

The Business of Hydrogen – FINA 7397 - 27408 (Fall 2023)

Class Information

- Tuesdays/Thursdays 1130am -100pm: August 22 – November 30
- Online synchronous
- Office Hours: By appointment (832-256-2229)

Instructor

Greg Bean is the Executive Director of the Gutierrez Energy Management Institute in the Bauer College of Business at the University of Houston. In this position, he is responsible for energy education, research, events and industry outreach at Bauer. He is also the Faculty Director of the MS in Global Energy Management Program and an adjunct faculty member. Greg has forty years of experience in the oil and gas industry, management consulting, and higher education

Summary

The course covers all the business, policy and regulatory aspects of a low carbon hydrogen industry which is emerging as a key component of the global transition to a low carbon energy world.

Course Learning Objectives

- Understand the current global energy system
- Identify the drivers and challenges for the global energy transition and potential scenarios
- Understand the current hydrogen global system and markets
- Identify what a global low carbon hydrogen system could look like in 2050
- Identify key business opportunities in hydrogen resulting from the transition
- Assess potential changes in energy industry structure and players

Course Approach

The course will include a variety of learning activities including lectures, classroom discussion, reading assignments, guest lecturers, and team projects.

Grading

Grades will be based on a mix of biweekly quizzes, homework, and a team project.

Class Detail

Week	Week of	Topics
1	Aug 21	Course Overview and Introduction to the Current Global Energy System
2	Aug 28	Drivers and Challenges of the Current Energy Transition
3	Sept 4	Current Global Hydrogen System
4	Sept 11	Hydrogen's Role as an Low Carbon Energy Carrier and Fuel
5	Sept 18	Potential Global Low Carbon Hydrogen System - Production
6	Sept 25	Potential Global Low Carbon Hydrogen System – Transportation & Storage
7	Oct 2	Potential Global Low Carbon Hydrogen System – End Uses
8	Oct 9	Associated Low Carbon Energy Value Chains – Low Carbon Electricity, CCUS, Equipment
9	Oct 16	Costs of a Low Carbon Hydrogen value chain
10	Oct 23	Markets and Trade in Low Carbon Hydrogen
11	Oct 30	Development of regional hydrogen hubs
12	Nov 6	Policy Choices – Incentives and Regulations
13	Nov 13	New Business Models and Key Players in a Low Carbon Hydrogen Industry
14	Nov 20	No Class - Thanksgiving
15	Nov 27	Team Presentations – No Final Exam

Guest Speakers

TBD

Project Assignments

Projects	Topic	Description	Deliverable
Team	Best Business Opportunity in Low Carbon Hydrogen	Student teams will identify and build a case for the best business opportunity they see in low carbon hydrogen	15 minute presentation

Career Support

If you are a business major curious about how to connect your academic experiences with a career path or job, please see the professionals in the Rockwell Career Center, as they have staff who are experts in the majors, career paths and employers available to Bauer students. Simply go to “Bauer Career Gateway” in AccessUH (<https://accessuh.uh.edu>) to make an appointment or to review current internship and job opportunities. If you are not a business major, University Career Services has staff who specialize in the other majors on campus who can provide similar services by going to “Cougar Pathways” in AccessUH to make an appointment or review job/internship postings. The services in Cougar Pathways are available to business majors as well.