INNOVATIVE TALENTS
SCIENCE TRAINING
PROGRAM

2024 SPRING QUARTER

Here is to certify that Fangyuan Yu has attended the course: Frontiers of Exoplanetary Science in the Innovative Talents Science Training Program from March 8th, to May 26th, 2024.

OFFICIAL TRANSCRIPT

Program	Professor	Class Period	Grade
Frontiers of Exoplanetary Science	Joshua Winn	03/08/2024~05/26/2024	96.00

The curriculum design of the course focuses on drawing lessons from the educational concepts of both General Education and Research-Based Learning of world-class universities.

Professor: Joshua Winn
Home Institution: Princeton University

GRADE	EQUIVALENT PERCENTAGES	GRADE	EQUIVALENT PERCENTAGES
A+	90-100	C+	67-69
A	85-89	C	63-66
A-	80-84	C-	60-62
B+	77-79	D+	57-59
B	73-76	D	53-56
B-	70-72	D-	50-52

Other Grading Information: Nonacademic Credit=Attended, Audited.

For more information visit ke.neoschool.com/student/#/passport/login and go to the Grading, Credits and Transcripts page in the Student Services Section.

Please note: The course syllabus and outlines are strictly in consistent with professor's home institutions. All lectures and readings are in English and all students works are also performed in English. Academy consistency is therefore maintained in accordance with the academic requirements at their respective colleges.

Neoscholar Education Group Inc. General Corporation SEAL 2020

ISSUED TO:

Name: Fangyuan Yu **Student ID:** 521120910163*

Class Period: 48 class hours

*Transcript valid only if bearing the Professor's Signature.

NEOSCHOLAR®
Educated by the 1%, Be the 1%

www.neoscholar.com

Frontiers of Exoplanetary Science

2024 ,ITSTP

Basic Information

Course Title	Frontiers of Exoplanetary Science
Instructor	Joshua Winn
Prerequisites	Advanced high school physics (classical mechanics) and single-variable calculus, willingness to learn Python for data analysis and plotting
Required Text & Tools	1.All material will be provided in class in the form of PowerPoints. 2.Computer with Python and Jupyter Notebook installed (we can help with the installation)
Grading Criteria	Exam: 50% Homework: 40% Class Participation: 10%
Course Key Words	Theoretical Physics. Astrophysics. Astronomy. Cosmology. Dark Matter. Gravitational. Relativity.

Schedule

No.	Topics
Lecture 1	1. Overview of the Solar System and our place in the universe.
Lecture 2	2. Kepler's laws of planetary motion.
Lecture 3	3. Planetary radiation and radiative balance.
Lecture 4	4. Astronomical measurements, Part I: astrometry and photometry.
Lecture 5	5. Astronomical measurements, Part II: spectroscopy.
Lecture 6	6. Stars: basic properties and classification.
Lecture 7	7. Exoplanet detection, Part I: the direct-imaging, astrometric, and Doppler methods.
Lecture 8	8. Exoplanet detection, Part II: the transit method.
Lecture 9	9. Exoplanet discoveries.
Lecture 10	10. Unsolved problems and future prospects.