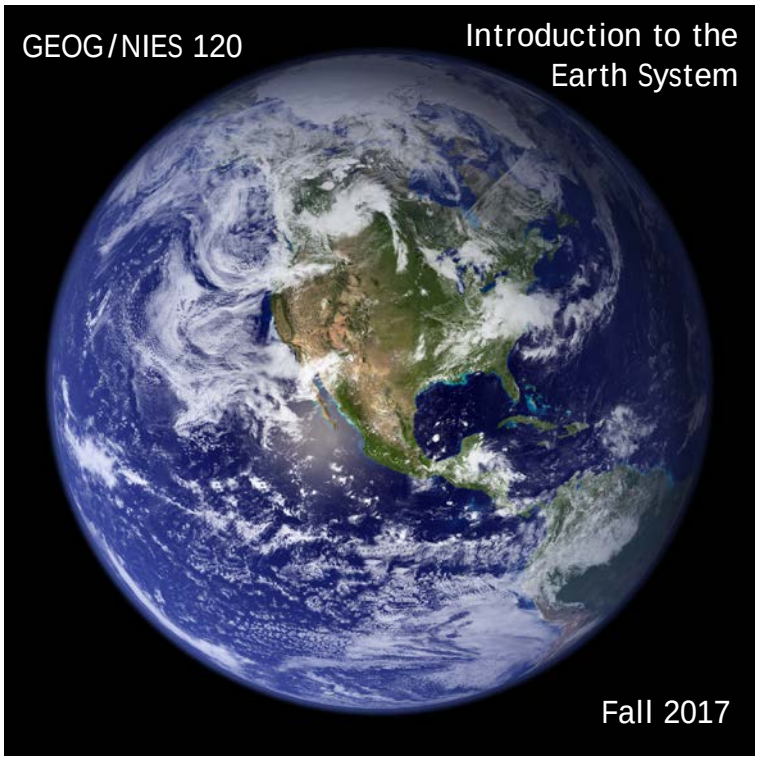

Image: NASA MODIS, http://visibleearth.nasa.gov/view.php?id=57723

Welcome to the Earth System. The Earth is the place where we live, the water that we drink, the air that we breathe, and the home to known life in the universe. The earth is a ***system***, composed of many interacting subsystems: the atmosphere, hydrosphere, biosphere, geosphere, and anthrosphere. The earth is ***dynamic.*** We live in a swiftly changing world, characterized by rapidly changing climates, shifting landscapes, and growing human populations. Now, more than ever, it's essential to understand how the Earth system works, how it affects our livelihoods, and how we are altering the physical environment of our planet.

Geography/NIES 120 provides a critical foundation for students into how the Earth system works and what makes Earth livable. You will gain a deeper appreciation for the diverse processes that shape our local, regional and global landscapes. Many students take this course to fulfill their physical science requirement. Others use it as a gateway to majors and careers in Geography, Environmental Studies, and Environmental Science.

INSTRUCTORS

Professor Ken Keefover-Ring, 115C Science Hall, ken.keefoverring@wisc.edu
Office Hours: Mondays 1:30-2:30 pm and Tuesdays 12:30-1:30 pm, or by appointment.

Professor Erika Marin-Spiotta, 223 Science Hall, marinspiotta@wisc.edu
Office Hours: Tuesdays and Wednesdays 12:30-1:30 pm, or by appointment.

TEACHING ASSISTANTS: **David Fastovich, (Head TA)**, **Allie Jensen,** and **Niwaeli Kimambo**. See the Discussion Syllabus for their office hours and contact information.

FORMAT: Lecture 2 hours per week and discussion section 1 hour per week. Discussion sections elaborate the principal points of class lectures and discuss topics of student interest related to lecture material.

LECTURES: Lecture Section - Monday and Wednesday 11-11:50 am, Humanities 3650

CREDITS: 3 credits in physical science.

TEXT: *Physical Geography, 5th edition*, Mason et al., 2015, Oxford University Press
Geosystems, 8th Edition, Christopherson, 2012, Prentice-Hall (Chapters 10 & 20 only. These two chapters will be posted to Learn@UW.)

EXAMINATIONS: Four 50-minute in-class examinations will be given at roughly 4-week intervals. The last exam will be on the last day of instruction. Each exam will stress the material covered

since the previous exam. There is no final comprehensive exam during the end-of-semester examination week.

GRADING: The final grade will be determined from the cumulative points achieved on the class examinations and the discussion section. Each class exam will be worth approximately 30 points and the discussion section grade will count for 50 points. Discussion section points will be earned from worksheets and activities described on the syllabus provided by the TAs at the first section meeting. The potential total number of points for the course is 170.

DISCUSSION: Discussion section points are based on attendance (*which is mandatory*), in-class exercises and discussion participation and comprise 30% of your total grade. The schedule of discussion activities will be handed out in section. **NOTE**: Discussion sections will not meet until the week of September 11th, the first full week of instruction.

PREREQUISITES: There are no prerequisite courses for this class, but students are expected to be geographically literate. You should know the location of the world's continents and oceans, the location of the U.S. 50 states, and be able to read latitude and longitude on a map. Much of this information is included in the first few chapters of your textbook or in any student atlas.

HONORS: If you are registered for honors, please contact your TA early in the semester to discuss the project. The Honors projects are administered by the TAs.

EXTRA CREDIT: Extra credit is not offered.

