

Research Job Family Outline

Below are typical responsibilities held by research staff at various levels throughout the University. This information can be used by Tufts managers, faculty and staff to create job descriptions.

Research Technician	Senior Research Technician	Research Assistant	Senior Research Assistant
<i>Qualifications:</i> Bachelor's degree in biological/physical sciences with up to one year of laboratory experience.	<i>Qualifications:</i> Bachelor's degree in biological/physical sciences and at least one year of related laboratory experience.	<i>Qualifications:</i> Bachelor's degree in biological/physical sciences and at least three to five years related experience OR Master's degree and related lab experience	<i>Qualifications:</i> Master's degree and at least five years progressively responsible experience in a related research field.
<i>Job Responsibilities</i>			
50% <i>Conducts routine experiments:</i>	50% <i>Conduct routine and specialized laboratory experiments:</i>	30% <i>Perform specialized laboratory experiments:</i>	20% <i>Plan and organize independent research project(s):</i>
- Follow appropriate protocols and procedures to achieve results	- Follow appropriate protocols and procedures to achieve results	- Perform advanced techniques such as DNA sequencing, molecular biology, etc.	- Design, test, and evaluate methodologies and protocols
- Perform techniques such as tissue culture, electrophoresis, protein purification, etc.	- Perform techniques such as tissue culture, electrophoresis, protein purification, etc.		
20% <i>Record results and assist with data analysis:</i>	20% <i>Record results and assist with data analysis:</i>	20% <i>Provide input into research design:</i>	30% <i>Execute research project(s):</i>
- Keep accurate records of experiments and results	- Keep accurate records of experiments and results	- Develop and/or modify techniques and protocols	- Train staff and delegate tasks and protocols
- Perform limited data interpretation and summarization	- Examine reliability of results and determine whether modification or repeat of procedures is necessary		- Evaluate progress of studies at checkpoints
	- Draft interpretation and summary		
15% <i>Maintain laboratory equipment and supplies:</i>	15% <i>Assist with general laboratory operations:</i>	20% <i>Advanced problem solving, troubleshooting, and data analysis:</i>	20% <i>Data Analysis:</i>
- Maintain laboratory equipment for optimal productivity	- Maintain laboratory equipment and supplies	- Examine reliability of results and determine whether modification or repeat of procedures is necessary	- Analyze, interpret and summarize data
- Keep inventory and purchase supplies when necessary	- Monitor compliance with university safety and OSHA requirements	- Interpret scientific data	- Compile results
- Prepare and stock solutions and other media	- Provide work direction to newer members of the laboratory	- Write summaries	- Prepare reports
15% <i>Monitor animal colonies:</i>	15% <i>Research alternate testing methods</i>	15% <i>Assist in writing/editing material:</i>	15% <i>Write/edit materials:</i>
- Perform husbandry	- Review current literature	- Collaborate with supervisor in preparing grants and materials for publication	- Prepare materials for submission of grants
- Collect samples	- Propose new or changed protocols	- Present papers at meetings	- Prepare abstracts, summaries, and research results for publication and presentation at meetings
- Note general appearance and condition of animals		15% <i>Assist in managing laboratory operations:</i>	15% <i>Oversee laboratory operations:</i>
- Maintain census records		- Train, supervise and evaluate progress and performance of laboratory staff	- Train, supervise and evaluate progress and performance of laboratory staff

	- Oversee inventory of supplies and equipment repair and maintenance	- Oversee inventory of supplies and equipment repair and maintenance
	- Ensure compliance with university safety and OSHA requirements; participate on university committees	- Ensure compliance with university safety and OSHA requirements and participate on university committees
	- Oversee care of animal colonies	- Ensure proper care of animal colonies

Competencies

Research Technician	Senior Research Technician	Research Assistant	Senior Research Assistant
<p>1. Expertise: Requisite skills for the position; sharing of expertise; support of others in learning and skill building; pride in work; commitment to professional development</p> <ul style="list-style-type: none"> - Knowledge of scientific principals - Accurate, detailed data and record keeping - Knowledge of statistical or other software - Organizational skills - Manual dexterity 	<p>1. Expertise: Requisite skills for the position; sharing of expertise; support of others in learning and skill building; pride in work; commitment to professional development</p> <ul style="list-style-type: none"> - Knowledge of scientific principles and procedures - Ability to work independently - Accurate, detailed data and record keeping - Knowledge of statistical or other software - Organizational skills - Manual dexterity 	<p>1. Expertise: Requisite skills for the position; sharing of expertise; support of others in learning and skill building; pride in work; commitment to professional development</p> <ul style="list-style-type: none"> - Advanced knowledge of scientific principles and procedures - Sophisticated laboratory techniques - Ability to design protocols - Insightful and evaluative reasoning skills - Advanced data analysis - Strong verbal and written communication skills - Organizational skills 	<p>1. Expertise: Requisite skills for the position; sharing of expertise; support of others in learning and skill building; pride in work; commitment to professional development</p> <ul style="list-style-type: none"> - Extensive knowledge of scientific principles and procedures - Task planning, distribution, and management skills - Sophisticated laboratory techniques - Insightful and evaluative reasoning skills - Dynamic approach to problem solving - Clear and concise communication skills - Excellent verbal and written communication skills - Organizational skills
<p>2. Interaction with Others: Demonstrated communication skills; openness to different viewpoints; respect shown for others; collaboration on joint projects & decisions; ability to give & receive candid and helpful feedback</p> <ul style="list-style-type: none"> -collaborate with other members of laboratory -share skills and knowledge with co-worker 	<p>2. Interaction with Others: Demonstrated communication skills; openness to different viewpoints; respect shown for others; collaboration on joint projects & decisions; ability to give & receive candid and helpful feedback</p> <ul style="list-style-type: none"> - Collaborate with other members of laboratory - Share knowledge and research developments with co-workers - Play lead role in disseminating information in laboratory 	<p>2. Interaction with Others: Demonstrated communication skills; openness to different viewpoints; respect shown for others; collaboration on joint projects & decisions; ability to give & receive candid and helpful feedback</p> <ul style="list-style-type: none"> - Ability to instruct and motivate laboratory staff - Ability to give and receive candid and helpful feedback - Share knowledge and research developments with staff 	<p>2. Interaction with Others: Demonstrated communication skills; openness to different viewpoints; respect shown for others; collaboration on joint projects & decisions; ability to give & receive candid and helpful feedback</p> <ul style="list-style-type: none"> - Ability to instruct and motivate laboratory staff - Ability to give and receive candid and helpful feedback - Share knowledge and research developments with staff

