Department of Earth Sciences Courses List(2012-2023) – Undergraduate Program

Note:

- 1. The number with the break () indicates the credits.
- 2. Color Code: Eligible Course, Astronomy, Atmospheric Science, Geology, Geophysics, Ocean, Sci. Edu./Edu. Program, Integrated Course.
- 3. Course with "*" are Master Joint Courses; courses in bold and italic are taught in English in the corresponding semester.

101-1 (2012 Fall)	Required	Selected
Freshman (Year 1)	General Meteorology(including Lab.)(3) Physical Geology(including Lab.)(3)	Earthquake Observation and Disaster(3)
Sophomore (Year 2)		Numerical Analysis(3) Environmental Geology(3) Mineralogy(including Lab.)(3)* Observational Seismology(3)
Junior (Year 3)		Galaxies(3) Atmospheric Dynamics(I)(3) Computer Application in Earth Sciences(3) Geodynamics(3)* Planetary Geology(3)* Earth Science Data Processing(3)* Physical Oceanography(3)* Introduction to Marine Chemistry(3)* Curriculum Design in Earth Sciences(3)*
Senior (Year 4)		Climatology(3)* Teaching Materials and Methods: Earth Sciences(2) Teaching Practicum: Earth Sciences(I)(2)
101-2 (2013 Spring)	Required	Selected
Freshman (Year 1)	Astronomy(including Lab.)(3) Introduction to Oceanography(including Lab.)(3)	
Sophomore (Year 2)	Introduction to Geophysics (including Lab.)(3)	Astronomical Observations(Including Lab)(3) Fluid Dynamics(3) Atmospheric Observations(including Lab.)(3) Applied Mathematics(II)(3)
Junior (Year 3)		The Development of Cosmology(3) Active Galaxies(3)* Atmospheric Dynamics(II)(3) Meteorological Statistics(3)* Historical Geology(including Lab.)(3)

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		Advanced Field Geological Techniques(3)*
		Field Geology(including Lab.)(3)*
		Geochemistry(3)*
		Petrology(including Lab.)(3)*
		Stable Isotope Geology(3)*
		Earthquakes of the Week(3)*
		1 1
		Geophysical Methods(3)*
		Paleomagnetism(3)*
		Introduction to Earth Science(including Lab.)(2)
Senior		Radio Astronomy(3)*
(Year 4)		Teaching Practicum: Earth Sciences(II)(2)
102-1	Required	Selected
(2013 Fall)		
Freshman	General Meteorology(including	Earthquake Observation and Disaster(3)
(Year 1)	Lab.)(3)	(6)
(1001 -)	Physical Geology(including	
	Lab.)(3)	
Conhamara	, , ,	The Solar System(2)
Sophomore	Applied Mathematics(I)(3)	The Solar System(3)
(Year 2)		Atmospheric Thermodynamics(3)
		Environmental Geology(3)
		Introductory Marine Biology(2)
Junior		Atmospheric Dynamics(I)(3)
(Year 3)		Computer Application in Earth Sciences(3)
		Climatology(3)*
		Synoptic Meteorology(3)*
		Hydrogeology(3)
		Continent and Supercontinent Evolution(3)*
		Mineralogy(including Lab.)(3)*
		Structural Geology(including Lab.)(3)*
		Earth Science Data Processing(3)*
		Ocean Circulation(3)*
Senior		Teaching Materials and Methods: Earth
(Year 4)		Sciences(2)
		Teaching Practicum: Earth Sciences(I)(2)
102-2	Required	Selected
(2014 Spring)	_	
Freshman	Astronomy(including Lab.)(3)	
(Year 1)	Introduction to Oceanography	
(1001 1)	(including Lab.)(3)	
Canhama		Astronomical Observations/last start 1/2/
Sophomore		Astronomical Observations(Including Lab)(3)
(Year 2)	Geophysics(including Lab.)(3)	Fluid Dynamics(3)
		Atmospheric Observations(including Lab.)(3)
Junior		Atmospheric Dynamics(II)(3)
(Year 3)		Weather Forecast and Analysis(3)
		Meteorological Statistics(3)*
		Tropical Meteorology(3)*
		Paleontology(including Lab.)(3)
		Field Geology(including Lab.)(3)*
		Geochemistry(3)*
		Geological Survey(3)*

