SEAN DILLON

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SUMMARY

I am a 22-year-old student at California State University - Chico, majoring in Physics and minoring in Mathematics. I started out my college career at University of California - Santa Cruz, which I enrolled in directly after high school where I graduated as Class Valedictorian. I chose to leave UCSC after I realized that there was no way I could graduate in 4 years without gaining massive amounts of student loan debt. I then decided to attend Butte College to fulfill the rest of my lower-division general education requirements before enrolling at California State University - Chico.

I have always strived to challenge myself with rigorous courseloads, even if it meant grades that were not exemplary. I believe that knowing *how* to find the information I need is a far-better skill to have than being able to take a timed test without notes. I take pride in my ability to pursue research opportunities, as well as my skills in computational physics.

I wish to go into the field of Astronomy and/or Astrophysics because I believe that I could greatly contribute to the field with my research. I excel at computational physics and using python which, when combined with my lifelong love of the stars and the night sky, would be valuable towards any research in Astrophysics.

EDUCATION

Bachelors of Science in Physics with a Minor in Mathematics 2018 - 2020
California State University, Chico
GPA : 3.09/4.00

Butte Community College 2017 - 2018
GPA : 3.02/4.00

University of California, Santa Cruz 2015 - 2017
GPA: 3.09/4.00

Member of Society of Physics Students 2018 - present
Member of American Physics Society 2018 - present
Member of American Astronomical Society 2018 - present

COURSEWORK

Grade	Course
Mathematics	
A-	Calculus for Scientists and Engineers A
B	Calculus for Scientists and Engineers B *Calculus, Rogawski, 2nd Ed.*
C	Vector Calculus A
C+	Vector Calculus B *Vector Calculus, Marsden/Tromba, 6th Ed.*
B	Elementary Differential Equation *A First Course in Differential Equations, Zill, 5th Ed.*
C	Linear Algebra *Linear Algebra and its Applications, Lay, 5th Ed.*
B-	Partial Differential Equations *Fourier Series and Boundary Value Problems, Brown/Churchill, 8th Ed.*
Computation	
B	Introduction to Python *Think Python: How to Think Like A Computer Scientist, Downey, Version 2.0.17*
A-	Computational Physics *Computational Physics, Newman*
Spring 2020	Advanced Computational Physics
Physics	
C	Introduction to Physics A
B-	Introduction to Physics A Lab
B	Introduction to Physics B
B+	Introduction to Physics B Lab
B	Introduction to Physics C
A-	Introduction to Physics C Lab *Physics for Scientists and Engineers, Giancolli, 4th Ed.*
A	Success in Physics
B	Introduction to Modern Physics *Modern Physics, Harris, 2nd Ed.*
C	Thermal Physics *Thermal Physics, Baierlein*

In Progress Quantum Mechanics A
Spring 2020 Quantum Mechanics B
Introduction to Quantum Mechanics, Griffiths, 2nd/3rd Ed.

In Progress Analytical Mechanics A
Classical Mechanics, Taylor

C Electricity and Magnetism A
In Progress Electricity and Magnetism B
Introduction to Electrodynamics, Griffiths, 4th Ed.

C Electronics for Scientists
Electronics with Discrete Components, Galvez

In Progress Advanced Laboratory
An Introduction to Error Analysis, Taylor, 2nd Ed.

Science Ed.
In Progress Learning Assistant Training

TECHNICAL SKILLS

Tools LabVIEW (moderate-beginner)
Platforms MS Office, Mathematica, Python 3.x+ (advanced)

PUBLICATIONS

The Sixteenth Data Release of the Sloan Digital Sky Surveys: Final release from the Extended Baryon Oscillation Spectroscopic Survey, and First Release from APOGEE-2S
Masters, et. al., Published to arXiv on 12/9/19, submitted to ApJS

HI-MaNGA: Data Release 2
Stark, et. al., In Progress

RESEARCH PRESENTATIONS

Talks 2019 APS Far West Section Meeting at Stanford University
A Principle Component Analysis of the HI Mass Fraction of Galaxies in the MaNGA Survey
2019 Keck Northeast Astronomy Consortium at Vassar College
A Principle Component Analysis of the HI Mass Fraction of Galaxies in the MaNGA Survey

Posters 2020 Winter AAS Meeting in Honolulu, Hawai'i
A Principle Component Analysis of the HI Mass Fraction of Galaxies in the MaNGA Survey
2019 College of Natural Sciences Poster Session
Modeling Convection in Slowly Rotating Sun-like Stars

INTERNSHIP/RESEARCH

Summer REU Astronomy Internship at Haverford College — May-August 2019
PHYS 499 Undergraduate Research at California State University - Chico — August 2018 - Present

CLUBS AND ORGANIZATIONS

American Astronomical Society — September 2018 - Present
American Physical Society — September 2018 - Present
Society of Physics Students — September 2018 - Present

WORK EXPERIENCE

Tutor — October 2017 - July 2018; August 2018 - Present

I was hired as a math tutor at Butte College's Center for Academic Success, where I held drop-in tutoring hours for students needing assistance in Math courses ranging from Introductory Algebra and Pre-Calculus to Linear Algebra and Differential Equations. After enrolling at California State University - Chico, I was able to volunteer my time to hold drop-in tutoring with the Society of Physics Students. I was responsible for developing teaching methods to help students understand college-level mathematics, keeping records of tutoring sessions and suggesting strategies for improvement, promoting alternate resources to assist student achievement, and motivating older students who were re-entering education after taking extensive leaves.

Grader — October 2017 - Present

I started as a grader for a College Algebra course at Butte College before coming to Chico State and grading papers for various lower-division physics courses, both algebra-based (for non-Physics/Engineering majors) as well as calculus-based. I was responsible for determining earned scores on tests and homework, ensuring mathematical techniques were being used correctly in solving problems, analyzing homework quality, and ensuring that any questions I had regarding the homework were quickly addressed with the instructor

Learning Assistant — August 2019 - Present

I was employed as a Learning Assistant(LA) for a lower-division, algebra-based mechanics course at the start of the Fall 2019 semester. Next semester, I will be an LA for a lower-division, calculus-based mechanics course. My responsibilities include attending all class-meetings, helping students who require assistance, monitoring classroom activities, as well as enrolling in a 2-unit Science Education Pedagogy class which provides opportunities to understand how best to help students in lower-division science courses.

PERSONAL PROFILE

Date of Birth	2 May 1997
Address	25200 Wilson St. Los Molinos, CA, USA, 96055
Languages known	English

DECLARATION

I hereby declare that above provided information is true to best of my knowledge belief.

Place :
Date :

SEAN MICHAEL DILLON