Course Description:
This course provides an introduction to the field of sustainable development, drawing primarily from social science and policy studies. It offers a critical examination of the concept of sustainable development, showing how factors like economics, population, culture, politics and inequality complicate its goals. Students will learn how different social science disciplines (political science, demography, economics, geography, history, law, and sociology) approach challenges of sustainable development across a variety of topics (fisheries, climate change, air pollution, consumption, energy, conservation, and water management). The course provides students with some of the fundamental concepts, vocabulary, and analytical tools to pursue and think critically about sustainable development.

Learning Outcomes: By the end of this course, students should be able to:

- Critically analyze an array of sustainable development challenges using analytical tools presented in the course
- Illustrate and analyze the complex interactions among the human population, the environment, global politics, and the economy
- Present and characterize potential solutions to sustainable development obstacles

Required Texts: There three required texts for this course. All other readings will be provided to you via Courseworks.


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1 Enter on Claremont Ave. between 119th and 120th (west of Fiske/Milbank Hall of Barnard). Sign in with your Columbia ID at the reception to obtain a Guest Pass.
Highly Recommended:


**Recitation Leaders:** Your Recitation Leaders will serve as your mentors for the course. You are required to attend one recitation each week. All students must be registered to a recitation section. Sign up is available on the course website.

Carolyn Hayek
- Email: ch3062@columbia.edu
- Office Hours and Location: T 1:30-3:30pm, by appointment. Lehman Library

Charles Taylor
- Email: cat2180@columbia.edu
- Office Hours and Location: W 1-2:20pm, by appointment. Lehman Library

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<thead>
<tr>
<th>Section</th>
<th>Recitation Leader</th>
<th>Day/Time</th>
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<td>1</td>
<td>Charles</td>
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<td>Schermerhorn 506</td>
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<td>Charles</td>
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<td>3</td>
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<td>4</td>
<td>Carolyn</td>
<td>R 2:45-3:45pm</td>
<td>Schermerhorn 506</td>
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**Course Assistants:** Course assistants will run skills-based, optional workshops and help-rooms should you require additional help with your work and with building skills needed for success in sustainable development, such as in computer software, data analysis, resume and cover letter, internship applications etc. Course assistants also handle course logistics and administration as well as grading.

Mario Saraiva        Email: mhs2195@columbia.edu
Antonia Samur        Email: afs2163@columbia.edu

**Workshop/Help-room Hours:** TBD, will be announced via Coursework
Evaluation:
- 20% Midterm Exam
- 30% Final Exam (Cumulative)
- 45% 3 Assignments, 1 Term Project
  - Assignment 1: Economics Problem Set (10%)
  - Assignment 2: Demography Problem Set (10%)
  - Assignment 3: Policy Essay (10%)
  - Term Project (15%)
- 5% Participation
  - 2.5% in lecture via polls or activities
  - 2.5% recitation attendance and contribution

Assignments: Three assignments based on economics, demography, and policy will be assigned throughout the semester. They are each worth 10% of your grade.

They are due by 5pm on **Feb 12th, March 26rd, and April 16th** respectively.

Cases and Term Project: This semester we will base our inquiry into the challenges of sustainable development on four key case studies: (1) Singapore and Indonesia’s Haze Problem; (2) India’s Ganges River Pollution; (3) The Great Pacific Garbage Patch; (4) Conserving Central Africa’s Mountain Gorillas. You will find at the end of this syllabus a brief description of these four cases. Choose one of the four cases from which to build a Term Project that is worth 15% of your grade. Three options are available: 1) write an economics commentary, 2) write a policy-oriented paper; or 3) pursue a solutions-oriented creative exercise. The options provide you with the flexibility to choose what you want to do based on your interests and goals.

  Project Outline: **Due 5pm March 9th**
  Term Project: **Due 5pm April 30th**

Exams: There will be a Midterm Exam and a Final Exam (cumulative). Exams will be closed notes and closed book.

  Midterm Exam: **February 22nd, in class**
  Final Exam: **May 10th, 9am-12pm (projected, subject to change)**

Course Policies:
You may appeal your grade on a graded component of the course up to **one week** after it has been returned to you. You must submit, in writing, a detailed explanation of why you should have been awarded credit for your answers, along with your original work. The Instructors reserve the right to review the entire graded component and the outcome of your appeal could be no change, a grade increase, or a grade decrease.

- In general, no make-up exams will be held and no extensions will be provided. If you have religious observances during the scheduled grading events of this course, please let the Instructors know during the first week of class. In case of a medical or personal emergency you are asked to alert the Instructor as soon as conveniently possible and provide proof (e.g. a note from a doctor or health services). Exceptions are provided on a case-by-case basis.
Only under exceptional circumstances would extensions be provided. You must contact your Recitation Leader in advance of perceived difficulties in meeting the course deadlines.

Participation in Lecture and Recitations:
- How will participation in lecture be evaluated? Regular attendance is essential and expected. Active learning is a vital component for this course. We will also make use of PollEverywhere and you should register with your university email by the second week of class. You may also be asked to write short (1-3 minute) responses in lecture. Prompts will be provided and these papers aim to help you reflect on what you have learned in lecture or in the readings due that day. You are also invited to give your personal reaction.
- Recitations in this course will complement the content of the course and provide a platform for interactive learning and critical thinking. Your attendance is recorded for recitations. You have one unexcused absence for recitations.
- Assessment of participation is formative. You will be graded on a check-basis, so don’t worry if you don’t have enough time to produce very polished responses. We want to know you are actively thinking and developing.