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		Petrology(including Lab.)(3)*
		Sedimentology and Stratigraphy(3)*
		Earthquakes of the Week(3)*
		Paleomagnetism(3)*
		Seismotectonics(3)*
		Innovation Trends in Oceanography(3)*
		Historical Perspectives on Science
		Development(3)*
		Introduction to Earth Science(including Lab.)(2)
Senior		
		Teaching Practicum: Earth Sciences(II)(2)
(Year 4)	Donning d	Calantad
103-1	Required	Selected
(2014 Fall)		
Freshman		Earthquake Observation and Disaster(2)
(Year 1)	Lab.)(3)	
	Physical Geology(including	
	Lab.)(3)	
Sophomore	Applied Mathematics(I)(3)	Galaxies(3)
(Year 2)	Introduction to	Introduction to Planetary Science(3)
	Geophysics(including Lab.)(3)	Numerical Analysis(3)
		Environmental Geology(3)
Junior		Atmospheric Dynamics(I)(3)
(Year 3)		Computer Application in Earth Sciences(3)
(10410)		Climatology(3)*
		Numerical Weather Prediction(3)*
		Synoptic Meteorology(3)*
		Geodynamics(3)*
		Planetary Geology(3)*
		Stable Isotope Geology(3)*
		Structural Geology(including Lab.)(3)*
		Introduction to Marine Chemistry(3)*
		Introduction to Marine Physics(3)*
Senior		Teaching Materials and Methods: Earth
(Year 4)		Sciences(2)
		Teaching Practicum: Earth Sciences(I)(2)
103-2	Required	Selected
(2015 Spring)		
Freshman	Astronomy(including Lab.)(3)	
(Year 1)	Introduction to Oceanography	
,	(including Lab.)(3)	
Sophomore		Atmospheric Observations(including Lab.)(3)
(Year 2)		Atmospheric Thermodynamics(3)
(Teal 2)		Fluid Dynamics(3)
		Observational Seismology(3)
		Applied Mathematics(II)(3)
Junior		Active Galaxies(3)*
(Year 3)		Space Weather(3)
		Atmospheric Dynamics(II)(3)*
		Meteorological Statistics(3)*
I		Tropical Meteorology(3)*

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		Advanced Field Geological Techniques(3)*
		Historical Geology(including Lab.)(3)
		Paleomagnetism(3)*
		Petrology(including Lab.)(3)*
		Historical Perspectives on Science
		Development(3)*
		Introduction to Earth Science(including Lab.)(2)
Senior		Radio Astronomy(3)*
(Year 4)		Teaching Practicum: Earth Sciences(II)(2)
104-1	Required	Selected
(2015 Fall)	_	
Freshman	General Meteorology(including	Earthquake Observation and Disaster(2)
(Year 1)	Lab.)(3)	
	Physical Geology(including	
	Lab.)(3)	
Sophomore	Applied Mathematics(I)(3)	Introduction to Planetary Science(3)
(Year 2)	Introduction to	Environmental Geology(3)
	Geophysics(including Lab.)(3)	Environmental Science(2)
	Coopinysies(including Eds.)(5)	Introductory Marine Biology(2)
Junior		The Development of Cosmology(3)
(Year 3)		Atmospheric Dynamics(I)(3)
		Atmospheric Physics(3)
		Computer Application in Earth Sciences(3)
		Climatology(3)*
		Synoptic Meteorology(3)*
		Geochemistry(3)*
		Stable Isotope Geology(3)*
		Structural Geology(including Lab.)(3)*
		Introduction to Marine Chemistry(3)*
		Introduction to Marine Physics(3)*
Senior		Teaching Materials and Methods: Earth
(Year 4)		Sciences(2)
		Teaching Practicum: Earth Sciences(I)(2)
104-2	Required	Selected
(2016 Spring)	_	
Freshman	Astronomy(including Lab.)(3)	
(Year 1)	Introduction to Oceanography	
,	(including Lab.)(3)	
Sophomore		Astronomical Observations(Including Lab)(3)
(Year 2)		Atmospheric Observations(including Lab.)(3)
,		Fluid Dynamics(3)
		Applied Mathematics(II)(3)
Junior		Physical Concepts in Astronomy(3)
(Year 3)		Weather Forecast and Analysis(3)
(Teal 3)		
		Atmospheric Dynamics(II)(3)*
		Meteorological Statistics(3)*
		Hydrogeology(3)
		Paleontology(including Lab.)(3)
		Continent and Supercontinent Evolution(3)*

		Field Coolers (including Lab)/2)*
		Field Geology(including Lab.)(3)* \
		Geological Survey(3)*
		Earthquakes of the Week(3)*
		Paleomagnetism(3)*
		Seismotectonics(3)*
		Ocean Circulation(3)*
		Historical Perspectives on Science
		Development(3)*
		Introduction to Earth Science(including Lab.)(2)
Senior		Radio Astronomy(3)*
(Year 4)		Teaching Practicum: Earth Sciences(II)(2)
105-1	Required	Selected
(2016 Fall)		00.0000
Freshman	General Meteorology(including	Earthquake Observation and Disaster(2)
(Year 1)	Lab.)(3)	Earthquake Observation and Disaster(2)
(100.1)	Physical Geology(including	
	Lab.)(3)	
Conhomoro	, , ,	The Color System(2)
=	Applied Mathematics(I)(3)	The Solar System(3)
(Year 2)		Atmospheric Thermodynamics(3)
		Environmental Geology(3)
		Observational Seismology(3)
Junior		Active Galaxies(3)*
(Year 3)		Atmospheric Dynamics(I)(3)
		Computer Application in Earth Sciences(3)
		Climatology(3)*
		Numerical Weather Prediction(3)*
		Synoptic Meteorology(3)*
		Economic Geology(3)*
		Petrology(including Lab.)(3)*
		Stable Isotope Geology(3)*
		Introduction to Marine Chemistry(3)*
		Introduction to Marine Physics(3)*
		Historical Perspectives on Science
		Development(3)*
Senior		Teaching Materials and Methods: Earth
(Year 4)		Sciences(2)
(Teal 4)		Teaching Practicum: Earth Sciences(I)(2)
105-2	Poguired	Selected
	Required	Selected
(2017 Spring)	Consul Material and and in aluding	Fouthervalio Observation and Dispetar(2)
Freshman		Earthquake Observation and Disaster(2)
(Year 1)	Lab.)(3)	
	Physical Geology(including	
_	Lab.)(3)	
-	Applied Mathematics(I)(3)	The Solar System(3)
(Year 2)		Atmospheric Thermodynamics(3)
		Environmental Geology(3)
		Observational Seismology(3)
Junior		Active Galaxies(3)*
I .		Atmospheric Dynamics(I)(3)

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		Computer Application in Earth Sciences(3)
		Climatology(3)*
		Numerical Weather Prediction(3)*
		Synoptic Meteorology(3)*
		Economic Geology(3)*
		Petrology(including Lab.)(3)*
		Stable Isotope Geology(3)*
		Introduction to Marine Physics(3)*
		Introduction to Marine Chemistry(3)*
		Historical Perspectives on Science
		Development(3)*
Senior		Teaching Materials and Methods: Earth
(Year 4)		Sciences(2)
(1641 4)		Teaching Practicum: Earth Sciences(I)(2)
106-1	Required	Selected
(2017 Fall)	Required	Selected
	Company Nathana and province business	Forth works Observation and Disease (2)
Freshman		Earthquake Observation and Disaster(2)
(Year 1)	Lab.)(3)	
	Physical Geology(including	
	Lab.)(3)	
Sophomore	Applied Mathematics(I)(3)	Introduction to Planetary Science(3)
(Year 2)		The Development of Cosmology(3)
		Environmental Geology(3)
		Observational Seismology(3)
		Introductory Marine Biology(2)
Junior		Atmospheric Dynamics(I)(3)
(Year 3)		Atmospheric Physics(3)
		Computer Application in Earth Sciences(3)
		Synoptic Meteorology(3)*
		Geochemistry(3)*
		Petrology(including Lab.)(3)*
		Stable Isotope Geology(3)*
		Structural Geology(including Lab.)(3)*
		Introduction to Marine Physics(3)*
		Innovation Trends in Oceanography(3)*
Senior		Teaching Materials and Methods: Earth
(Year 4)		Sciences(2)
(10011)		Teaching Practicum: Earth Sciences(I)(2)
106-2	Required	Selected
(2018 Spring)	Required	Sciected
Freshman	Astronomy(including Lab.)(3)	
(Year 1)	Introduction to	
(1Eal I)		
	Oceanography(including	
Camba	Lab.)(3)	Atmoorphopio Ohoo as although and the Late 1700
Sophomore	Introduction to	Atmospheric Observations(including Lab.)(3)
(Year 2)	Geophysics(including Lab.)(3)	Astronomical Observations(Including Lab)(3)
		Applied Mathematics(II)(3)
Junior		Physical Concepts in Astronomy(3)
(Year 3)		Atmospheric Dynamics(II)(3)*
1		Climatology(3)*

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		Meteorological Statistics(3)*
		Field Geology(including Lab.)(3)*
		Geological Survey(3)*
		Geology of Taiwan(3)*
		Mineralogy(including Lab.)(3)*
		Paleontology(including Lab.)(3)*
		Seismotectonics(3)*
		Paleomagnetism(3)*
		Introduction to Earth Science(including Lab.)(2)
		Earth Science Practicum(I)(3)
		Earth System and Comparative Planetology(3)*
Senior		Radio Astronomy(3)*
(Year 4)		Teaching Practicum: Earth Sciences(II)(2)
107-1	Required	Selected
(2018 Fall)		
Freshman	General Meteorology(including	Earthquake Observation and Disaster(2)
(Year 1)	Lab.)(3)	
	Physical Geology(including	
	Lab.)(3)	
Sophomore	Applied Mathematics(I)(3)	Galaxies(3)
(Year 2)	Introduction to	The Solar System(3)
(Geophysics(including Lab.)(3)	Atmospheric Observations(including Lab.)(3)
		Atmospheric Thermodynamics(3)
		Environmental Geology(3)
Junior		
		Atmospheric Dynamics(I)(3)
(Year 3)		Climatology(3)*
		Numerical Weather Prediction(3)*
		Synoptic Meteorology(3)*
		Petrology(including Lab.)(3)*
		Planetary Geology(3)*
		Stable Isotope Geology(3)*
		Structural Geology(including Lab.)(3)*
		Earthquakes of the Week(3)*
		Ocean Circulation(3)*
		Introduction to Marine Physics(3)*
		Teaching Materials and Methods: Earth
		Sciences(2)
		Earth Science Practicum(II)(3)
		Scientific Field Expeditions of Earth Systems(3)*
Senior		
		Teaching Practicum: Earth Sciences(I)(2)
(Year 4)	Described.	Calastad
107-2	Required	Selected
(2019 Spring)	Ashronomy /including Lab 1/21	
Freshman	Astronomy(including Lab.)(3)	
(Year 1)	Introduction to	
	Oceanography(including	
	Lab.)(3)	
Sophomore		Fluid Dynamics(3)
(Year 2)		Observational Seismology(3)
		Petrology (including Lab.)(3)*

l	1	Space Weether/2)
Junior (Year 2)		Space Weather(3)
(Year 3)		Active Galaxies(3)*
		Computer Application in Earth Sciences(3)
		Tropical Meteorology(3)*
		Atmospheric Dynamics (II)(3)*
		Hydrogeology(3)
		Geodynamics(3)*
		Field Geology(including Lab.)(3)*
		Advanced Field Geological Techniques(3)*
		Sedimentology and Stratigraphy(3)*
		Continent and Supercontinent Evolution(3)*
		Principle of Geotechnical Engineering(3)*
		Geology of Taiwan(3)*
		Topics in Geophysics(3)*
		Physics and Chemistry of the Earth's Interior(3)*
		Seismotectonics(3)*
		Water Wave Theory(3)*
		Introduction to Earth Science(including Lab.)(2)
		Earth Science Practicum(I)(3)
		Earth System and Comparative Planetology(3)*
Senior		Radio Astronomy(3)*
(Year 4)		Teaching Practicum: Earth Sciences(II)(2)
108-1	Required	Selected
(2019 Fall)	Required	Selected
Freshman	General Meteorology/including	Earthquake Observation and Disaster(2)
(Year 1)	Lab.)(3)	Earthquake Observation and Disaster(2)
(Tear I)	Physical Geology(including	
	Lab.)(3)	
Sophomore	Applied Mathematics(I)(3)	Galaxies(3)
(Year 2)		
(Tear Z)	Introduction to	Astronomical Observations (Including Lab)(3)
	Geophysics(including Lab.)(3)	Introduction to Planetary Science(3)
		Numerical Analysis(3)
		Environmental Geology(3)
		Introductory Marine Biology(2)
		Computers and Earth Science Education(2)
Junior		Atmospheric Dynamics(I)(3)
(Year 3)		Climatology(3)*
		Synoptic Meteorology(3)*
		Historical Geology (including Lab.)(3)
		Geochemistry(3)*
		Mineralogy (including Lab.)(3)*
		Structural Geology(including Lab.)(3)*
		Introduction to Petroleum Geology (3)*
		Earth Science Data Processing(3)*
		Earthquakes of the Week(3)*
		Ocean Circulation(3)*
		Introduction to Marine Physics(3)*
		Innovation Trends in Oceanography(3)*
İ		
		Teaching Materials and Methods: Earth

		Earth Science Practicum(I)(3)
		Earth Science Practicum(II)(3)*
Senior		Teaching Practicum: Earth Sciences(I)(2)
(Year 4)		(1)(-1)
108-2 (2020 Spring)	Required	Selected
Freshman	Astronomy (including Lab.)(3)	Introduction to Earth Science (including Lab.)(2)
(Year 1)	Introduction to Oceanography (including Lab.)(3)	introduction to Eurth Science (including Eus.)(2)
Sophomore	(merading Edd.)(e)	The Development of Cosmology(3)
(Year 2)		Atmospheric Observations (including Lab.)(3) Observational Seismology(3)
		Applied Mathematics (II)(3)
Junior		Physical Concepts in Astronomy(3)
(Year 3)		Weather Forecast and Analysis(3)
,		Computer Application in Earth Sciences(3)
		Meteorological Statistics(3)*
		Atmospheric Dynamics (II)(3)*
		Stable Isotope Geology(3)*
		Petrology (including Lab.)(3)*
		Field Geology (including Lab.)(3)*
		Economic Geology(3)*
		Geology of Taiwan(3)*
		Principle of Geotechnical Engineering(3)*
		Seismotectonics(3)*
		Paleomagnetism(3)*
		Geophysical Planetary Exploration(3)*
		Water Wave Theory(3)*
		Earth System and Comparative Planetology(3)*
Senior		Teaching Practicum: Earth Sciences(II)(2)
(Year 4)		
109-1	Required	Selected
(2020 Fall)		
Freshman	Physical Geology (including	Introduction to Earth Science (including Lab.)(2)
(Year 1)	Lab.)(3))
Sophomore	Introduction to Geophysics	Atmospheric Thermodynamics(3)
(Year 2)	(including Lab.)(3)	Atmospheric Observations (including Lab.) (3)
	Applied Mathematics(I)(3)	Environmental Geology(3)
		Mineralogy (including Lab.) (3)* Galaxies(3)
		The Solar System(3)
		Introductory Marine Biology(2)
Junior		Climatology(3)*
(Year 3)		Synoptic Meteorology(3)*
(Tear 3)		Atmospheric Dynamics (I) (3)
		Geochemistry (3)*
		Introduction to Petroleum Geology(3)*
		Sedimentology and Stratigraphy(3)*
		Structural Geology (including Lab.) (3)*
		Earthquakes of the Week(3)*

