

**Climate and Space Sciences and Engineering
2015-2016 Sample Schedule: B.S.E Climate and Meteorology**

	Semester:	1	2	3	4	5	6	7	8
Subjects required by all programs (55 hrs.)									
	<i>hrs.</i>								
Mathematics 115, 116, 215, and 216	16	4	4	4	4	-	-	-	-
ENG 100 Intro to Engr	4	4	-	-	-	-	-	-	-
ENG 101 Intro to Computers	4	-	4	-	-	-	-	-	-
Chemistry 125/126 and 130 or Chemistry 210/211	5	5	-	-	-	-	-	-	-
Physics 140/141; 240/241	10	-	5	5	-	-	-	-	-
Humanities and Social Sciences	16	4	4	4	4	-	-	-	-
Required Core Courses (38 hrs.)									
CLIMATE 320 Earth and Space System Evolution	3	-	-	3	-	-	-	-	-
CLIMATE 321 Earth and Space System Dynamics	3	-	-	-	3	-	-	-	-
CLIMATE 323 Earth System Analysis	4	-	-	-	4	-	-	-	-
CLIMATE 350 Atmospheric Thermodynamics	3	-	-	-	-	-	3	-	-
CLIMATE 380 Introduction to Radiative Transfer	3	-	-	-	-	3	-	-	-
CLIMATE 401 Geophysical Fluid Dynamics	3	-	-	-	-	3	-	-	-
CLIMATE 410 Earth System Modeling	4	-	-	-	-	-	-	4	-
CLIMATE 414 Weather Systems	3	-	-	-	-	-	3	-	-
CLIMATE 462 Instrumentation for Atmos & Space Sciences	4	-	-	-	-	-	4	-	-
CLIMATE 405 Data Analysis and Visualization (Note 1)	4	-	-	-	-	-	4	-	-
CLIMATE 455 Capstone Design (Note 2)	4	-	-	-	-	-	-	-	4
Concentrations: (select one)									
Meteorology: (35 hrs. total)									
CLIMATE 411 Cloud and Precipitation Processes	3	-	-	-	-	-	-	-	3
CLIMATE 405 Remote Sensing (Note 3)	3	-	-	-	-	-	-	-	3
CLIMATE 422 Boundary Layer Meteorology	4	-	-	-	-	4	-	-	-
CLIMATE 440 Meteorological Analysis Laboratory	4	-	-	-	-	-	-	4	-
Technical Electives	12	-	-	-	-	4	-	4	4
Unrestricted Elective	9	-	-	-	-	3	3	3	-
Total	128	17	17	16	15	17	17	15	14
Climate Science and Impacts Engineering: (35 hrs. total) (Note 4)									
CLIMATE 473 Climate Physics	3	-	-	-	-	-	-	-	3
Statistics /GIS Elective	3	-	-	-	-	3	-	-	-
Climate/Climate Change Elective (See Note 4)	3	-	-	-	-	-	-	-	3
Energy/Sustainability Elective (See Note 4)	3	-	-	-	-	-	-	3	-
Interactions Elective (See Note 4)	4	-	-	-	-	-	-	-	4
Technical Electives	10	-	-	-	-	3	-	4	3
Unrestricted Electives	9	-	-	-	-	3	3	3	-
Total	128	17	17	16	15	15	17	14	17

Note 1. New Course

Note 2. New Course. Student may take year-long (2 CR each term) CLIMATE 499 Directed Study as a Senior Thesis option. Note 3. New Course. Student may elect to take NRE 541 Remote Sensing (4 credits)

Note 4. Use the following electives Tables for Climate Science and Impacts Engineering Electives.

Suggested Climate/Climate Change Electives		
Class Number	Class Title	Credit Hrs
CLIMATE 405	Carbon-Climate Interactions	3
CLIMATE 474	Ice Sheets, Glaciers and Climate Change	3
CLIMATE 480	Climate Change: The Move To Action	3
Suggested Atmosphere/Land/Ocean Interactions Electives		
Class Number	Class Title	Credit Hrs
CLIMATE 421	Introduction to Physical Oceanography	3

CLIMATE 420/NAVARCH 420	Environmental Ocean Dynamics	4
CLIMATE 467	Biogeochemical Cycles	3
CLIMATE 475	Earth System Interactions	4
EEB 320/ENVIRON 311	Rivers, Lakes, and Wetlands: Introduction to Aquatic Ecosystems	4
EEB 380	Oceanography: Marine Ecology	3
Suggested Energy/ Sustainability Electives		
Class Number	Class Title	Credit Hrs
CEE 265	Sustainable Engineering Practices	3
CEE 365	Environmental Engineering Principles	4
EARTH 344	Sustainable and Fossil Energy: Options and Consequences	3
ENVIRON 312	Environmental Politics and Policy	3
ENVIRON 367	Global Enterprise and Sustainable Development	3
ME 433	Advanced Energy Solutions	3
NRE 574	Sustainable Energy Systems	3
Suggested Statistics/GIS Electives		
Class Number	Class Title	Credit Hrs
CEE 270	Statistical Methods for Data Analysis and Uncertainty Modeling	3
EARTH 408	Introduction to GIS in the Earth Sciences	3
NRE 531	Principles of GIS	4
STATS 250	Introduction to Statistics and Data Analysis	4
STATS 412	Introduction to Probability and Statistics	3
STATS 425/MATH425	Introduction to Probability	3

