**UNIVERSITY OF MAINE**

**Job Description**

**TITLE:** Postdoctoral Research Associate in Offshore Model Testing and Engineering

**DEPARTMENT:** Advanced Structures and Composites Center

**DATE:** June 2020

**REPORTS TO:** Manager, Offshore Model Testing and Structural Design

**PURPOSE:** Coordinate, manage, and conduct offshore analysis and model testing research to support the commissioning and funded projects in the new W2 wind wave basin housed in the Advanced Structures and Composites Center (The Center).

**ESSENTIAL DUTIES/RESPONSIBILITIES:**

* Perform typical analysis for offshore structures including global performance, structural load calculations, hydrostatics and stability, wind turbine load models, and other related activities.
* Design model test programs including selection of appropriate scaling laws, metocean environments, and design/materials of models.
* Develop 3D models using solid works or other software.
* Attract industrial and Federal contract and grant work by actively pursuing RFPs and drafting written proposals to meet needs.
* Write peer reviewed publications.
* Involve University and Center personnel/faculty as necessary in proposal writing process related to Ocean Engineering.
* Supervise Undergraduate and Graduate Research Associates to ensure validity and accuracy of research.
* Research and recommend purchase for equipment, materials and supplies.
* Represent the center at national technical meetings.
* Perform other reasonably related duties as assigned.

**KNOWLEDGE AND SKILLS QUALIFICATIONS:**

**Required**

* Ph.D. in Ocean Engineering, Mechanical Engineering, and Civil Engineering with focus on Offshore Structures, Naval Architecture, or related Engineering discipline.
* Experience with analysis of offshore structures.
* Experience with model testing.
* Demonstrated excellent organizational, written and oral communication skills.
* Demonstrated judgment while working under pressure to meet constant deadlines.
* Ability to work independently as well as in a team environment.

**Preferred**

* Significant experience in some of the following areas preferred: naval architecture, offshore design, structural engineering, hydrodynamics, model testing of offshore structures, floating offshore wind turbine design and modeling, offshore design standards, CAD, and metocean data analysis.
* High level of proficiency using offshore design software preferred such as ANSYS AQWA, OpenFAST, GHS, ORCAFLEX, Bladed, ANSYS Mechanical, Solidworks, MATLAB, and Mathcad.

**SUPERVISORY RESPONSIBILITIES:** Undergraduate Research Assistants, Graduate Research Assistants and Interns.

**POSITION TYPE:** Contingent on funding and successful performance.

**WORK SCHEDULE:** Normal University of Maine business hours are Monday through Friday 8:00 a.m. to 4:30 p.m. Work outside of normal business hours will be necessary in order to complete the requirements of the position.

**WORK ENVIRONMENT:** Work will be performed at the Advanced Structures and Composites Center 100,000 ft2 laboratory with a world-leading of over 180 faculty, staff and students who conduct contract research with a variety of public and private entities.

**SCHEDULE FOR EVALUATION:** In the initial six months of employment and annually thereafter in accordance with the UMPSA agreement.

Appropriate background checks will be required.

All UMS employees are required to comply with applicable policies and procedures, as well as to complete applicable workplace related screenings, and required employee trainings, such as Information Security, Safety Training, Workplace Violence and Sexual Harassment.