

University of Washington Human Resources

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MOORING SYSTEM ELECTRONICS TECHNICIAN

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Req #:	208932
Department:	ENV: CICOES
Job Location:	Other Location
Job Location Detail:	NOAA Pacific Marine Environmental Laboratory at Sand Point in Seattle
Posting Date:	06/28/2022
Closing Info:	Closes On 07/28/2022
Salary:	Salary is commensurate with education and experience
Shift:	First Shift
Notes:	As a UW employee, you will enjoy generous benefits and work/life programs. For detailed information on Benefits for this position, click here.

As a UW employee, you have a unique opportunity to change lives on our campuses, in our state and around the world. UW employees offer their boundless energy, creative problem solving skills and dedication to build stronger minds and a healthier world.

UW faculty and staff also enjoy outstanding benefits, professional growth opportunities and unique resources in an environment noted for diversity, intellectual excitement, artistic pursuits and natural beauty.

A leader in the environmental sciences, the UW's Cooperative Institute for Climate, Ocean and Ecosystems Studies (CICOES) is a Cooperative Institute between the National Oceanic and Atmospheric Administration and the University of Washington that fosters collaborative research on a broad range of global and regional topics of concern and interest to the public.

This Mooring System Electronics Technician will work in the Global Tropical Moored Buoy Array (GT MBA) group at the NOAA Pacific Marine Environmental Laboratory at Sand Point in Seattle.

The GT MBA Project deploys deep-sea ocean mooring observing systems for the collection of high quality oceanographic and surface meteorological data for monitoring, forecasting, and understanding of the world's climate. This position will provide the GT MBA Project with technical, engineering, logistical, and operational support for its mission with its international partners in the global tropical oceans.

The employee will participate in the collection and dissemination of mooring time series data. Working from requirements and specifications defined by scientists or engineers, the incumbent will participate in the design, development, and support of various deep-sea subsurface and surface mooring platforms. In addition, the incumbent will participate in the design, maintenance, and support of data-acquisition systems, oceanographic and meteorological sensors, and other instrumentation associated with the mooring platforms.

The employee will perform assigned tasks by applying specified scientific and engineering procedures as developed by the project and as directed by lab engineers, scientists, and supervisors. In addition, the incumbent will serve as the lead operations engineer on scientific research cruises. This position requires preparation of oceanographic and meteorological instrumentation for their deployment on deep-water surface moorings around the world. This includes the direction of logistical support and the supervision of shipboard operations and personnel on board national and international research vessels with international project partners, including but not limited to those in India, Indonesia, Korea, France and Brazil, to accomplish the recovery and deployment of the GTMBA Project's deep-sea moorings.

The incumbent will analyze data in the field to verify mooring systems are working properly and data is valid. The incumbent will be required to prepare cruise reports as well as written and oral reports dealing with instrumental system performance, data analysis techniques and data quality for in-house distribution, feedback to manufacturers, possible publication in technical memoranda and at technical workshops and meetings.

RESPONSIBILITIES:

Laboratory and land based mooring system, instrument and engineering duties:

- Participate in the development and set-up of complete deep-water mooring systems; testing, evaluating, and calibrating analog and digital interface(s) for oceanographic and meteorological instrumentation within the system and update as required.
- Assist laboratory personnel in the fabrication assembly, operation, and/or maintenance of experimental equipment and instruments that include taking measurements, recording observations, compiling data, and recognizing discrepancies in results.
- Repair, maintain, and calibrate sensors and systems to insure data accuracy and precision.
- Use, update, and maintain detailed sensor and cruise databases.
- Write and produce technical and logistical reports on procedures, cruise operations, inventory, and shipping.
- Procure, fabricate, and/or assemble instruments, cables, hardware, tools, and calibration equipment; determine materials requirements. Design, assemble, modify, and troubleshoot electronics down to the component level.
- Troubleshoot electronic circuit boards, including soldering and de-soldering of all sizes of components, electrical testing/analysis and production of relevant electronic and wiring schematics and documentation.
- Comfortable with modern electronics design and testing software.
- Evaluate and recommend the purchase, fabrication and/or modification of instruments and equipment.
- Install and test fabricated equipment for proper operation; adjust and calibrate to appropriate standards; troubleshoot and repair equipment malfunction(s) to system, board, or component level using diagnostic software as needed; prepare written documentation.
- Source parts, supplies, and materials for purchase requests, obtain quotes from vendors, and maintain an inventory of commonly used tools and supplies.
- Interact in a collaborative manner with colleagues to accomplish tasks and improve efficiency.
- Perform related duties as required.

