



UNIVERSITY OF NORTH CAROLINA WILMINGTON

Research Vessel Captain
Competency Profile

DESCRIPTION OF WORK:

Positions in this banded class operate and maintain research vessels in support of a wide variety of underwater research activities with overall responsibility for the safety and operation of the vessel and passengers. Positions are responsible for all aspects of operations and vessel maintenance year round under potentially hazardous conditions including navigation. Duties range from crew leader or relief captain to full oversight and direction of a crew in deploying and retrieving research equipment; determination of safe operating conditions or when to cease operations because of hazardous working conditions; compliance with all state and federal laws on safety for operation of the vessel; oversight of the maintenance of the navigation, electrical and mechanical systems and direction of the maintenance and repair of equipment and other gear involved in completing objectives. Positions provide the means for scientist and academic researchers to obtain a variety of samples and conduct experiments for their studies; provide training and instruction to researchers and students as to how to conduct research on the vessel, sampling techniques and safety procedures. The captain works closely with administrators and scientists to plan and execute the research project.

ROLE DESCRIPTIONS BY COMPETENCY LEVEL

| Contributing | Journey | Advanced |
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| Positions in this banded class typically use working knowledge and technical skills to safely operate and maintain a variety of vessels of a less complex nature in support of academic research. They assist in planning for vessel operations, ensure all vessel and support equipment is functional and maintain inventory control. They provide operations and safety instructions and may complete repairs and maintenance on the vessel as required. | Positions at this level apply considerable knowledge and technical skills in the operation of more complex vessels and research projects. They exercise full command of the vessel at sea and supervise the activities of the mate and other onboard personnel during critical vessel maneuvers. They work closely with scientists to assess the needs of the research operation to ensure the vessel is properly prepared and positioned to carry out the intended research operation including budgeting and use of resources. | Positions at this level typically apply significant knowledge and technical skills for complex vessels with advanced equipment for multi-stage research projects. They may have oversight of technical quality assurance and safety programs and establish priorities in the use of resources and funds. They ensure compliance with policies, procedures and work standards. They prepare and implement budgets and identify potential cost savings. |

| Competencies | Definition |
|-------------------------------------|---|
| Knowledge – Professional | Ability and professional skill in all phases of seamanship including command, navigation and first aid. Knowledge in navigation and maneuvering of the vessel in a variety of waters and weather conditions to meet safety and USCG rules and regulations. General knowledge of the scientific methods used to conduct research; knowledge of related technology. |
| Planning and Organizing Work | Knowledge and ability to serve as a resource on technical and program related issues for staff and others. Ability to develop plans to accomplish mission operations and objectives. Ability to arrange and assign work to use resources efficiently. |
| Communication | Ability to communicate with scientists, port authorities, administrators, vendors, outside agencies, and the general public. Ability to complete appropriate documentation, logs, inventory and reports. |
| Human Resources Management | Knowledge and ability to administer and ensure compliance with human resources policies and procedures. Ability to observe and assess techniques and provide feedback to staff, students, faculty and/or other clients. Ability to provide technical supervision. |
| Vessel Operations Management | Ability to plan voyages and plot courses. Ability to make quick decisions on vessel operations in times of crisis such as equipment breakdown and inclement weather. Complies with safety standards to maintain a safe environment. Ability to understand budget and resource management concepts. |

Note: Competency statements are progressive and not all competencies apply to every position/employee. Evaluate only those that apply.

| Competency | Contributing | Journey | Advanced |
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| <p>Knowledge - Professional - Ability and professional skill in all phases of seamanship including command, navigation and first aid. Knowledge in navigation and maneuvering of the vessel in a variety of waters and weather conditions to meet safety and USCG rules and regulations. General knowledge of the scientific methods used to conduct research; knowledge of related technology.</p> | <p>Working knowledge of and technical skills to effectively and safely operate a variety of vessels using navigational techniques and standard navigational devices. Knowledge of Inland and International Rules of the Road, as well as knowledge of the sea, weather and local waters sufficient to operate the vessel in both marked and unmarked waters and the open ocean.</p> | <p>Considerable knowledge of and technical skills for more complex vessels and projects. Specific knowledge of operation of vessels in support of diving, remotely operated vehicles or oceanographic research. Ability to operate marine diesel engines and engage in generator repair.</p> | <p>Significant knowledge and technical skills for complex vessel operations with advanced navigation systems and sophisticated equipment for complex research projects. Ability to identify needs, contracting and oversight of outside maintenance, as necessary. Ability to stay abreast of current developments in the industry and trends in research advancements.</p> |

Basic Knowledge – The span of knowledge minimally necessary to complete defined assignments.

