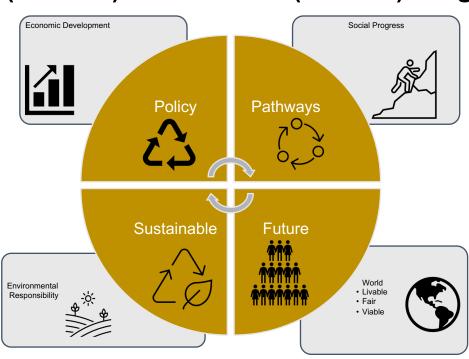
## **School of Public Policy**

# Sustainable Energy&

**Environmental Management** 

Masters (MSEEM) & Certificate (CSEEM) Programs





Dr. Marilyn A. Brown Regents' Professor mbrown9@gatech.edu

Dr. Daniel Matisoff Associate Professor Matisoff@gatech.edu Dr. Alice Favero Program Coordinator alice.favero@gatech.edu



# MSEEM & CSEEM Programs School of Public Policy

# Highly ranked by U.S. News & World Report

Information Technology Management Energy & Environmental Policy Policy Analysis

### Includes virtually every policy area

environmental, communications, transportation, biotechnology and health, urban development, workforce, education, and more.

- Multidisciplinary and globally networked
- Policy relevant in S&T, E&E, ITC and Ethics
- Programs informed by world-recognized thought leaders in policy, governance, STEM education, and real-world issues
- Data-driven forecasting innovation and entrepreneurial pathways

## **Benefits**

- Choose from state-of-the-art programs across the university gives you competitive training for today's global marketplace
- Opportunity to plan a unique learning profile to optimize your career goals
- Access course content to suit your distinct needs

"Learn to use public policy skills to impact social good change the world"



# **MSEEM Professors & Faculty**

## **Award Winning**

- Respected Practitioners
- International Awards
- Published
- Global Knowledge

"Experts in climate change – dedicated to reducing carbon emissions, leading research, influencing policy."

## **Benefits**

- Learn
- Share Research
- Explore
- Collaborative
- Mentoring







# MSEEM Faculty – World Renowned

Data Analytics & Machine Learning

Omar Isaac Asensio

Marilyn A. Brown



Management



MSSEM Co-Director Energy Policy Modeling, Smart Cris Policies, Renevables L EVs

**Utilities, Regulation, Renewables, & Demand- Side Solutions** 

**Environmental Economics & Climate Policy** 

Alice Favero

Scott Ganz



Environmental Economics, Climate



Social Organization Spatial Economic Analysis Impacts of Carbon Tax

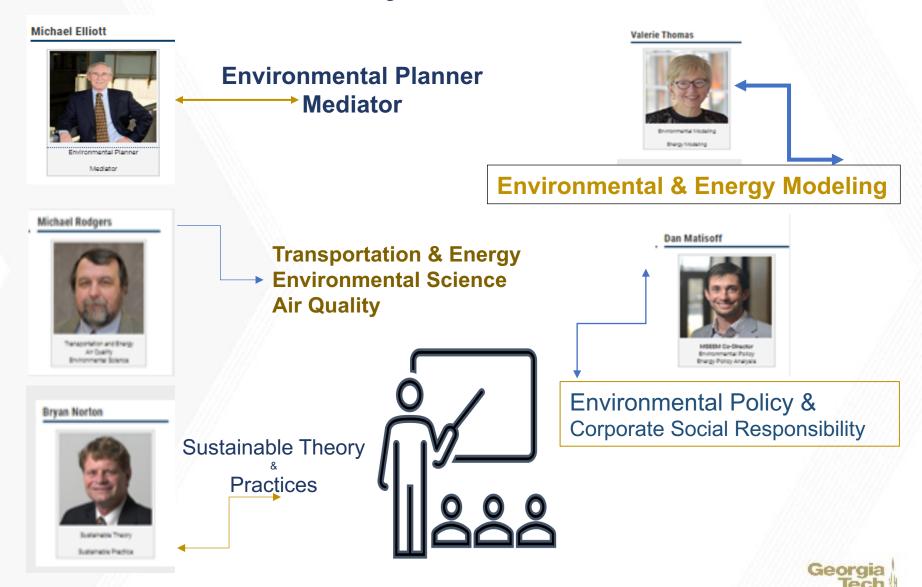
Carbon Credits, Green Energy Financing, Eco-Certification