Sea-going mooring system, instrument and engineering duties:

- Participate and serve as Cruise Lead on ships of opportunity whether domestic or international. This may entail occasionally presenting research results to peers and/or the public.
- Participate, lead and oversee shipboard operations, including planning, rigging, recovery, and deployment of deep-water mooring systems.
- Prepare oceanographic and meteorological instrumentation, sensors, and mooring systems for deployment and recovery at sea.
- Conduct experiments in the field that include taking measurements, recording observations, compiling data, and recognizing discrepancies in results.
- Prepare thorough written documentation detailing cruise activities and instrument procedures.
- Support inventory tracking, packing, and preparation of equipment for shipment to and from cruises.
- Operate, conduct, and oversee small boat operations at sea.
- Operate shipboard deck machinery, including the use of hydraulic and electric winches.

MINIMUM REQUIREMENTS:

- Bachelor's degree in Oceanography, Marine Science, Meteorology, Engineering, Physics, Chemistry, or Related Field.
- Three to five years job-related experience

Equivalent education/experience will substitute for all minimum qualifications except when there are legal requirements, such as a license/certification/registration.

ADDITIONAL REQUIREMENTS:

The incumbent must be knowledgeable in the area of modern oceanographic measurement techniques. The assigned tasks involve calibrating, refurbishing, developing, fabrication, modifying, assembling, and repairing various mechanical, electro-mechanical, or electronic instruments. This position is required to spend extended lengths of time at sea on scientific research cruises often in remote parts of the world. Demonstrated ability to produce documentation including calibration and testing logs, experiment results and at sea reports. Demonstrated journey-level experience designing assembling, modifying and troubleshooting electronics down to the component level.

This position requires spending extended lengths of time at sea on scientific research cruises, for a total of up to 3 months per year aboard cruises that typically operate for approximately 30-40 days at sea per cruise. While at sea, the incumbent will participate as senior technical representative or team leader of field operations involving the deployment and recovery of deep-water surface moorings. These scientific cruise operations involve a variety of platforms that include NOAA, UNOLS and international research vessels, and require knowledge of deep-water mooring systems, the ability to work at sea in harsh and unfamiliar conditions, the ability to lift 50lbs, stand for long periods of time on a steel deck, and knowledge of at sea ship operating practices.

Must be capable of interacting in a collaborative manner with colleagues to accomplish tasks and meet project goals. Must be able to work effectively with minimal supervision and have excellent communication skills. This position involves a diverse group of scientists, engineers and technicians, which requires the ability to work well in a team environment.

DESIRED:

Knowledge in preparation of oceanographic and meteorological instruments. Experience work with oceanographic instrumentation including Sea-Bird Scientific temperature and conductivity instruments, acoustic releases, Acoustic Doppler Current Profilers, point Doppler current meters, relative humidity sensors, short wave and long wave radiometers, rain gauges and wind sensors. Sea-going, shipboard experience in leading deck operations; small boat operations; technical electronics skills, including reading schematics, troubleshooting, and soldering; basic fabrication skills, including the use of machine tools and hand-tools; computer skills, including Office, and database programs.

Application Process:

The application process for UW positions may include completion of a variety of online assessments to obtain additional information that will be used in the evaluation process. These assessments may include Work Authorization, Cover Letter and/or others. Any assessments that you need to complete will appear on your screen as soon as you select "Apply to this position". Once you begin an assessment, it must be completed at that time; if you do not complete the assessment you will be prompted to do so the next time you access your "My Jobs" page. If you select to take it later, it will appear on your "My Jobs" page to take when you are ready.

Please note that your application will not be reviewed, and you will not be considered for this position until all required assessments have been completed.

Applicants considered for this position will be required to disclose if they are the subject of any substantiated findings or current investigations related to sexual misconduct at their current employment and past employment. Disclosure is required under [Washington state law](#).

Committed to attracting and retaining a diverse staff, the University of Washington will honor your experiences, perspectives and unique identity. Together, our community strives to create and maintain working and learning environments that are inclusive, equitable and welcoming.



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The University of Washington is an affirmative action and equal opportunity employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, gender expression, national origin, age, protected veteran or disabled status, or genetic information.

To request disability accommodation in the application process, contact the Disability Services Office at 206-543-6450 or dso@uw.edu.

COVID-19 VACCINATION REQUIREMENT

Governor Inslee's Proclamation 21-14.2 requires employees of higher education and healthcare institutions to be fully vaccinated against COVID-19 unless a medical or religious exemption is approved. Being fully vaccinated means that an individual is at least two weeks past their final dose of an authorized COVID-19 vaccine regimen. As a condition of employment, newly hired employees will be required to provide proof of their COVID-19 vaccination. View the [Final candidate guide to COVID-19 vaccination requirement webpage](#) for information about the medical or religious exemption process for final candidates.

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