ATTENDANCE: Attendance at class lectures is your responsibility; however, students who regularly come to class, take good notes and ask questions have greater success. We welcome questions and discussion during and after lecture and in our office hours. Please restrict laptop or other electronic device use during class time to the course and be aware that your activities on your computer can be distracting to your fellow students.

ACADEMIC MISCONDUCT: Instances of plagiarism, cheating, and other forms of academic misconduct have serious consequences for the students involved. To avoid any possibility of misunderstanding, you are strongly encouraged to consult the campus academic integrity web page: students.wisc.edu/doso/acadintegrity.html. The documents referenced by this page contain explanations of what constitutes misconduct and related policies and procedures.

ONLINE RESOURCES: learnuw.wisc.edu/ *Password-protected course materials, including 1)* **News***, used by the instructors for class announcements, 2)* **Content***, where the instructors post materials for download, 3)* **Discussion***, containing bulletin boards for student questions and feedback, and 4)* **Grades***.*

ADDITIONAL RESOURCES FOR STUDENTS:

- McBurney Disability Resource Center. We are happy to work with students who need additional accommodations. Please talk to one of the professors early on in the semester so we can best accommodate you. http://www.mcburney.wisc.edu/
- Multicultural Student Center. The MSC exists to make sure students of all backgrounds are successful at UW. https://msc.wisc.edu
- GUTS (Greater University Tutoring Service) tutoring. See their homepage to inquire about individual tutors/general tutoring sessions. http://guts.studentorg.wisc.edu/

- UW Writing Center. See their website for information about drop-in or scheduled appointments with expert writers. They will help with just about any type of writing assignments/needs. http://www.writing.wisc.edu/
- L&S Student and Academic Affairs. See their website for issues regarding medical absences and other emergencies that may affect your ability to attend courses and complete coursework. http://saa.ls.wisc.edu
- Any student facing food and/or housing insecurity and who believes this may affect their performance in the course, is urged to contact the Dean of Students for support: https://doso.students.wisc.edu/student-assistance/. Please notify one of the professors if you don't feel comfortable doing so, so they can help you access resources. As a student at the University of Wisconsin – Madison there are numerous resources available to you, including your Deans. Each student has two Deans, an **Academic Dean,** whose role is to assist students with academic matters pertaining to his/her/their respective School or College, and the Dean **of Students**, whose role is to assist students with personal matters.

Lecture Schedule – Fall 2017:

Week 1	W	Sep 6	1) Introduction to Geography and Earth System Science, Units 1-3[1,2]
Week 2	M	Sep 11	2) EMR, Earth-Sun Fundamentals, Unit 4, What If: Sunless Earth? https://what-if.xkcd.com/49/
	W	Sep 13	3) Atmosphere Fundamentals, Composition, Structure, Unit 6 + pp 94-95, What If: Rising Steadily? https://what-if.xkcd.com/64/
Week 3	M	Sep 18	4) Earth's Energy Cycle, Unit 5
	W	Sep 20	5) Earth's Energy Cycle and Temperature, Units 5, 7
Week 4	M	Sep 25	6) Atmospheric Forces and Motion, Unit 8, What If: Global Windstorm? http://on.mash.to/1tzdktj
	W	Sep 27	7) Atmospheric Moisture and Stability, Unit 11 + pp 84-86, What If: Raindrop: https://what-if.xkcd.com/12/
Week 5	M	Oct 2	8) ***** FIRST EXAM *****
	W	Oct 4	9) Atmospheric Circulation, Unit 9
Week 6	M	Oct 9	10) Weather, Fronts, and Mid-latitude Cyclones, Units 12, 13
	W	Oct 11	11) Ocean Structure and Circulation, Unit 10, What If: Drain the Oceans. https://what-if.xkcd.com/53/
Week 7	M	Oct 16	12) Water Cycle and Water Resources, Units 11, 38
	W	Oct 18	13) Global Climates and Biomes, Christopherson Chapters 10, 20
Week 8	M	Oct 23	14) Global Climate Change, Units 18,19
	W	Oct 25	15) ***** SECOND EXAM *****
Week 9	M	Oct 30	16) Human Effects on Global Biogeochemical Cycles, Unit 20, Unit 24
	W	Nov 1	17) Soil Systems & Soil Forming Environments, Units 21-23
Week 10	M	Nov 6	18) Characteristics of Earth's Surface and Interior, Units 27-29
	W	Nov 8	19) Characteristics of Earth's Surface and Interior, Units 27-29
Week 11	M	Nov 13	20) Earth's Tectonic Systems, Units 30-31
	W	Nov 15	21) Volcanic and Earthquake Hazards, Units 32-34
Week 12	M	Nov 20	22) ***** THIRD EXAM *****
	W	Nov 22	23) Weathering Processes, Units 35, 36, 42
	Nov 23-26		**Thanksgiving break**
Week 13	M	Nov 27	24) Mass-Movement Processes and Hazards, Units 36, 37
	W	Nov 29	25) Fluvial Erosion and River Processes, Units 38-41
Week 14	M	Dec 4	26) Arid Systems, Units 35, 47
	W	Dec 6	27) Glacier Landforms and Sediments, Units 43-45
Week 15	M	Dec 11	28) Responses of Glacier Systems to Climate Change, Units 46, 18, 19
	W	Dec 13	29) ***** FOURTH EXAM *****

[1]Unit 1 will be covered in lecture– you are expected to read Units 2-3 on your own and be responsible for this material.

[2]'Units' always refers to readings from the Mason textbook