Working Knowledge – The span of knowledge necessary to independently complete defined assignments to produce an effort or activity directed toward the production or accomplishment of the research objective.

Full Knowledge – The broad scope of knowledge demonstrated on the job that is beyond journey competencies.

| Competency | Contributing | Journey | Advanced |
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| <p>Planning & Organizing Work – Knowledge and ability to serve as a resource on technical and program related issues for staff and others. Ability to develop plans to accomplish mission operations and objectives. Ability to arrange and assign work to use resources efficiently.</p> | <p>Ability to assist in planning for vessel operations and prioritize daily or weekly to meet research objectives. Ability to set short-range deadlines. Ability to provide instructions to others. Ability to monitor operations for safety and efficiencies. Ability to contribute feedback/ input into the grant process.</p> | <p>Ability to determine long-range plans and schedules within established research objectives. Ability to assess the needs of the research operations and recommend changes in procedures, workflow and manpower assignments. Ability to contribute feedback/ input into the grant process.</p> | <p>Ability to determine multiple and more complex long-range plans and schedules within established research objectives. Ability to contribute input into the grant process or prepare grant proposals. Ability to arrange and assign work for multiple research projects. Ability to participate in strategic planning to fulfill mission goals.</p> |

| Competency | Contributing | Journey | Advanced |
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| <p>Communication - Ability to communicate with scientists, port authorities, administrators, vendors, outside agencies, and the general public. Ability to complete appropriate documentation, logs, inventory and reports.</p> | <p>Ability to convey daily plans with research team and participants to ensure understanding of project and safety guidelines. Ability to collect and document information for internal and external reporting. Ability to deliver instruction in operations and safety procedures when appropriate.</p> | <p>Ability to communicate with external program clients, e.g., scientists for multiple research operations. Ability to exercise full command of vessel at sea. Ability to organize, tabulate, and analyze data for internal and external reporting.</p> | <p>Ability to communicate with agencies and regulatory entities. Ability to conduct feasibility studies for research proposals. Ability to prepare annual reports for internal and external agencies.</p> |
| Competency | Contributing | Journey | Advanced |
| <p>Human Resources Management - Knowledge and ability to administer and ensure compliance with human resources policies and procedures. Ability to observe and assess techniques and provide feedback to staff, students, faculty and/or other clients. Ability to provide technical supervision.</p> | <p>Ability to resolve minor problems and complaints on an informal basis.</p> | <p>Ability to plan for and ensure professional training. Ability to review appropriate certifications. Ability to participate in recruitment and selection process and/or performance management of crew. Ability to ensure human resources policies and related information are shared with employees.</p> | <p>Ability to determine training needs and provide training to specific employees. Ability to ensure employees have tools and knowledge to comply with research protocol and regulatory requirements. Ability to develop training programs. Ability to determine work unit design. Ability to apply policies to execute operations needs. Ability to conduct performance management. Ability to resolve disciplinary and grievance issues.</p> |

| Competency | Contributing | Journey | Advanced |
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| <p>Vessel Operations Management - Ability to plan voyages and plot courses. Ability to make quick decisions on vessel operations in times of crisis such as equipment breakdown and inclement weather. Complies with safety standards to maintain a safe environment. Ability to understand budget and resource management concepts.</p> | <p>Ability to monitor work of research team. Ability to assemble, inspect and ensure all vessel and support equipment is functional, onboard and ready to use. Ability to coordinate and perform maintenance on the vessel as required, including routine and emergency at sea and shore based repairs. Ability to maintain inventory control, and coordinates space, field, equipment and/or facilities.</p> | <p>Ability to review research project objectives. Ability to ensure vessel is properly prepared and positioned to carry out the intended research operation. Ability to direct and supervise the activities of the mate and other onboard personnel during critical vessel maneuvers. Ability to plan and operate project within resources, including budgeting and personnel. Ability to recommend priorities in the use of resources including space, field equipment and/or facilities. Ability to order spare parts and equipment.</p> | <p>Ability to provide oversight of technical quality assurance and safety programs. Ability to coordinate and manage multiple vessels and/or equipment, supplies and related resources. Ability to monitor environmental risks. Ability to establish priorities in the use of resources including space, field equipment and/or facilities. Ability to ensure compliance with policies, procedures and work standards. Ability to implement adjustments or changes to work standards. Ability to prepare and implement budgets, and identify potential cost savings.</p> |

Recommended Minimum Training Guideline: Minimum Education and Experience into the Band: US Coast Guard Master’s Licensure for tonnage required for operation of vessel intended for use. All degrees must be received from appropriately accredited institutions.

Special Note: This is a generalized representation of positions in this class and is not intended to reflect essential functions per ADA. Examples of competencies are typical of the majority of positions, but may not be applicable to all positions.