# MSEEM Faculty – World Renowned

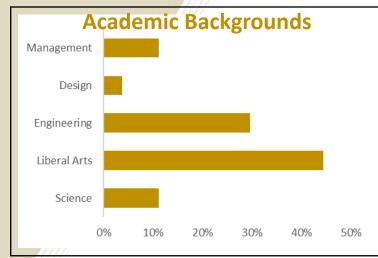


CREATING THE NEXT

# 2020 Profile: Inaugural Class of MSEEM is the only sustainability-oriented Masters Program in Georgia

**Applications from Coast to Coast and Around the Globe** 





## **Year One - 2020**

24 motivated & accomplished scholars selected for year one:

- Different schools
- Range of work experience & education
- 5 MSEEM Funded Fellows



## **Meet The Inaugural Class of 2020**

### 14 MSEEM Graduate Students

- 11 Full-time
- 3 Part-time

4 CSEEM Students

## Highly diverse and qualified

- 67% with GPA > 3.0
- Degrees
  - ♦ 11% Science
  - 44% Liberal Arts
  - ♦ 30% Engineering
  - 4 15% Management



# High Demand for Accredited Sustainability Skills

## Job Forecast by the numbers

Between 2012 – 2022, increasing by 15%

Source: Bureau of Labor Statistics

### These job categories include:

- Clean Energy Sector
- Conservation & Nonprofits
- Corporate Social Responsibility
- Regulatory & Governmental
- Environmental Engineering
- Consulting

Benefit: "The MSEEM/CSEEM degree opens doors to the increased demand for sustainability professionals."

### North Georgia Fires in 2016



Flood water after Hurricane Matthew



Farm damage from Hurricane Michael



CREATING THE NEX

# **PUBP Class Listings – Fall 2020**

Required courses					
PUBP 8803	Sustainable Energy and Environmental Management Policy and Management – Dr. Matisoff				
Quantitative Methods elective (need 2 in total)					
PUBP 6114	Applied Policy Methods and Data Analysis – Dr. Rogers				
PUBP 8200	Advanced Research Methods I – Dr. Rogers				
PUBP 6120	Policy Cost Ben Analysis – Dr. Massetti				
Sustainable Energy & Environmental Management (need 3 in total)					
PUBP 6300	Earth Systems – Dr. Rodgers				
PUBP 6330	Environmental Law – Dr. Slieper				
PUBP 6352	Utility Regulation & Policy – Dr. Brown				
Policy & Management (need 1 in total)					
PUBP 6116	Microeconomic Analysis in Public Policymaking – Dr. Marco				
PUBP 6201	Public Policy Analysis – Dr. Bullinger				
PUBP 6314	Policy Tools for Environmental Management – Dr. Elliott				



# Stackable and Flexible Programs MSEEM on campus or via distance learning\* CSEEM can feed into MSEEM

## CSEEM 12 credit hours



## MSEEM 30 credit hours

2 Required Courses



2 Quantitative
Methods
Courses



3 SEEM
Electives +
1 Policy &
Management
Elective

Professional paper to be completed in two 3-credit-hour courses

Georgia

<sup>\*</sup> Should numbers permit

# **Complete List** of Courses

#### **Required Courses:**

- PUBP 8803: Sustainable Energy & Environmental Management
- PUBP 6312: Economics of Environmental Policy
- PUBP 6801: Professional Paper

#### **Methods Electives:**

- PUBP 6114: Applied Policy Methods
- PUBP 6120: Cost Benefit Analysis
- PUBP 6218: Quantitative Models in Public Policy
- PUBP 6530/CP 6514: Intro to GIS
- PUBP 8200: Advanced Research Methods 1
- PUBP 8205: Advanced Research Methods 2
- PUBP 8751: Big Data and Public Policy
- CETL 6490: Advanced Environmental Data Analysis
- CP 6541: Environmental Analysis Using GIS
- ISYE 8803: Life Cycle Assessment
- MGT 6203: Data Analytics in Business
- MSE 6759: Materials in Environmentally Conscious Design and Manufacturing

