GENOMICS OF COMMON AND RARE INHERITED DISEASES

Duration: One week
Cost: £1,000. If you are an NHS employee full funding is available through Health Education England
Tutors: Dr Katie Snape – St George’s, University of London
Dr Francesca Capon – King’s College London
Location: St George’s, University of London

SGUL.AC.UK/GENOMICS
In this module you will explore traditional and current approaches used to identify genetic predisposition to common and rare inherited diseases. You will investigate the clinical presentation and course of common and rare inherited disease, including hereditary cancer syndromes, using expertise from across both universities and our health partners to provide exemplars which emphasise the wide ranging genetic architecture of medical conditions.

In addition, the role of genomics in a care pathway will be examined through a series of cases studies, including the patient and family perspective, and the implications of genomic data sharing. You will then learn about the Genomics England 100,000 Genomes Project and data infrastructure and through practical examples learn how to select cases with unmet diagnostic need that will benefit from exome or whole genome sequencing.

LEARNING OBJECTIVES
This module will allow you to:

- Infer modes of disease inheritance and determine the appropriate methodology to utilise and identify genetic causality on a case-by-case basis
- Explain the 100,000 Genome Project
- Describe the current legislative and ethical framework within which genomics operates

ASSESSMENT
Work produced for assessment will be assessed against specific criteria for the module concerned and against St George's general postgraduate (level 7) criteria which state that students working at master’s level should be able to demonstrate the following attributes in their work:

1. Critical and analytical thought processes;
2. An appropriate use of evidence;
3. Reference to relevant theoretical constructs;
4. In-depth understanding of current thought and practice within the chosen field;
5. Appropriate presentation (including acceptable academic style and correct referencing technique).

ENTRY REQUIREMENTS
Applicants should have a lower second class degree (2:2) in a subject that offers an appropriate grounding in science, healthcare or genetics. Alternative professional qualifications may be considered. Please visit sgul.ac.uk/genomics for the full criteria.

I began the Genomic Medicine course in March 2016 initially being drawn to the programme integrating scientific research with medicine and in particular personalised healthcare. The programme is modular in structure which complements my employment in the NHS, allowing work alongside study. The lecturers are very helpful, the small group teaching with online resources available gives better understanding of disease genetics, interpreting genomic data, diagnostic laboratory methods and treatments.

Sobia Butt, Genomic Medicine Module student

Apply via sgul.ac.uk/genomics