. Some majors specify particular courses to meet core curriculum requirements when options are available.

\* Indicates prerequisites—see catalog for more information. \*\* Or an equivalent course (second year, second semester) in a foreign language.

\*\*\* For further specialization in biotechnology, an internship in industry or research is recommended.

\*\*\*\* This course is highly recommended.

NOTE: At least 39 hours of advanced work (3000- or 4000-level courses) for which tuition is paid must be earned at WTAMU, and 30 of the final 36 hours counted toward the degree must be earned at WTAMU. A maximum of six semester hours in religion (RELI) and six semester hours in physical education (PHED) courses can count toward a baccalaureate degree.

Note: This is NOT a degree plan. After completing 30 hours, students are encouraged to request an official degree plan in the office of the dean of the College of Agriculture and Natural Sciences, located in the Agriculture and Natural Sciences Building, Room 106 (or call 651-2585). Students who have completed 45 hours will not be allowed to progress without requesting a degree plan.