

DEES Climate System Science Major Checklist

Name: UNI: Points required: **43.5**
 Conc: YOG:

	Points	Semester	Course #
I Foundational Courses (2) Climate System (EESC2100)	(7.5 points)	<input type="text"/>	<input type="text"/>
One of the following:			
Global Warming for Global Leaders (EESC 1009)	<input type="text"/>	<input type="text"/>	<input type="text"/>
Oceanography (EESC 1030)	<input type="text"/>	<input type="text"/>	<input type="text"/>
Environmental Risks & Disasters (EESC 1201)	<input type="text"/>	<input type="text"/>	<input type="text"/>
Earth Resources & Sustainable Development (EESC 1600/4600)	<input type="text"/>	<input type="text"/>	<input type="text"/>
Solid Earth System (EESC 2200)	<input type="text"/>	<input type="text"/>	<input type="text"/>
Life System (EESC 2300/EESB 2002)	<input type="text"/>	<input type="text"/>	<input type="text"/>
Science for Sustainable Development (EESC 2330)	<input type="text"/>	<input type="text"/>	<input type="text"/>

II. Supporting Courses (4) Calculus (MATH 1101 or 1102)	(12 points)	<input type="text"/>	<input type="text"/>
Three of the following:			
Physics I (PHYS 1201)	<input type="text"/>	<input type="text"/>	<input type="text"/>
Physics II (PHYS 1202)	<input type="text"/>	<input type="text"/>	<input type="text"/>
Chemistry I (CHEM 1403)	<input type="text"/>	<input type="text"/>	<input type="text"/>
Chemistry II (CHEM 1404)	<input type="text"/>	<input type="text"/>	<input type="text"/>
EEEB 2001 (Env Bio) Life System (EESC 2300)	<input type="text"/>	<input type="text"/>	<input type="text"/>

III. Climate System Core (5) >1 Paleoclimate Course (see list below)	(15 points)	<input type="text"/>	<input type="text"/>
>1 Modern Climate Course (see list below)	<input type="text"/>	<input type="text"/>	<input type="text"/>
>3 More Courses in either Paleoclimate, Modern Climate, Climate System, or Supporting EESC Topic (see list below)	<input type="text"/>	<input type="text"/>	<input type="text"/>

IV. Climate Solutions, Justice, Policy & Communication (2) Any 2 courses on Solutions, Justice, Policy & Communication (see list below)	(6 points)	<input type="text"/>	<input type="text"/>
---	------------	----------------------	----------------------

V. Climate System Capstone (1) Independent Research in CSS (EESC 3904)	(3 points)	<input type="text"/>	<input type="text"/>
OR Senior Seminar (EESC 3901)	<input type="text"/>	<input type="text"/>	<input type="text"/>
*taken twice, in Fall & Spring OR in sequence with EESC BC3800, OR:	<input type="text"/>	<input type="text"/>	<input type="text"/>
Approved Field Course focused on the Climate System	<input type="text"/>	<input type="text"/>	<input type="text"/>
*must be proposed to & approved by DUS. Field course must be minimum 126 hours in the field - e.g. 9 hours a day for 2 full weeks.			

Research Advisor:

Project Title:

CLIMATE SYSTEM CORE - 15 points (five courses)	
At least one:	Paleoclimate Course
EESC GU4235	Sea Level Change*
EESC GU4330	Terrestrial Paleoclimate
EESC GU4480	Paleobiology & Earth Systems
EESC GU4920	Paleoceanography
EESC GU4937	Cenozoic Paleoceanography
At least one:	Modern Climate Course
EESC UN3031	Chemistry of Climate
EESC UN3109	Climate Physics *
EESC GU4008	Intro to Atmospheric Sciences*
EESC GU4020	Humans and the Carbon Cycle
EESC GU4835	Wetlands & Climate Change
EESC GU4923	Biological Oceanography
EESC GU4925	Physical Oceanography
EESC GU4926	Chemical Oceanography
EESC GU4940	Climate Thermodynamics*
EESC GU4930	Earth's Ocean and Atmospheres
Could include:	Other Climate System Courses
EESC BC3025	Hydrology
EESC UN3101	Geochemistry Habitable Planet
EESC UN3201	Solid Earth Dynamics
EESC GU4220	Glaciology*
EESC GU4835	Wetlands & Climate Change
EESC GU4885	Chemistry of Continental Waters
EESC GU4923	Biological Oceanography
EESC GU4924	Intro to Atmospheric Chem*
EESC GU4926	Chemical Oceanography
Could include one:	Supporting EESC Course
EESC UN3400	Computational Earth Science
EESC GU4210	Geophysical Fluid Dynamics*
EESC GU4223	Sedimentary Geology
EESC GU4230	Crustal Deformation
EESC GU4887	Isotope Geochem I
EESC GU4888	Stable Isotope Geochem.

* May require pre-requisites beyond those required for this major

CLIMATE SOLUTIONS, JUSTICE, POLICY, COMMUNICATION	
6 points (2 courses)	
Any two from entire list:	
	Solutions Courses
ARCH 3120	City, Landscape and Ecology
EAAE 2002/4002	Alternative Energy Resources
EAAE 2100	Better Planet by Design
EAAE E4300	Introduction to Carbon Management
EAAE E4301	Carbon Storage
EAAE E4302	Carbon Capture
	Climate Justice, Policy, Economics
ANTH 3861	Anthropology of the Anthropocene
ANTH BC3932	Climate Ch./Glob. Migration/Human Rights
SOCI BC3244	Environmental Sociology
ECON BC3039	Environmental & Nat. Res Economics*
EESC BC3040	Environmental Law
POLS GU4814	Global Energy and Climate Change: Security/Geopolitics
POLS UN3648	Governing the Global Economy
POLS GU4863	Internat. Political Economy of Developing Countries
POLS BC3605	Global Politics of Climate Change
SDEV UN2100	Intro to Climate Justice
SDEV UN2050	Environmental Policy and Governance
SDEV UN3355	Climate Change and Law
SDEV UN3360	Disasters and Development

* May require pre-requisites beyond those required for this major

<p>Directors of Undergraduate Studies: Dr. Terry Plank Dr. Joerg Schaefer dees-dus@columbia.edu</p>	<p>DEES Office: 557 Schermerhorn Extension</p>	<p>Undergraduate Program Manager: Julianna Russo jr4432@columbia.edu</p>
---	--	---