Tohono O'odham Community College

Associate of Science in Physical Science

TOCC's Science programs include an Associate of Science in Physical Science degree for transfer with the following concentrations: Astronomy, Physics, Computer Science and Engineering. All options in the AS Physical Science degree emphasize thorough preparation of students who plan to transfer to four-year colleges and universities after they graduate from TOCC. The AS Physical Science degree can help a student attain admission to one of Arizona's public universities as a junior and prepares students for transfer to fields such as engineering, computer science or physical sciences like astronomy, physics or geology.

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 (6 cr hr)	
✓ SBS Course ✓ HIS 122	
Fall 1 (15 cr hr)	**Spring 1 (15 cr hr)**
✓ WRT 101 ✓ MAT 142H or placement ✓ THO101 or 106 ✓ Science Elective	✓ WRT 102 ✓ Science Elective ✓ MAT 151 ✓ Science Elective
Summer 2 (7 cr hr)	
✓ Science Elective ✓ Humanities course	
Fall 2 (16 cr hr)	**Spring 2 (14 cr hr)**
✓ MAT 187 ✓ CHM 151N ✓ PHY 121N ✓ PHY 298	✓ CHM 152N ✓ PHY 232 ✓ MAT 220 ✓ PHY 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)
- MAT 220 Calculus I (Prerequisite: MAT 142H, 151, and MAT 182; or MAT 142H, 151, and MAT 187; or placement test equivalent)
- Humanities and Fine Arts (3 cr): Any course from the General Education selection
- Social and Behavioral Sciences (3 cr).

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							
CHM 151N	General Chemistry I (Prerequisite: MAT 151 or higher)				5		
CHM 152N	Gen Chemistry II (Prerequisite: CHM 151N with a grade of C or higher)				5		
PHY 121N	Fundamentals of Physics I (Prerequisite: Grade C or higher in MAT187 or concurrently enrolled in MAT 187)				5		
Total General Education Credits Needed: 39			**Total Earned Credits:**				

Core Requirements:

COURSE PREFIX	COURSE NAME	REPLACEMENT COURSE	SEMESTER	YEAR	CREDITS	GRADE	MET
PHY 232	Principles of Research in the Natural				3		

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	Sciences (Prerequisite: WRT 101, MAT 151 and 2 science courses)						
PHY 298	Service Learning Practicum (Prerequisite: Declared major in A.S. Physical Science and completion of general education requirements.)				1		
PHY 299	Research Practicum (Prerequisite: Declared major in A.S. Physical Science and completion of general education requirements.)				1		
			Total Core Credits Needed: 5			**Total Earned Credits:**	

Electives:

Choose any of the following courses: AST 101N, AST 102N, CIS 127, EGR 102N, GEO 101N, GLG 101, any MAT Above 220, PHY 210N, PHY 216N, PHY 295, SCI 100, or SCI 290

COURSE PREFIX	COURSE NAME	REPLACEMENT COURSE	SEMESTER	YEAR	CREDITS	GRADE	MET
			Total Core Credits Needed: 16		**Total Earned Credits:**		
			Total Program Credits Needed: 60		**Total Earned Credits:**		

Program Learning Outcomes:

1. Demonstrate foundational knowledge of science and technical topics relevant to physical sciences or engineering.
2. Design and conduct experiments and proficiently analyze and interpret data in the context of both indigenous and western perspectives in physical sciences or engineering.
3. Display a sense of place, by being able to identify engineering, scientific or technical issues on the Tohono O'odham Nation and propose a culturally-appropriate solution.
4. Apply critical and creative thinking skills to solve problems.

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.

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