



KOGOD SCHOOL *of* BUSINESS

AMERICAN UNIVERSITY • WASHINGTON, DC

MASTER OF SCIENCE IN SUSTAINABILITY MANAGEMENT

Sample Courses

MGMT 644: Managing for Climate Change

COURSE DESCRIPTION

Climate change will be an increasingly important challenge for organizations, corporations and financial institutions. Addressing risks from climate change, and capturing opportunities to address climate change will increasingly become a dominant factor in organization's sustainability goals. This course covers topics that prepare managers, executives, sustainability professionals to address all aspects of climate change, including addressing risks posed by a changing climate, including addressing risks posed by a changing climate, and capturing opportunities for organizations to address and/or prepare for climate change. The course also considers climate change issues from the perspective of investors and the financial community.

LEARNING OBJECTIVES

Upon completion of this course, students will be able to:

- Identify key concepts related to managing climate-related issues in business, including becoming fluent on definitions such as climate risk (transition, physical, and liability), climate opportunities, climate finance, climate-risk management
- Explain connections between organizational operations, financial vulnerability, climate change and sustainability
- Identify the broader policy context around climate change which may have an impact on business level decision making and disclosure, as well as approaches for assessing organizational and financial risks resulting from climate change
- Evaluate options for addressing climate change risks, such as reducing greenhouse gas emissions/footprint(s), building-in resilience options, obtaining risk-mitigation and transfer products (e.g. insurance), and advancing sustainability goals

ACCT 696: Sustainability Reporting and Analysis

COURSE DESCRIPTION

This course introduces current practices in sustainability reporting and analysis. (GRI, SASB, TCFD, ISSB), and evolving regulatory requirements (EU, SEC) both in the US and internationally. Critically examines challenges related to measuring sustainability including, carbon accounting (carbon offsets, carbon markets, measuring Scope 1, 2, & 3 emissions), social metrics, rating methodologies and external assurance practices. The course also explores how sustainability information is integrated into financial and investment decisions.

LEARNING OBJECTIVES

The overall objective of the course is to provide students a broad conceptual framework for understanding the evolving area of sustainability reporting. Another main objective of this course is to help you become reasonably proficient at interpreting and analyzing firms' sustainability reports and assessing their usefulness for business decisions.

The course also serves to enable students to demonstrate competence in quantitative methods for measuring sustainability and the application of protocols and policy frameworks that aid in the application and verification of these measurements.

Upon successful completion of this course, students will be able to:

- Describe and implement ESG reporting frameworks such as GRI and SASB.
- Critically analyze sustainability regulatory initiatives.
- Assess and critically evaluate popular ESG rating methodologies
- Critically analyze corporate sustainability reports
- Develop familiarity and assess advances in sustainability reporting such as integrated reporting

IBUS 641: Social Sustainability

COURSE DESCRIPTION

Social sustainability, part of the triple bottom line (along with economic and environmental sustainability), encompasses issues such as fair labor practices, community development, human rights, health care, social justice, and peacemaking, among others. The objectives of this course are to expose students to the wide-ranging issues in this domain (from strategy formulation to implementation), how these issues relate to business practice, why businesses should consider these issues in their strategic decision-making, and how to begin to evaluate corporate social performance.

LEARNING OBJECTIVES

At the end of this course students will be able to:

- Identify social sustainability strategies, how they are applied, and why they are important,
- Understand the motivations for companies to adopt these strategies,
- Analyze firms' social sustainability strategies and make recommendations for improving them (and do so orally and in writing),
- Discuss different approaches for evaluating the competitive effectiveness of different social sustainability strategies
- Investigate the use of sustainability metrics for assessing corporate social performance and understand how they are created.

IBUS 745: Global Supply Chain Management

COURSE DESCRIPTION

Global Supply Chain Management introduces a set of approaches designed to efficiently integrate suppliers, manufacturers, warehouses and stores so that merchandise is produced and distributed at the right quantities, to the right locations, and at the right time in order to minimize system wide costs while satisfying service level requirements. This course utilizes case studies and computer simulations to illustrate and reinforce effective supply chain management approaches in both global and domestic organizations.

LEARNING OBJECTIVES

IBUS 745 is designed to sensitize students to the issues associated with the effective management of global and domestic supply chains. In a world of global business it is imperative that managers understand the tools, techniques and strategies that lead to the effective management of an efficient and responsive global supply chain. Two major trends mandate increased attention on management of global supply chains. Globalization has created incentives for the development of sourcing strategies that rely on significant levels of outsourcing from dispersed suppliers. As a consequence supply chains are much more vulnerable to external shocks and discontinuities over which managers have little control. In addition, to meet corporate

productivity objectives, it is critical to reduce excess logistics and supply chain costs. Information technology is the foundation for restructuring the supply chain to support the business strategy of a firm. In this course students learn how firms efficiently move raw materials through manufacturing to customers. The course discusses efficient management of facilities, inventories, and the transportation network along the supply chain. The course also covers the strategic role of the supply chain as well as the methodologies for designing and planning the supply chain.

