the UNIVERSITY of GREENWICH

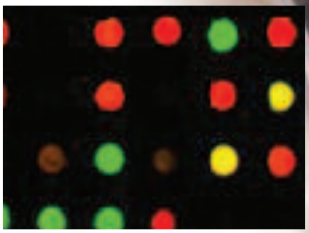
biomed ON-LINE LEARNING

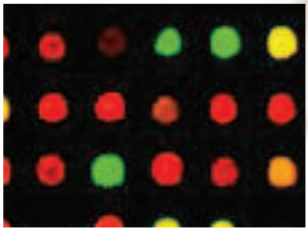
Analysis of Nucleic Acids

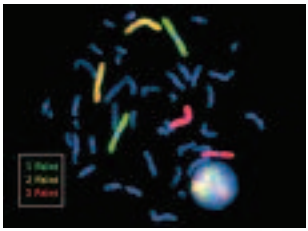
Twelve-week course starting April and October

BioMed Online Learning

www.greenwich.ac.uk/biomed







Analysis of Nucleic Acids

This course has been designed for:

- Biomedical scientists
- Clinical scientists
- Medical technical officers
- Healthcare scientists
- Nurses
- Pharmacists
- Doctors
- Allied health professionals

When you have completed this course, you will be able to:

- Demonstrate a critical understanding of eukaryotic and prokaryotic mutation and their relevance to human health and disease
- Demonstrate an awareness of the methods of molecular biology
- Demonstrate a critical awareness of current methods for mutation detection and their applications
- Use the Internet as a communication tool as well as a tool to find and evaluate relevant information
- Produce reports to professional standards
- Produce materials for public presentations

Course Content

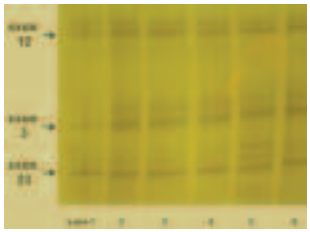
The course comprises two components:

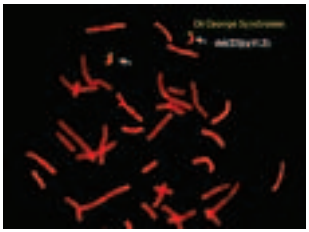
*Two face-to-face workshop*s

- Workshop 1: Introduction to WebCT, your tutor, and your course;
- Workshop 2: Course consolidation.

Guided online study of the following eight topics:

- **Genomes** - bacterial, viral, mitochondrial and human genomes –the Human Genome Project
- **Mutations** –occurrence, mutation classes and types - DNA polymorphisms
- **Methods** - isolation of nucleic acids – cloning - restriction enzymes - Northern and Southern blotting – the labelling and use of probes to detect nucleic acids - RFLPs
- **PCR** – design of primers - the key role of PCR in the revolution in molecular genetics - PCR in biomedical science laboratories
- **Carrier identification** – specific genetic conditions and trisomy in amniotic fluid diagnosis
- **DNA sequencing** – use DNA databases to identify a DNA sequence - the role of DNA sequencing techniques in the understanding of gene structure
- **Techniques for mutation scanning** - differentiate between mutation scanning and mutation detection - principles of mutation scanning methods and their use
- **Techniques for the detection of specific mutations** - principles of mutation detection methods and their use





Study where you want, when you want, supported online by a tutor

- Take an accredited short course
- Gain 30 credits at Master's level
- Gain 100 Continuing Professional Development credits for portfolio and registration
- Can be used towards an IBMS accredited MSc in Biomedical Science (Online)

Biomed courses train you to:

- Use Internet-based applications
- Make effective presentations
- Use real-time chat rooms and discussion groups to support reflective learning

Biomed courses offer you:

- Online support from specialists in the field
- Online access to fellow students
- Self-assessment and quizzes to support your progress
- Rapid, meaningful feedback

The programme is accredited by the Institute of Biomedical Science.

Analysis of Nucleic Acids

Enquiries

Name .....

Company name .....

Please send me further information on the following course(s):

- ☐ Quality Systems Management
- ☐ Implementing Advanced Quality Management
- ☐ Management of Healthcare Associated Infection
- ☐ Point of Care Testing
- ☐ Robotics and Automation
- ☐ Gene Structure and Function
- ☐ Analysis of Nucleic Acids
- ☐ Bioinformatics
- ☐ Renal Disease
- ☐ Lung Disease
- ☐ Diagnosis of Breast Cancer
- ☐ WebCT Training for Course Creators

Address .....

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E-mail .....

Telephone .....

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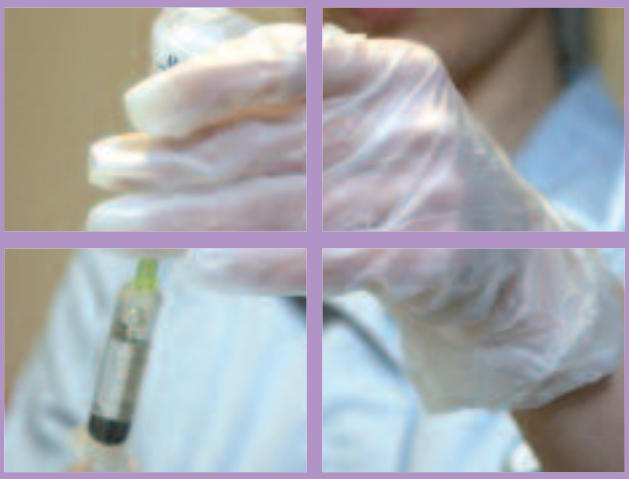

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This document is available in other formats on request

BioMed courses are owned by the BioMed Consortium, comprising 17 NHS Trusts, the Health Protection Agency and the University of Greenwich

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