

Spencer Emmons

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<https://semmons98.github.io/>

EDUCATION

Arizona State University, Tempe, AZ

- Major: Earth and Space Exploration (Astrophysics) B.S. – Minor: Physics – Certificate: Planetary Science
- Expected Graduation 2026 – Current GPA 3.57 – Dean's List 4 Times
- Classes: Physics I-III, Classical Physics I, Quantum Physics I-II, Astrophysics I-II, Calc I-III, Differential Equations, and Mathematical Methods for Physics I-II

Yavapai College, Prescott, AZ

- Associate of Science – Completed December 2022
- Classes: Calc I-II, BIO I-II, GLG I, and Intro to Meteorology

Architecture, Construction, & Engineering Charter High School, Camarillo, CA.

- Graduated May 2016

Regional Occupational Program, Camarillo, CA

- Computer-Aided Drafting/Design Certificate - Completed June 2013

SKILLS

Programming Languages:

- **Python** – Some Experience
- **LaTeX** – Some Experience
- **MATLAB** – Basic Knowledge

Computer-Aided Drafting/Design Programs:

- **AutoCAD** – Experienced
- **Sketchup** – Some Experience
- **3DS Max** – Some Experience
- **Solidworks** – Basic Knowledge
- **Blender** – Basic Knowledge

Extra-Curriculars and Other Experience

ACE Charter High School LEOs Club

- Member August 2012 to May 2016
- Vice-President August 2015 to December 2016
- President January 2016 to May 2016

2015 Navy STEM Camp, Naval Base Ventura County

- Science, technology, engineering, and mathematics-based day camp during the summer, hosted by Naval Base Ventura County.
- Included classroom and practical experience in orbital mechanics, carpentry, engineering prototypes, and surveying.

ASU Astronomy Club

- Trained to operate the school's telescopes as a member of the club's telescope crew - regularly set them up and took them down for club meetings.

HONORS AND AWARDS

ΣΠΣ - Physics and Astronomy Honor Society, Inducted into the ASU Chapter April 2024

Boy Scouts of America, Eagle Scout

ACE Charter High School, Class of 2016 Valedictorian, various awards for excellence in Physics, Social Science, History, English, and general scholarship.

Noontime Optimist Club of Camarillo: For Community Service (2013), Scholarship (2014), and Combined Community Service; Scholarship; and Leadership (2015).

2015 Navy STEM Camp Environmental Engineering Award: Award for designing the best-performing water filter at the US Navy's STEM Camp.

WORK EXPERIENCE

ASU, Tempe, AZ

- **August 2025 to May 2026** – Undergraduate TA – Taught and graded AST 111 Lab (Fall 2025 Semester) and AST 112 Lab (Spring 2025 Semester)

Safeway, Chino Valley, AZ/Tempe, AZ (After January 2023)

- **February 2018 to Present** – Cashier and (After June 2018) Bakery Clerk – Produced, packaged, and sold various baked goods.

UPS, Prescott Valley, AZ.

- **November 2017 to December 2017** – Seasonal Driver Helper – Quickly delivered packages during the busy holiday season.

Sam's Club, Prescott Valley, AZ.

- **May 2017 to September 2017** – Cashier

All-Trade Engineering & Design, Moorpark, CA.

- **September 2015 to January 2017** – Drafter/Assistant creating architectural and structural drawings primarily using AutoCAD.

RESEARCH EXPERIENCE

Galaxies and Cosmology:

- **Windhorst Cosmology Research Group, ASU**
 - In progress
 - Studying quenching of star formation in galaxies at cosmic noon.
 - Based on JWST Data.
 - Using the Pysersic Python package to find Sérsic profiles of the galaxies in our sample.

Planetary Science and Seismology:

- ***PsycheESE Capstone Project, ASU***
 - Used simulations to study the feasibility of using artificial impacts and seismometers to investigate the interior of asteroids such as (16) Psyche.
 - Poster presented at the Summer 2026 meeting of the American Astronomical Society: <https://aas242-aas.ipostersessions.com/?s=1B-39-73-D9-63-59-E7-2E-81-46-FB-7A-F9-7D-0F-33>
- ***SES 123 “Earth, Solar System, Universe” Final, Crater Counting on Charon, ASU***
 - The final project for this class, used images from NASA's New Horizons mission to count the impact craters on the surface of Pluto's largest moon Charon and determine if and where it is geologically active.

Astrobiology:

- ***SES 310 “Astrobiology” Diagnosing Life White Paper, ASU***
 - The final project for this class, a full class group project in which we wrote a white paper about a method of defining life using a diagnostic system we created comparable to the DSM. This method was intended to be used to interpret potential astronomical biosignatures.