#### **Policy & Management Electives:**

- PUBP 6010: Ethics and the Policy Profession
- PUBP 6012: Fundamentals of Policy Process
- PUBP 6017: Public Management
- PUBP 6018: Policy Implementation and Administration
- PUBP 6116: Microeconomic Analysis in Public Policymaking
- · PUBP 6118: Public Finance and Policy
- PUBP 6201: Public Policy Analysis
- PUBP 6221: Policy and Program Evaluation
- PUBP 6314: Policy Tools for Environmental Management
- PUBP 6350: Energy Policy and Markets
- PUBP 6354: Climate Policy
- PUBP 6401: Science, Technology, and Public Policy
- PUBP 8540: Advanced Environmental Policy
- PUBP 8803: Environmental Policy and Politics
- CP 6016: Growth Management Law and Implementation
- CP 6223: Policy Tools for Environmental Management
- MGT 8803: Understanding Markets with Data Science

#### **SEEM OR P&M Electives:**

- PUBP 6326: Environmental Values and Policy Goals
- PUBP 6327: Sustainability and Environmental Policy
- PUBP 6330/CP 6261: Environmental Law
- PUBP 6350: Energy Policy and Markets
- PUBP 6701: Energy Technology Policy

#### **Sustainable Energy & Environmental Management Electives:**

- PUBP 6300: Earth Systems
- PUBP 6310: Environmental Issues
- PUBP 6350: Energy Policy and Markets
- PUBP 6352: Utility Regulation and Policy
- PUBP 6380: Economics of Natural Resources and the Environment
- PUBP 8803: Environmental Finance OR Sustainability and Environmental Policy OR Smart Cities
- AE 4803/8803: Energy Efficiency and Environmental Impacts
- ARCH 6531: Environmental Systems I
- BC 6002: Issues in Sustainable Construction Technology
- BC 6731: Zero Energy Housing
- CEE 4300: Environmental Engineering Systems
- CEE 4395: Environmental Systems Design Project
- CEE 4620: Environmental Impact Assessment
- CEE 6314: Fundamentals of Environmental Modeling and Mathematics
- CEE 6345: Sustainable Engineering
- CEE 6390: Air Pollutant Formation and Control
- CEE 6625: Transportation, Energy, and Air Quality
- · CEE 6790: Air Pollution Physics and Chemistry
- CHBE 4803/8803: Chemical Engineering of Energy Systems
- CHEM 8833: Funds./Challenges for a Sustainable Chemical Enterprise
- CP 6190: Introduction to Climate Change Planning
- CP 6213: Urban Environmental Planning and Design
- CP 6214: Environmental Planning and Impact Assessment
- CP 6217: Climate Change and the City
- CP 6233: Sustainable Urban Development
- EAS 6132: Introduction to Climate Change
- EAS 6135: Introduction to Complex Environmental Systems
- EAS 8803: Climate and Global Change OR Environmental Geochemistry
- EAS 8813: Biodiversity Dynamics
- ECON 6380: Economics of Natural Resources and the Environment
- ECON 7032: Macroeconomics of Innovation
- HTS 6116: The Environment in World History
- HTS 6120: Inequality, Science and Technology
- · INTA 8803: Energy and International Security
- · LMC 6215: Issues in Media Studies
- · MGT 6359: Business Strategies for Sustainability
- MGT 6369: Sustainable Business Consulting Practicum
- MSE 6759: Materials in Environmentally Conscious Design and Manufacturing
- PHIL 6710: Ethics of Biotechnology and Bioengineering Research



## **Popular Courses**

Course Number	Course Name	Туре	ERG	ENV	POL	ECON	CIT	TRN	BUS
PUBP 6114	Applied Policy Methods	м							
PUBP 6116	Microeconomics Policy Analysis	P&M							
PUBP 6120/8803	Cost Benefit Analysis for Policy	м							
PUBP 6223/CP 6233	Sustainable Urban Development	SEEM							
PUBP 6300	Earth Systems	SEEM							
PUBP 6312	Economics of Environmental Policy	R							
PUBP 6314/CP 6223	Policy Tools for Environmental Management	P&M							
PUBP 6327	Sustainability and Environmental Policy	SEEM, P&M							
PUBP 6352/8833	Utility Regulation and Policy	SEEM							
PUBP 6354	Climate Policy	P&M							
PUBP 6625/CEE 6625	Transportation, Energy, and Air Quality	SEEM							
PUBP 6701/ISYE 6701	Energy Technology and Policy	SEEM							
PUBP 8751	Big Data and Policy	м							
PUBP 8803	Sustainable Energy and Environmental Management	R							
CP 6016	Growth Management Law	P&M							
INTA 8803	Energy and International Security	SEEM							
MGT 6359	Business Strategies for Sustainability	SEEM							
MGT 6369	Sustainable Business Practicum	SEEM							
MGT 8803	Understanding Markets with Data Science	P&M							











# Guest Lecture Anna Lasso



## PUBP 8803:Required Sustainable Energy and Environmental Management

**Professor:** 

**Dr. Daniel Matisoff** 



Guest Lecture
Ben Jordan



### **Part 1:**

# Sustainability Theory and Philosophy

Conservationism; Preservationism; Sustainable Development; Malthus vs. Prometheus

## Part 2:

# Tools for Managing Sustainability

Regulations; Markets; Participatory Processes; Corporate Social Responsibility

## Part 3:

**Case Analysis** 



# **Guest Lectures: Industry Perspectives**

- Guest Lectures from the Atlanta metropolitan area strengthen linkages to professional practice.
- Guest Lectures are drawn from multiple sectors of the Atlanta business, government, and not-for-profit community.





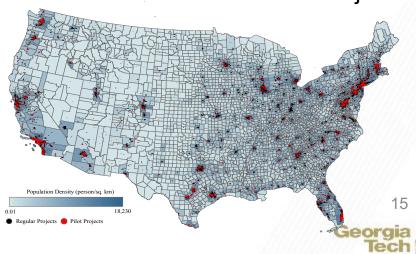
# **Capstone Project**

- The MSEEM summer term focuses on the Research Capstone Project 6 credits
- Students have flexibility to identify and define a real-world problem in the area of energy, sustainability and/or environment and select a methodology to assess valuable solutions.
- Students can develop the project individually or as a team.

# The Kendeda Building for Innovative Sustainable Design



## LEED Construction & Pilot Projects



# **Illustrative Capstone Case Examples**

- GT as a learning laboratory
  - Environmental and economic impacts of car rental services at GT
- Community-based projects
  - Case Study: How sustainable is urban agroforestry?
  - Integrating community needs into regional resilience planning
  - The role of local government to implement sustainability actions
- Business-related projects
  - Value of incorporating Sustainable Development Goals (SDGs) in business
  - Airline Sustainable Supply Chain







## Jobs: **Graduates Making A Difference**







### **Non-Governmental Organizations**

**Natural** Resources **Defense Council** 

Union of Concerned **Scientists** 

**American Council** for an Energy-**Efficient Economy** 

**U.S. Environmental Protection Agency** 

**SE Energy Efficiency** Alliance

ICF

**FcoAct** 

**Federal Energy** Regulatory Commission

**National Labs:** ANL, LLNL, **NREL, & ORNL** 

Michigan Energy Office

**Atlanta Office of** Resilience

**Georgia Public Service** Commission

> **U.S.** Department of **Energy**

mc<sup>2</sup>i Group

**Oglethorpe Power** 

Quest Renewables

The Greenlink Group

Amazon

Deloitte

Coca-Cola

Government

**Business** 



# A Philanthropic Gift for Student Fellowships



Thanks to a generous gift,

MSEEM offers full graduate
fellowships for

5 on-campus full-time students per year for the first 3 years.

## **Frequently Asked Questions**

- 1. What are the backgrounds of C/MSEEM students?
- 2. What kind of opportunities are available for graduates of the C/MSEEM?
- 3. How many students are likely to be in each class?
- 4. How long does it take to complete the MSEEM?
- 5. Can we take the C/MSEEM part-time while working?
- 6. What courses do I need to take to complete the degree program?
- 7. Can we use the CSEEM credits for the MSEEM?
- 8. What kind of financial aid is available?
- 9. Can C/MSEEM students get credit for an elective course that is not currently on our approved list?

