



New Jersey 2-Day Offshore Wind Bootcamp Training

Organizers:

New Jersey Institute of Technology

New Jersey Economic Development Authority

Date: 20 – 21 June 2023

Venue: Agile Strategy Lab, New Jersey Institute of Technology, Newark, New Jersey, United States

Objective: This 2-day offshore wind training bootcamp is for university students and engineers who are interested in starting a career in offshore wind industry to gain initial knowledge and understanding. The event aims to cover the general aspects of offshore wind farms. This bootcamp training will issue certificate of completion with 14 hours of PDH. Approximately this bootcamp is equivalent to a 1-credit course. If a participant passes the examination (multiple-choice questions) at the end of the bootcamp, this course can constitute towards a graduate certificate in the offshore wind education program under planning at NJIT.

Target audience: There are no pre-requisite course requirements. Participants are expected to have an educational background in college-level or advanced-placement level of engineering or physical sciences. The bootcamp aims to provide a short-term, rigorous, fast-paced, and focused fundamental training to help practicing engineers, researchers, and graduates to transition from traditional power engineering roles into the new field of offshore wind energy.

Bootcamp Outline

Program	Topics	Duration	Instructors/Speakers
Day 1 (20 June, Tue)			
8:30am – 9:00am	Breakfast		
Chair opening (9am – 9:10am)	Chair opening: NJIT	10 mins	NJIT (Philip Pong)
Keynote opening (9:10am – 9:25am)	Opening Remarks: NJEDA	15 minutes	NJEDA (Jen Becker)
Course 1 (9:25am – 10:55am)	Offshore Wind Farm Overview: Site selection criteria, key environmental considerations, wind farm design, array design, overview of major equipment in an offshore wind farm, foundations and substructures review, etc.	1.5 hours	Atlantic Shores (Doug Copeland)
Course 2 (10:55am – 12:25pm)	Generation: Components of a wind turbine generator, power curves and capacity factor, power production, energy yield assessment, wake effects, turbine technology, evaluating wind turbines, etc.	1.5 hours	Vestas (Henning Schmitt)
12:25pm – 1:10pm	Lunch		
Course 3 (1:10pm – 2:40pm)	Offshore Wind Export Cable Systems: Export cable system review, cable transition at landfall, onshore cable system, cable protection and control, cable selection, developing cable route, etc.	1.5 hours	BurnsMCD (David Slee)(virtual)
Course 4 (2:40pm – 4:10pm)	Offshore Substations: AC/DC & DC/DC conversion, major equipment with the OSS, offshore meshed grid	1.5 hours	Siemens (Eugen Starschich)
Day 2 (21 June, Wed)			
8:30am – 9:00am	Breakfast		
Panel forum (9am – 10:30am)	Panel: A panel discussion with 5 panelists hosted by a moderator on the latest industrial developments and career prospect in offshore wind	~1.5 hours	Moderator: PSEG (Elizabeth Gostkowski) Panelists: Siemens (Eugen Starschich), Atlantic Shore (Megan Hayes), BurnsMCD (Tony Appleton), NJEDA (Julia Kortrey), Hatch (Dan Kell)
Course 5 (10:30am – 12pm)	Grid Interconnection: Introduction to ISOs/RTOs, grid interconnection process, review of PJM studies, etc.	1.5 hours	PSEG (Chad Watson / Rafael Wilches)
12pm – 12:45pm	Lunch		

Course 6 (12:45am – 2:15pm)	Wind Policy: Wind Power Policy, Regulation, and Environmental Aspects	1.5 hours	Atlantic Shores (Megan Hayes)
Course 7 (2:15pm – 3:45pm)	Operation and Maintenance: O&M required on wind turbines and major components across an offshore wind project, maintenance cycles for major equipment	1.5 hours	Atlantic Shores (David Wang)
Examination (optional) (3:45pm – 4:45pm)	Attendees will take an exam comprising of ~40 multiple choice questions from all the courses and a survey	1 hours	Proctored by Philip Pong (NJIT), Abdellatif El Mouatamid (NJIT)

Event mode:

Audience: In-person

Further questions: Prof. Philip Pong (philip.pong@njit.edu, 973-596-3533), Department of Electrical and Computer Engineering, New Jersey Institute of Technology, Newark, New Jersey

