Post Details	Last Updated: 24/12/2021	
Faculty/Administrative/Service Department:	Faculty of Health and Medical Sciences	
Job Title:	Bioinformatics Experimental Officer	
Job Family & Job Level	Research and Analogous	Level 4
Responsible to:	The Academic Lead for Bioinformatics	
Responsible for:	n/a	

Job Purpose Statement

As part of a team, the post holder will provide bioinformatics expertise to Faculty researchers. The post holder will advise users on the most appropriate data analysis approach to respond to their research problem and is involved in training users in the use of relevant specialist software. The post will contribute to an increase in research activities and grant bidding in highly funded areas involving computational biology.

Main Responsibilities/Activities

Problem Solving, Accountability and Dimensions of the role

The post holder will work largely autonomously and without close line management supervision. They are responsible for the bioinformatics suite infrastructure and providing data analysis and software programme expertise and training for multi-users across the Faculty. The post holder will perform tasks delegated to them by their line manager, with priorities being determined by their line manager and other users of the bioinformatics facility. Whilst their priorities are determined for them, the post holder will determine how best to complete the tasks given and will manage their own smaller priorities and deadlines within these, generally based on their own judgement and experience.

The post holder is expected to carry out full technical problem solving and to ensure the scientific and technical quality of computational solutions. Problems presented to the post holder may range from identification of the software to best implement a particular data analysis approach and the implementation of computer programs for data conversion between tools to the identification of computer operating system configurations which are optimal for the functionality of the Bioinformatics infrastructure. In terms of finding technical solutions to data analysis problems, the post holder is required on occasion to take a creative or innovative approach. The post holder will also have to refer to their past experiences and technical knowledge to develop solutions, whilst also ensuring that they comply with departmental policies and procedures. The post holder will receive limited guidance in the resolution of problems; however, more complex issues or problems may be referred to a more senior member of staff. The post holder is also expected to recognise the impact of incidents arising and raise concerns where necessary.

The post holder will be proactively involved in the continual development of the Bioinformatics suite and is expected to make suggestions for the improvement/development of current working practices, in consultation with their line manager.

The post holder will not be responsible for managing any staff. The post impacts upon the Faculty's ability to further develop its strong research portfolio in the areas requiring sophisticated data analysis and computer simulation. The post holder will not have any budgetary responsibility.

Background Information/Relationships

During the last four years the FHMS has been committed to the development of interdisciplinary research integrating mathematical modelling and bioinformatics with state-of-the-art experimental methods of functional genomics. This resulted in the emergence of new research projects which have been recently affiliated under the Systems Biology Cross Cutting Theme. The Systems Biology activities have already resulted in numerous successful grant applications. Bioinformatics suite infrastructure has been established in the framework of these developments and is essential for further extension of Systems Biology activities.

The post-holder will interact with the Leads of Multi-User facilities. They will also liaise with other staff, including the respective Academic Leads, involved with genomics, microarrays, proteomics and metabolomics.

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This job purpose reflects the core activities of the post. As the Department/Faculty and the post-holder develop, there will inevitably be some changes to the duties for which the post is responsible, and possibly to the emphasis of the post itself. The University expects that the post-holder will recognise this and will adopt a flexible approach to work. This could include undertaking relevant training where necessary.

Person Specification This section describes the sum total of knowledge, experience & competence required by the post holder that is necessary for standard acceptable performance in carrying out this role.

Qualifications and Professional Memberships		**Essential/ Desirable**
PhD in biostatistics, bioinformatics, data science, machine learning, statistics, mathematics, computer science, or in a Biological Sciences subject with relevant experience		E
Technical Competencies (Experience and Knowledge) This section contains the level of competency required to carry out the role (please refer to the competency framework for clarification where needed and the Job Families Booklet).	**Essential/ Desirable**	**Level 1-3**
Competent in implementation of RNA-Seq data analysis	E	3
Competent in next generation sequencing data analysis	E	3
Competent in programming in **one** or several of the commonly used programming languages (R, Python, C/C++, Java, Perl)	E	3
Solid understanding of the application of statistical methods to biological / clinical data	E	3
Experience in statistical analysis of high throughput data	E	3
Experience in software package development and delivery of software in containers	E	2
Experience in machine learning	D	2
Experience in database management	D	1
Competent in proteomics data analysis	D	2
Competent in single-cell omics data analysis	D	2
Competent in the implementation of web interfaces	D	1
Competent in the Bayesian Statistics, Graphical Models, or Causality Analysis	D	2
Competent in the implementation of molecular interaction network analysis programs	D	3
Special Requirements:	**Essential/ Desirable**	**Level 1-3**
n/a		
Core Competencies This section contains the level of competency required to carry out this role. (Please refer to the competency framework for clarification where needed). N/A (not applicable) should be placed, where the competency is not a requirement of the grade.		**Level 1-3**
Communication		2
Adaptability / Flexibility		2
Customer/Client service and support		2
Planning and Organising		2
Teamwork		1
Continuous Improvement		2
Problem Solving and Decision-Making Skills		2
Leadership / Management		1
Creative and Analytical Thinking		2
Influencing, Persuasion and Negotiation Skills		1
Strategic Thinking		1

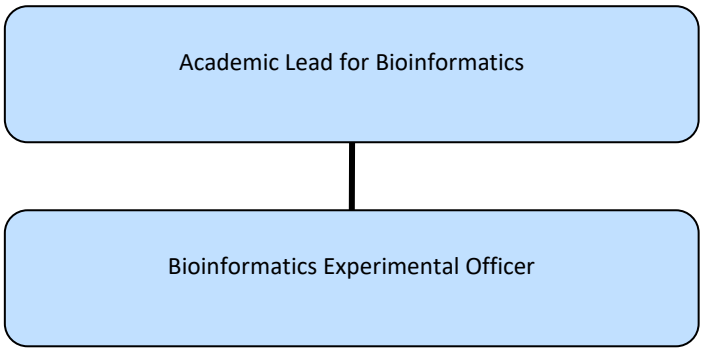
Organisational Information

All staff are expected to:

Positively support equality of opportunity and equity of treatment to colleagues and students in accordance with the University of Surrey Equal Opportunities Policy.

Help maintain a safe working environment by:

- Attending training in Health and Safety requirements as necessary, both on appointment and as changes in duties and techniques demand.
- Following local codes of safe working practices and the University of Surrey Health and Safety Policy.
- Excellent environmental performance is a strategic objective for the University of Surrey. All staff are encouraged to work to achieve the aims of our Environmental Policy and promote awareness to colleagues and students.
- Undertake such other duties within the scope of the post as may be requested by your Manager.



Key Responsibilities

This document is not designed to be a list of all tasks undertaken but an outline record of the main responsibilities (5 to 8 maximum) and should be read in conjunction with the accompanying Job Purpose.

1. Provision of expertise and training in statistical analysis of genomics, functional genomics and metabolomic data and computational systems biology. Maintenance of specialist software in the Bioinformatics Suite and assistance with administration of associated servers and workstations.
2. Take overall responsibility for the management of the specialist software and workstations associated with the Core Technology facilities that comprise the Bioinformatics Suite. The post-holder is expected to oversee the maintenance of the relevant workstations and software licences.
3. Provide training and advice on use of specialist software and provide input to users in statistical analysis of 'omic data.
4. Assist in the preparation of manuscripts related to the Faculty's research activities where appropriate.
5. Provide advice on the recent methodology developments in the relevant areas of computational biology.
6. Assist with implementation of data analysis protocols and services requiring computer programming skills.

N.B. The above list is not exhaustive.