



FLORIDA STATE UNIVERSITY
CENTER FOR THE ADVANCEMENT OF TEACHING

NMR Research Specialist Florida State University

Job Posting Title:

Scientific Research
Specialist (Chemistry
& Biochemistry)

Position Number

00051834 (Scientific
Research Specialist)

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Salary is dependent on degree and experience: \$55,000 - \$67,000

Florida State University Department of Chemistry and Biochemistry is searching for an energetic and motivated Scientific Specialist to join our core NMR facility. The candidate should be a BS, MS, or PhD level physical scientist that has worked with NMR spectrometers. In this position, you will work directly with leaders in the field of chemistry, biochemistry, and materials science. You will have the opportunity to help design experiments and assist University and Corporate users on NMR studies of solution and solid-state samples.

FSU is situated in the panhandle of Florida and Tallahassee is the capitol of Florida. Tallahassee has three universities in the city limits and is home to the NSF National High Magnetic Field Laboratory. The top-ranked Chemistry and Biochemistry program involves 33 research-active faculty, 180 PhD and MS students, and 30 postdoctoral associates. The NMR core on campus consists of three general use solution NMRs, a cryoprobe, and a solid-state NMR. In addition, we work closely with the National High Magnetic Field Laboratory that houses some of the strongest NMRs in the world. As a scientific specialist you will learn to maintain NMRs, develop science experiments, and train students. By working with the facility director, you will learn how to organize, manage, and run an NMR facility.

Responsibilities

The Scientific Research Specialist is responsible for measurement, training, and maintenance of all NMR instruments in the NMR Lab. Duties include: Overseeing daily operations of NMR instruments including variable temperature systems, cryoprobe status, air pressure, room temperature, power supply systems, O2 monitor, tube quality, spinner condition, and proper operation of sample cases. Overseeing routine maintenance of NMR instruments and diagnosing, scheduling, and coordinating repairs to the NMRs, Coordinating measurements and the collection of data on NMRs for undergraduate laboratories. Providing scientific support to the users of the NMR facility in coordination with and at the direction of the facility director. Conducting lab safety and user operation training.

Qualifications

Bachelor's degree and two years' experience, MS or PhD. Note: Higher education can substitute for experience at the equivalent rate. Ability to convey technical information to technical and non-technical users. Ability to perform mathematical calculations. Ability to independently perform tests, examinations, and procedures relevant to the assigned area of research. Experience in training users and handle cryogen refill. Able to move 250 L Dewar with L-He. Familiar with the operation of Bruker NMR spectrometer, topspin and Mnova software.

Job duties include but are not limited to:

1. NMR Lab Routine Maintenance
 - monitoring the cryogen level of spectrometers, ordering and ensuring the timely delivery of cryogens and gases
 - refill L-N2 of all NMR instrumentation weekly, assist the director to order L-He and fill magnets when large 250L Dewar is used
 - weekly assessment of instrument function and performance, such as lineshape analysis, shimfile updates, T & M are working smoothly, etc.
2. User training
 - Schedule and conduct NMR lab safety and NMR user operation training
 - Demo and help users to apply the online time reservation system
 - Demo and help user to save and transfer data
3. Billing
 - Maintain the log in files and collect user's instrument usage raw files
 - Process and prepare the monthly billing statements under the guidance of director and accounting staffs based on the facility rate schedule.
4. Support
 - Assisting and running NMR samples for undergraduate education lab programs, providing technical support for experiments and data interpretation;
 - Assisting and/or running routine NMR samples for research groups, external NMR users.
5. Oversight of NMR labs

- Follow the guidance of FSU EHS and keep NMR labs meet the safety requirement.
- Monitor and cooling-system status of spectrometer with cryoprobe.
- check the dry air supply, DP and pressure of airflow pressure to the NNMR lab
- check and keep stable temperature or NMR rooms;
- monitor the power supply systems, especially the UPS working status.
- Make sure the power on of the O₂ monitor
- Keep eyes on the quality NMR tubes are used
- Make sure the spinners are on proper condition and sample case moving smoothly
- Coordinate lab cleaning, keep the labs in order and sufficient lab supplies