Tohono O'odham Community College

Associate of Science in Biological and Biomedical Sciences

The A.S. Biological and Biomedical Science (ASBBS) will prepare students for transfer to 4-year veterinary, biology, and biomedical programs. This degree will transfer into University of Arizona's (UA) four-year Pre-vet, Biology, and Biomedical degrees. It will also serve as the core for a future 90-credit program for transfer into UA's Doctorate of Veterinary Medicine (DVM). A degree in Biology and Biomedical Science equips students with the knowledge and skills to pursue careers in medicine, nutrition, physical therapy, physiology, nutrition, ecology, and science education.

Sample Path Progression

If you are a part time student, take half of the classes each semester (fall 1 and spring 1). The following year, take the second half of the classes (fall 1 again and spring 1 again) until you complete the suggested sequence.

Summer 1 (3 cr hr)	
✓ STU 101 Becoming a Master Student (Recommended if student has been out of school for several years)	
Fall 1 (14 cr hr)	**Spring 1 (15 cr hr)**
✓ WRT 101 ✓ HIS 122 ✓ MAT 142H ✓ BIO 100N	✓ WRT 102 ✓ CHM 121N ✓ MAT 151 ✓ BIO 105N
Summer 2 (7 cr hr)	
✓ Humanities course ✓ THO 101 or 106	
Fall 2 (12 cr hr)	**Spring 2 (12 cr hr)**
✓ BIO 181N ✓ BIO 232 ✓ MAT 187	✓ BIO 182N ✓ MAT 220 ✓ SBS Course
Summer 3	
✓ A Student Journey (optional)	
Fall 3 (10 cr hr)	**Spring 3 (10 cr hr)**
✓ PHY 121N ✓ CHM 151N ✓ BIO 298	✓ PHY 122N ✓ CHM 152N ✓ BIO 299

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NAME:	TOCC ID:
TOCC EMAIL:	PHONE NUMBER:
TERM OF ADMISSION:	EXPECTED GRADUATION YEAR/TERM:
ACADEMIC ADVISOR:	FACULTY ADVISOR:

General Education Courses:

- Tohono O'odham Himdag (7 cr): HIS 122 (3 cr) and select one from the following: THO 101, THO 106 (4 cr)
- Mathematics (5 cr): MAT 220 Calculus I or higher (Prerequisite: MAT 151 and MAT 182; or MAT 151 and MAT 187; or placement test equivalent.)
- Humanities and Fine Arts (3 cr): Any courses from the General Education selection
- Social and Behavioral Sciences (3 cr). Any courses from the General Education selection

Note: MAT 142H and courses ending in N (e.g., BIO 100N) are 4 cr. hrs unless otherwise indicated. The rest of the courses are 3 cr. hrs unless otherwise indicated.

COURSE PREFIX	COURSE NAME	REPLACEMENT COURSE	SEMESTER	YEAR	CREDITS	GRADE	MET
HIS 122	Tohono O'odham History and Culture				3		
THO					4		
WRT 101	Writing I				3		
WRT 102	Writing II				3		
MAT 220	Calculus I						
Humanities and Fine Arts:							
					3		
Social and Behavioral Sciences							
					3		
Three Lab-loaded Science Courses							
BIO 105N	Environmental Biology						
BIO 181N	Unity of Life I (prerequisites: WRT 101, BIO 100N, CHM 121N)						
BIO 182N	Unity of Life II (prerequisites: WRT 101, BIO 100N, CHM 121N)						
Total General Education Credits Needed: 36			**Total Earned Credits:**				

Core Requirements:

COURSE PREFIX	COURSE NAME	REPLACEMENT COURSE	SEMESTER	YEAR	CREDITS	GRADE	MET
CHM 151N	General Chemistry I (prerequisite: MAT 151)				5		
CHM 152N	General Chemistry II (prerequisite: CHM 151N)				5		
PHY 121N	Fundamentals of Physics I				5		

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	(prerequisites: MAT 151 and MAT 187)						
PHY 122N	Fundamentals of Physics II (perquisite: PHY 121N)						
BIO 232	Principles of Research in the Natural Sciences (Prerequisite: WRT 101, MAT 151 and 2 science courses)						
BIO 298	Service-Learning Practicum (1 cr hr). Prerequisite: Declared major in AAPPN and completion of general education requirements						
BIO 299	Research Practicum (1 cr hr). Prerequisite: 45 cr hr earned						
Total Core Credits Needed: 25			**Total Earned Credits:**				
Total Degree Credits			**61**				

Program Learning Outcomes:

1. Demonstrate foundational knowledge of concepts and vocabulary in the biological sciences and related areas.
2. Design and conduct research including hypothesis formulation, literature review, experimental design, and data analysis in the context of both Indigenous and Western perspectives.
3. Display a sense of place by identifying biological issues in their community and propose a culturally appropriate solution that incorporates cultural core values.
4. Communicate clearly and accurately in both written and oral form about a contemporary biological issue and argue cogently from evidence to make informed judgments.

Students:

You must secure official approval by your advisor(s) before submitting the **final** Program of Study. By signing or entering your name below, you agree to the following statement: "Students are responsible for complete knowledge of Academic Catalog requirements in their degree plan and for adhering to all policies in Academic Catalog and Student Handbook."

Signature Panel:

Please indicate approval of the curriculum on the Program of Study by placing your signature (formal electronic signatures are permitted) in the space provided.

Student:	Date:

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Academic Advisor:	Date:
Faculty Advisor:	Date:
Registrar:	Date:
Dean of Academics:	Date: