**UNIVERSITY OF COLORADO AT DENVER**

**The Business School**

**MGMT 6827**, Online Canvas class Professor

**Business and Climate Change** john.byrd@ucdenver.edu

Spring 2022 – January 18 to May 12 Phone: 970-247-9182

**COURSE OVERVEW**

Investors, employees, customers, and government agencies are all calling on companies to address climate change. If climate change occurs as scientists predict, managers will have to consider climate-related costs and risks, regulatory requirements, disclosure and develop competitive products and services for a low carbon world. No matter what your personal views are about climate change, most corporations will have to develop a climate strategy or plan. More progressive companies will find ways to turn this potentially serious constraint into some sort of opportunity and thereby shape their own destiny rather than having it determined for them.

After a brief introduction to climate change, the class will focus on the tools and concepts required to develop a corporate climate strategy. This will enable you to contribute to your organization’s climate activities. At the end of the semester we will look at some non-corporate topics related to climate: personal actions, climate justice and how to have a fair transition to a low-carbon economy. The class is entirely online with no required Zoom meetings or class sessions.

**Catalog Description**

MGMT 6827 - Global Climate Change (3 Credits)

Global climate change may be one of the most important challenges facing business in the 21st century. This course will introduce the potential impacts of climate, then discuss possible regulatory responses to and business risks and opportunities that may emerge if climate change occurs.

**Important University dates**

* Last day to drop without $100 course penalty – January 24.
* Last day to drop with tuition adjustment – February 2.
* Last day to drop using UCDAccess or request No Credit or Pass/Fail grade – April 3.

**COURSE OBJECTIVES**

* Discuss the business case for preparing for climate change
* Know about the predicted impacts of climate change as currently understood.
* Understand the risks that climate change may create for companies
* Learn the components of a corporate climate strategy.
* Practice computing a carbon footprint and analyzing transition and physical risk.
* Consider how to set a science-based carbon emissions reduction target.
* Understand what zero carbon, net zero and carbon neutral emissions targets are.
* Learn about carbon reporting and emerging standards of climate disclosure.

**PREREQUISITES**

There are no formal prerequisites for this course.

**VIRTUAL OFFICE HOURS, E-MAIL, AND CONTACT INFORMATION**

I check e-mail and the class website often, though weekends can be filled with family activities. When you send an e-mail be sure to put your name in the note and have MGMT 6827 in the subject line. I am teaching two classes this semester, and this will help me better understand and respond to your question. In case you need it, my home phone is 970-247-9182. We turn in early, so please limit calls to the hours of 8:00 a.m. and 9:30 p.m. My e-mail address is: john.byrd@ucdenver.edu

**COURSE MATERIALS**

**Readings:** There is nothing to buy. All materials will be downloaded from the class website at no cost. Readings are listed in the weekly start here page and in lecture pages.

**Class Schedule**

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| Week | Date | Topic |
| 1 | 1/18/22 | Climate Basics; Carbon budget |
| 2 | 1/24/22 | Climate Impacts |
| 3 | 1/31/22 | Climate policies: Taxes Cap-and-trade, Border Adjustments |
| 4 | 2/7/22 | Why companies need to address climate: Climate strategy |
| 5 | 2/14/22 | Physical & Transition Risk |
| 6 | 2/21/22 | Emissions: Footprinting; Importance of SCOPE 3 |
| 7 | 2/28/22 | Targets and Offsets |
| 8 | 3/7/22 | Posting Week Mitigation, Adaptation, New energy |
| 9 | 3/14/22 | Financial Analysis for Climate Investment |
| 10 | 3/21/22 | SPRING BREAK |
| 11 | 3/28/22 | Reporting: Current State-of-the-art; TFCD: CDP |
| 12 | 4/4/22 | Climate Tech |
| 13 | 4/11/22 | Climate finance; green bonds |
| 14 | 4/18/22 | Climate Justice; Fair transition |
| 15 | 4/25/22 | Personal Climate impacts/Efforts |
| 16 | 5/2/22 | Review Discussion: EXAM |
| 17 | 5/9/22 | Work on case |

**Assignments**

Submit 3 climate-oriented news items 15

Postings (Complete 3 of 5 opportunities) 45

Physical & Transition Risk case (due Wednesday, February 28) 60

Carbon Footprint Case (due Wednesday, March 9) 60

Carbon Reduction Investments (due Wednesday, March 28) 60

Climate reporting critique (due Wednesday, April 11) 60

Climate Strategy case (due Friday May 13) 200

Final Exam (due Wednesday May 5) 100

Total 600

**Assignment descriptions**

**Submit 3 climate-oriented news items:** Send me the title and a one sentence description of a climate-related news item and I’ll post it on our weekly news list. Items should be spread through the semester: 1 in weeks 1-5; 1 in weeks 6-10 and the third in weeks 11-16.

**Postings:** There will be 5 posting opportunities during the term. These are reports you share with the class in a Discussion area. You need to complete 3 for full credit.

The topics and due dates are:

Week 6: Examples of Scope 3 emissions reporting for two companies, one domestic and one international

Week 8: An example of a carbon reduction (mitigation) technology, an adaptation technology, or an emerging energy technology. Examples are direct air capture, types of geo-engineering (including pros and cons), new versions of nuclear energy.

Week 12: An example of a web-based or cloud-based technology addressing climate or carbon emissions.

Week 14: A climate justice issue or example. This can be something that has happened or can deal with how to make the transition to a low-carbon economy fair.

Week 15: Personal climate actions. These should be accompanied by a measure of your personal carbon footprint and how the action helps reduce it or address it.

**60-point assignments:** These assignments may be done with one other person.

**Physical & Transition Risk case**: Evaluate the physical and transition risk exposure of two companies.

**Carbon Footprint Case:** Compute the carbon footprint for Simon Pearce and make suggestions about where the company should look for emission reductions

**Financial analysis of several investments:** Complete a financial analysis with and without a carbon tax.

**Carbon Reporting Critique:** SASB (Sustainable Accounting Standards Board) has identified key sustainability indicators for about 80 industries. For this assignment you will choose an industry, find the appropriate SASB, then find 3 companies in the industry (SASB lists some of the larger ones). Once you have identified an industry and three companies you will look for their sustainability reports. At least two companies need to have sustainability or CSR reports. You may have to expand your company group beyond three to find two with CSR reports. Note the companies you could not find reports for. For the two (maybe three) companies with reports look for the following:

* Does the report contain the SASB recommended metrics?
* Is the carbon emissions disclosure complete, e.g., Scope 1 and 2, and Scope 3? Emissions reported in absolute MtCO2e and with some sort of intensity metric.
* Does the company set a carbon emissions target? If so, is it science-based or does it recognize a 2° or a 1.5° target? Is it net zero? Does it have intermediate goals?
* Does the company mention carbon or climate risk?
* Other interesting things that are in or aren’t in the report.

**Climate Strategy case:** Working in a group of two or three people, design a climate strategy for a small company including setting targets, designing how emissions and targets will be disclosed and where carbon reduction investments will be made.

**Final Exam:** This will be part online and part written/take-home. Much of it will be vocabulary and basic concepts with a few calculation problems. It is designed to reinforce basic material from throughout the class. A study guide will be provided.

**Grading**

The Business School suggests that the average GPA for most MBA classes should be between 3.1 and 3.6. Grades will be based on total points earned for all assignments. My final grades for this class have traditionally been very high. The scale I use is roughly: 93% and higher = A, 90% to 92.9% = a-; 87% to 89.9% = B=, etc.

**Late Assignments:** I will almost always give an extra day to turn something in. If you need more time please email and let me know when I can expect your submission. The Final case report needs to be submitted on time or within a day of the due date. I have a hard deadline for turning in grades, and need time to read those assignments.

If health, family or work issues arise that affect your ability to complete assignments in a timely manner, please contact me so we can figure out a revised schedule. If something happens near the end of the term and you only one or two assignments to complete, I can give you an Incomplete grade and you can finish the class after the term ends.

**Extra Credit:** There are no extra credit opportunities in this class.

**Success in the class:** My experience teaching online classes is that as long as a person doesn’t fall behind they usually do well. In this class I think you can skip one week and catch up, but skipping more than that could make recovery much harder.