		Earth Science Data Processing(3)*
		Ocean Circulation(3)*
		Innovation Trends in Oceanography(3)*
		Introduction to Marine Physics(3)*
		Earth Science Practicum (I) (3)
		Earth Science Practicum (II) (3)*
		Introduction to Marine Geology(3)*
		Scientific Field Expeditions of Earth Systems) (3)*
Senior		Radio Astronomy(3)*
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(Year 4)		Teaching Practicum: Earth Sciences(I)(2)
		Teaching Materials and Methods: Earth
		Sciences(2)
109-2	Required	Selected
(2021 Spring)		
Freshman		Introduction to Earth Science (including Lab.)(2)
(Year 1)	General Meteorology(including	Observational Seismology(3)
	Lab.)(3)	
	Introduction to Oceanography	
	(including Lab.)(3)	
Sophomore		Fluid Dynamics (3)
(Year 2)		Introduction to Astroinformatics(3)
Junior		Active Galaxies(3)*
(Year 3)		Atmospheric Dynamics (II)(3)*
(10010)		Computer Application in Earth Sciences(3)
		Continent and Supercontinent Evolution(3)*
		Earth System and Comparative Planetology(3)*
		Earth Science Aspects of Renewable Energy(3)*
		Field Geology (including Lab.)(3)*
		Geodynamics(3)*
		Geology of Taiwan(3)*
		Geophysical Planetary Exploration(3)*
		Paleontology (including Lab.)
		Petroleum Geochemistry(3)*
		Petrology (including Lab.)(3)*
		Physics and Chemistry of the Earth's Interior(3)*
		Principle of Geotechnical Engineering(3)*
		Regional Geology(3)*
		Satellite Data Analysis Techniques Applied to
		Oceanography(3)*
		Space Weather(3)
		Tropical Meteorology(3)*
Senior		Teaching Practicum: Earth Sciences(II)(2)
(Year 4)		
110-1	Required	Selected
(2021 Fall)		
Freshman	Introduction to Geophysics	Introduction to Earth Science (including Lab.) (2)
(Year 1)	(including Lab.)B(3)	The state of the s
, ,	Physical Geology (including	
	Lab.)(3)	
Sonhomoro	, , ,	Astronomical Observations (Including Lab)(2)
Sophomore	Introduction to Geophysics	Astronomical Observations (Including Lab)(3)