Academic Integrity: Please familiarize yourselves with the Academic Integrity Policy at Columbia. Collaborative scholarship requires the study of other scholars’ work, the free discussion of such work, and the explicit acknowledgement of those ideas in any work that inform our own. This exchange of ideas relies upon a mutual trust that sources, opinions, facts, and insights will be properly noted and carefully credited. You must:
1. Be responsible for the full citations of others’ ideas in all of your research papers and projects;
2. Be scrupulously honest when taking your examinations;
3. Always submit your own work and not that of another student, scholar, or internet agent.

Any breach of this intellectual responsibility is a breach of faith with the rest of our academic community and cannot be tolerated. Should we detect any student misconduct, we will report the incidents swiftly to the Directors of Undergraduate Studies and to your Advising Deans, in accordance with Columbia Procedures. Infractions may result in grade reductions, written warnings, disciplinary probation, suspension, or dismissal.

Accommodations: If you are a student with a disability and have a DS-certified Accommodation Letter please come to office hours to confirm your accommodation needs. If you believe that you might have a disability that requires accommodation, you should contact Disability Services at 212-64-2388 and disability@columbia.edu.
Tentative Course Outline: A detailed outline with reading assignments and their due dates are posted on Coursework’s Syllabus page. Please refer to Courseworks for the latest outline/reading assignments, as they are subject to change.

1. **Jan 16** Alice in Wonderland, London, and Easter Island: The need for the study of sustainability
2. **Jan 18** Defining sustainability and sustainable development: conflicting views and thinkers
   b. What are the tools that we need to analyze sustainability questions?
3. **Jan 23** Well-being and Economists’ vision of sustainability
   a. What is well-being? How do we measure well-being?
   b. What is GDP? What is capital? What is human and natural capital?
   c. Strong vs. weak sustainability; Environmental vs. Ecological Economics
4. **Jan 25** The Economics Language
   a. Efficiency, marginal analysis
   b. Types of goods; Externalities
5. **Jan 30** Tragedy of the Commons
   a. Free-riding and the state of fisheries
   b. Growth dynamics and fisheries economics
   c. Policy solutions: Fisheries Councils, UNCLOS, MPAs, taxes, ITQs
6. **Feb 1** The Great Pacific Garbage Patch (Guest Lecture: Kyle Frischkorn, DEES)
7. **Feb 6** Intertemporal Welfare: Climate Change
   a. Discovery of global warming
   b. Prisoner’s Dilemma
   c. Discounting and the Social Costs of Carbon
   d. Policy and law: UNFCCC, IPCC, COPs; Instrument Choice
8. **Feb 8** The Porter Hypothesis: Green and Competitive?
   a. Are environmental regulations bad for business?
   b. Trade and Environmental Kuznets Curve

**Feb 12 Assignment 1 Due**

9. **Feb 13** Economic Growth as a Sustainability Challenge
   a. Solow and the Neoclassical Growth Model
10. **Feb 15** Poverty traps: Industrial trap, savings trap, demographic trap
    a. Development institutions, programs, and aid
    b. Big Thinkers: Jeffrey Sachs, William Easterly, Esther Duflo
    c. Millennium Villages and the Sustainable Development Goals
    d. Evaluating development programs
11. **Feb 20** Behavior, Happiness, and Sustainable Development
    a. Nudging and libertarian paternalism
    b. Economics of Happiness

Modified: 1/16/18
Feb 22 Midterm Exam

DISTINGUISHED GUEST LECTURES: PROFESSOR JOEL COHEN

1. **Feb 27** Do we have a population problem?
   - a. Brief history of human population and concerns; Demographic transition
   - b. Demography of the rich, the poor, and the middle class

2. **Mar 1** Populations continued
   - a. What kills people
   - b. Contraception: technology, culture, ethics; unintended pregnancy
   - c. National family planning programs, reproductive rights

3. **Mar 6** Migration and Immigration: State of the World

4. **Mar 8** Food, hunger, and the human carrying capacity; Race, Religion, and Population

**March 9 Project Outline Due**

**SPRING BREAK**

**DALE**

1. **Mar 20** Power, culture, and politics in sustainable development
   - a. Historical sources of inequality: colonialism, racism, geography
   - b. Geopolitics

2. **Mar 22** Environmental Justice
   - a. Roots of the movement and current dimensions
   - b. Consider connections to case studies

3. **Mar 27** Global environmental policy: Institutions and structures
   - a. Sovereignty and the modern state system
   - b. IGOs: United Nations, World Bank, IMF
   - c. Civil society and individuals
   - d. International environmental regimes

4. **Mar 29** Global environmental policy: Climate change mitigation
   - a. Trace history of treaty system
   - b. Current status: The Paris Agreement

5. **Apr 3** Global environmental policy: Climate change adaptation
   - a. Funding and institutional foundations
   - b. Adaptation in an unequal world
   - c. Resilient cities

Modified: 1/16/18
6. **Apr 5** Indigenous groups and local knowledge  
   a. Different ways of knowing  
   b. Community-based sustainable development

7. **Apr 10** Consumption, waste, and growth  
   a. Consumerism and affluence  
   b. Recycling and up-cycling  
   c. Waste management: municipal, domestic, and international dimensions

8. **Apr 12** Land Use: Forests and agriculture  
   a. REDD+  
   b. Agriculture, soil, and erosion

**Apr 16 Assignment 3 Due**

9. **Apr 17** Biodiversity  
   a. Distribution of global biodiversity  
   b. The Endangered Species Act  
   c. CITES

10. **Apr 19** Water  
    a. Shortage of freshwater  
    b. Human health & ecosystem function

11. **Apr 24** Food  
    a. Global food systems  
    b. Is eating locally the best solution?

12. **Apr 26** Conclusion: the future of sustainable development  
    a. Individual activism  
    b. Political reform

**April 30th – Last day of classes - Term Project Due**

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**May 10 Thursday - FINAL EXAM - 9am-12pm (tentative, subject to change)**