MGMT 617: Sustainability Systems

COURSE DESCRIPTION

The impacts of climate change are making the world's hottest geographies drier and precipitation more variable and extreme. And as populations increase and consumption grows, it is becoming increasingly difficult to attain a sustainable system – to meet the needs of the present population without compromising the ability of future generations to meet their own needs. The objective of this course is to expose students to the wide-ranging structures, research, and policies surrounding social, economic, and environmental sustainability. Students will learn how a changing climate and the need to maintain an ecological, social, and economic balance relates to business practice, why businesses should consider these issues in their strategic decision making, and how business leaders must work alongside the government and nonprofit sector to address issues of water sustainability and resilience.

This course provides a general understanding of key legal, regulatory, and policy issues that relate to the concept of sustainability across three primary tracks: business, science, and policy. The course provides a foundational background that focuses on the major actors, interests, and challenges in sustainability and their interplay with related legal and regulatory principles.

LEARNING OBJECTIVES

At the end of this course students will be able to:

- Identify opportunities, strategies, and solutions for actors to implement sustainable practices in operations, government policy, corporate responsibility practices, and investments, based on science-based decision-making approaches;
- Understand the challenges actors face in relation to pursuing sustainability in the face of slow and quick-onset disasters and what resilience strategies are available
- Analyze management situations that require a framework of sustainability to guide future development, research, policy, and business practice
- Discusses different approaches for evaluating sustainability practices relating to legal and policy systems through the lens of social justice

MGMT 720: Applied Sustainability Management

COURSE DESCRIPTION

This is the capstone course of the Master of Science in Sustainability Management program that encourages students to integrate previous sustainability management-related coursework in business, science, policy, and international issues and requires students to develop and implement a session-long project to advance sustainability management in a selected business, governmental, or non-profit organization.

LEARNING OBJECTIVES

Upon completion of this course, students will be able to:

- Demonstrate a broad and deep understanding of the social, environmental, and economic dimensions of sustainability
- Apply models and tools of sustainable business management across key global industries
- Integrate science, policy, and international perspectives on sustainability-related problems facing public and private organizations
- Conduct a live experiential project focusing on sustainability management

Experiential Learning

The experiential learning component of the MSSM curriculum comprises the following:

- In-class, software-enabled simulations in sustainability management and climate risk
- Interactive corporate case studies demonstrating applications of the materiality index, circular economy, and other sustainability models
- Workshops to build student skills in data extraction, text mining, and analysis
- Training sessions on the Bloomberg ESG portal in the Kogod School's Financial Lab
- Panels featuring subject matter experts and MSSM alumni addressing professional development in sustainability

The MSSM program also highlights live sustainability consulting projects executed by MSSM student teams in collaboration with external partners in the U.S. and abroad. These projects serve the following purposes:

- Provide opportunities for MSSM students for hands-on applications of the the tools, skills, and methodologies developed in their residential courses to critical problems in sustainability
- Strengthen student capabilities in project management, client relations, communications, and team collaboration
- Expand the professional networks of MSSM students
- Enrich the personal narratives of MSSM graduates pursuing jobs in sustainability

SAMPLES OF LIVE MSSM PROJECTS

MSSM Capstone: Applied Sustainability

Application of skills, tools, and methodologies acquired in the MSSM program to real world problems in sustainability

- Sustainability analytics
- Sustainability metrics & reporting
- Sustainability financing
- Corporate sustainability
- Sustainability risk management
- Sustainability consulting
- International best practices in sustainability
- Adoption of advanced technologies in sustainability



Recycled Apparel
Responsible Corporate Lobbying
Water Conservation in Garment Manufacturing
Science-Based Targets



Supply Chain Sustainability
Monetization of Sustainability Consulting



Mobile Platform for
ESG Assessment



SDG Fulfillment Strategy

Sustainable Procurement

MSSM International Practicum: Sustainability in Scandinavia

- Investigation of sustainability practices and strategies in Scandinavia
- Organized around live projects with sustainability stakeholders in Sweden
- Student teams undertake original research and analysis of sustainability problems
- Teams deliver actionable recommendations to guide strategies of Swedish clients



Sustainable Packaging



Upcycling of Bread Waste



Municipal Waste Management



HVAC Systems



Children's Health



Vertical Farming



Solar-Powered
Water Treatment



Organic Food Services



Food Rescue



Sustainable Bicycle
Manufacturing



HVAC Energy Savings