(Year 2)	(including Lab.)A(3)	Atmospheric Observations (including Lab.)(3)
(Tear 2)	Applied Mathematics(I)(3)	Fluid Climatology(3)*
		Dynamics (3)
		Introduction to Astroinformatics(3)
		Introductory Marine Biology(2)
		Introduction to Planetary Science(3)
		Mineralogy (including Lab.)(3)*
		The Development of Cosmology(3)
Junior		Atmospheric Dynamics (I)(3)
(Year 3)		Atmospheric Physics(3)
(1641 3)		Earthquakes of the Week(3)*
		Earth Science Data Processing(3)*
		Earth Science Practicum (I)(3)
		Earth Science Practicum (II)(3)
		Geochemistry(3)*
		Introduction to Petroleum Geology(3)*
		Introduction to Marine Physics(3)*
		Innovation Trends in Oceanography(3)*
		Marine Resources and Sustainable
		Development(3)*
		Ocean Circulation(3)*
		Planet and Earth Systems Scientific Research
		Writing Program (I)(3)
		Structural Geology (including Lab.)(3)*
		Teaching Materials and Methods: Earth (2)
		Time Series Analysis(3)*
Senior		Radio Astronomy(3)*
(Year 4)		Sciences Teaching Practicum: Earth Sciences(I)(2)
110-2	Required	Selected
(2022 Spring)	•	
Freshman	Astronomy (including Lab.)(3)	Observational Seismology(3)
(Year 1)	General Meteorology(including	211 7
ì	Lab.)(3)	
	Introduction to Oceanography	
	(including Lab.)(3)	
Sophomore		Applied Mathematics (II)(3)
(Year 2)		Planet and Earth Systems Scientific Research
		Writing Program (II)(3)
Junior		
pulliol		Physical Concepts in Astronomy(3)
		Physical Concepts in Astronomy(3) Computer Application in Earth Sciences(3)
(Year 3)		Computer Application in Earth Sciences(3)
		Computer Application in Earth Sciences(3) Weather Forecast and Analysis(3)
		Computer Application in Earth Sciences(3) Weather Forecast and Analysis(3) Meteorological Statistics(3)*
		Computer Application in Earth Sciences(3) Weather Forecast and Analysis(3) Meteorological Statistics(3)* Planetary Geology(3)*
		Computer Application in Earth Sciences(3) Weather Forecast and Analysis(3) Meteorological Statistics(3)* Planetary Geology(3)* Atmospheric Dynamics (II)*
		Computer Application in Earth Sciences(3) Weather Forecast and Analysis(3) Meteorological Statistics(3)* Planetary Geology(3)* Atmospheric Dynamics (II)* Stable Isotope Geology(3)*
		Computer Application in Earth Sciences(3) Weather Forecast and Analysis(3) Meteorological Statistics(3)* Planetary Geology(3)* Atmospheric Dynamics (II)* Stable Isotope Geology(3)* Petrology (including Lab.)(3)*
		Computer Application in Earth Sciences(3) Weather Forecast and Analysis(3) Meteorological Statistics(3)* Planetary Geology(3)* Atmospheric Dynamics (II)* Stable Isotope Geology(3)* Petrology (including Lab.)(3)* Field Geology (including Lab.)(3)*
		Computer Application in Earth Sciences(3) Weather Forecast and Analysis(3) Meteorological Statistics(3)* Planetary Geology(3)* Atmospheric Dynamics (II)* Stable Isotope Geology(3)* Petrology (including Lab.)(3)*

		Geology of Taiwan(3)*
		Principle of Geotechnical Engineering(3)*
		Petroleum Geochemistry(3)*
		Earth Science Aspects of Renewable Energy(2)*
		Geophysical Planetary Exploration(3)*
		Satellite Data Analysis Techniques Applied to
		Oceanography(3)*
		Introduction to Marine Geology(3)*
		Earth System and Comparative Planetology(3)*
		Inquiry and Practical Work in Science(2)*
Senior (Year 4)		Teaching Practicum: Earth Sciences(II)(2)
111-1 (2022 Fall)	Required	Selected
Freshman	Introduction to Geophysics	Introduction to Earth Science (including Lab.)(2)
(Year 1)	(including Lab.)(3)	introduction to Earth Science (melading Eds.)(2)
(Tear 1)	Physical Geology (including	
Sophomore	Lab.)(3) Applied Mathematics(I)(3)	Astronomical Observations (Including Lab)(3)
· -	Applied Mathematics(1)(5)	, , , ,
(Year 2)		Astronomy in Taiwanese(3)
		Atmospheric Thermodynamics(3)
		Atmospheric Observations (including Lab.)(3)
		Environmental Geology(3)
		Planet and Earth Systems Scientific Research
		Writing Program (I)(3)
Junior		Atmospheric Dynamics (I)(3)
(Year 3)		Numerical Weather Prediction(3)*
		Synoptic Meteorology(3)*
		Geodynamics(3)*
		Mineralogy (including Lab.)(3)*
		Structural Geology (including Lab.)(3)*
		Introduction to Petroleum Geology(3)*
		Time Series Analysis(3)*
		Earth Science Data Processing(3)*
		Earthquakes of the Week(3)*
		Innovation Trends in Oceanography(3)*
		Introduction to Marine Physics(3)*
		Marine Resources and Sustainable
		Development(3)*
		Earth Science Practicum (I)(3)
		Earth Science Practicum (II)(3)*
		Earth System Sciences and Disaster Risk Assessment(3)*
		Teaching Materials and Methods: Earth (2)
Senior		Radio Astronomy(3)*
(Year 4)		Sciences Teaching Practicum: Earth Sciences(I)(2)
111-2	Required	Selected
(2023 Spring)	<u> </u>	33.33.3
Freshman	Astronomy(including	
i i Comman	Astronomy(including	