<p><i>3. Continuous Improvement/Customer Focus: Measurable improvement made in systems or processes; attention to and focus on customer satisfaction; system efficiency; effective and appropriate relationships with customers; innovation and creativity; commitment to generating new solutions & ideas</i></p> <ul style="list-style-type: none"> - Demonstrate enthusiasm and creativity for - Improving efficiency of laboratory operations 	<p><i>3. Continuous Improvement/Customer Focus: Measurable improvement made in systems or processes; attention to and focus on customer satisfaction; system efficiency; effective and appropriate relationships with customers; innovation and creativity; commitment to generating new solutions & ideas</i></p> <ul style="list-style-type: none"> - Improve protocols to reduce time and increase quality of studies and data 	<p><i>3. Continuous Improvement/Customer Focus: Measurable improvement made in systems or processes; attention to and focus on customer satisfaction; system efficiency; effective and appropriate relationships with customers; innovation and creativity; commitment to generating new solutions & ideas</i></p> <ul style="list-style-type: none"> - Improve protocols to increase efficiency and quality of studies and data - Reallocate staff and/or resources to accommodate shifts in research design - Identify and arrange for training needs of laboratory staff 	<p><i>3. Continuous Improvement/Customer Focus: Measurable improvement made in systems or processes; attention to and focus on customer satisfaction; system efficiency; effective and appropriate relationships with customers; innovation and creativity; commitment to generating new solutions & ideas</i></p> <ul style="list-style-type: none"> - Improve protocols to increase efficiency and quality of studies and data - Reallocate staff and/or resources to accommodate shifts in research design - Identify and arrange for training needs of laboratory staff
<p><i>4. Resourcefulness and Results: The ability to work effectively in a variety of situations; demonstrating good work habits, flexibility & initiative; using multiple resources to achieve desired results; seeking input & assessing risks when decision making; committing to getting things done</i></p> <ul style="list-style-type: none"> - Research vendors for best products and prices - Search scientific literature for relevant research 	<p><i>4. Resourcefulness and Results: The ability to work effectively in a variety of situations; demonstrating good work habits, flexibility & initiative; using multiple resources to achieve desired results; seeking input & assessing risks when decision making; committing to getting things done</i></p> <ul style="list-style-type: none"> - Research vendors for best products and prices - Search scientific literature for relevant research 	<p><i>4. Resourcefulness and Results: The ability to work effectively in a variety of situations; demonstrating good work habits, flexibility & initiative; using multiple resources to achieve desired results; seeking input & assessing risks when decision making; committing to getting things done</i></p> <ul style="list-style-type: none"> - Ability to analyze and trouble-shoot problems, identify solutions - Knowledge of resources and how to do business in university 	<p><i>4. Resourcefulness and Results: The ability to work effectively in a variety of situations; demonstrating good work habits, flexibility & initiative; using multiple resources to achieve desired results; seeking input & assessing risks when decision making; committing to getting things done</i></p> <ul style="list-style-type: none"> - Ability to analyze and trouble-shoot problems, identify solutions - Knowledge of resources and how to do business in university
<p><i>5. Leadership: Model desired behavior for position; act as a catalyst for change through positive energy. (For management positions refer to the Leadership Competency Model.)</i></p> <ul style="list-style-type: none"> - Demonstrate positive attitude and flexibility - Reinforce teamwork 	<p><i>5. Leadership: Model desired behavior for position; act as a catalyst for change through positive energy. (For management positions refer to the Leadership Competency Model.)</i></p> <ul style="list-style-type: none"> - Demonstrate positive attitude and flexibility - Reinforce teamwork, train and motivate others 	<p><i>5. Leadership: Model desired behavior for position; act as a catalyst for change through positive energy. (For management positions refer to the Leadership Competency Model.)</i></p> <ul style="list-style-type: none"> - Demonstrate positive attitude and teamwork - Ability to train, coach and motivate others 	<p><i>5. Leadership: Model desired behavior for position; act as a catalyst for change through positive energy. (For management positions refer to the Leadership Competency Model.)</i></p> <ul style="list-style-type: none"> - Demonstrate positive attitude and teamwork - Ability to train, coach and motivate others