(Voor 1)	Lab.)(3)	
(Year 1)		
	General Meteorology(including	
	Lab.)(3)	
	Introduction to	
	Oceanography(including Lab.)(3)	
Sophomore		The Solar System(3)
(Year 2)		Computer Application in Earth Sciences(3)
		Fluid Dynamics(3)
		Petrology (including Lab.)(3)*
		Planet and Earth Systems Scientific Research
		Writing Program (II)(3)
Junior		Active Galaxies(3)*
(Year 3)		Atmospheric Dynamics (II)(3)*
(Climate Change Science and Practical Data
		Analysis (3)*
		Field Geology (including Lab.)(3)*
		Advanced Field Geological Techniques(3)*
		Sedimentology and Stratigraphy(3)*
		Continent and Supercontinent Evolution(3)*
		Geology of Taiwan(3)*
		Volcanology and Volcanic Hazards (Including Lab.)
		(3)*
		Principle of Geotechnical Engineering(3)*
		Petroleum Geochemistry(3)*
		Earth Science Aspects of Renewable Energy(2)*
		Historical Geology (including Lab.)(3)
		Physics and Chemistry of the Earth's Interior(3)*
		Introductory Marine Biology(3)*
		Earth System and Comparative Planetology(3)*
		Scientific Field Expeditions of Earth Systems(3)*
		Inquiry and Practical Work in Science(2)*
Senior (Year 4)		Teaching Practicum: Earth Sciences(I)(2)
112-1	Required	Selected
(2023 Fall)		
Freshman	Introduction to Geophysics	Introduction to Earth Science (including Lab.)(2)
(Year 1)	(including Lab.)(3)	
	Physical Geology (including	
Sophomore	Lab.)(3) Applied Mathematics(I)(3)	Astronomy in Taiwanese(3)
(Year 2)	Applied iviathematics(1)(3)	Galaxies(3)
1001 27		Introduction to Astroinformatics(3)
		Atmospheric Observations (including Lab.)(3)
		Numerical Analysis(3)
		Environmental Geology(3)

	Mineralogy (including Lab.)(3)*
Junior	Atmospheric Dynamics (I)(3)
(Year 3)	Synoptic Meteorology(3)*
	Climatology(3)*
	Geochemistry(3)*
	Geological Survey(3)*
	Introduction to Petroleum Geology(3)*
	Structural Geology (including Lab.)(3)*
	Earth Science Data Processing(3)*
	Time Series Analysis(3)*
	Innovation Trends in Oceanography(3)*
	Introduction to Marine Chemistry(3)*
	Introduction to Marine Geology(3)*
	Introduction to Marine Physics(3)*
	Marine Resources and Sustainable
	Development(3)*
	Earth Science Practicum (I)(3)
	Earth Science Practicum (II)(3)*
	Teaching Materials and Methods: Earth (2)
Senior	Radio Astronomy(3)*
(Year 4)	Sciences Teaching Practicum: Earth Sciences(I)(2)