

## Liverpool John Moores University

Title: IMPACT OF CLIMATE CHANGE ON BIOLOGICAL PROCESSES  
Status: Definitive  
Code: **5405NATSCI** (127328)  
Version Start Date: 01-08-2021

Owning School/Faculty: Biological and Environmental Sciences  
Teaching School/Faculty: Biological and Environmental Sciences

| Team                 | Leader |
|----------------------|--------|
| Richard Webster      | Y      |
| Christopher Williams |        |
| Rachael Symonds      |        |

**Academic Level:** FHEQ5      **Credit Value:** 20      **Total Delivered Hours:** 50  
**Total Learning Hours:** 200      **Private Study:** 150

### Delivery Options

Course typically offered: Semester 2

| Component | Contact Hours |
|-----------|---------------|
| Lecture   | 24            |
| Practical | 18            |
| Workshop  | 6             |

**Grading Basis:** 40 %

### Assessment Details

| Category  | Short Description | Description  | Weighting (%) | Exam Duration |
|-----------|-------------------|--|---------------|---------------|
| Portfolio | test+rep          | Series of phase tests throughout the semester to test understanding of lecture and practical material and a report of a choice of subjects | 60            |               |
| Exam      | Exam              | Short questions and essay exam   | 40            | 2             |

### Aims

*To provide students with Scientific knowledge underpinning climate change biology. How the changing climate affects biological processes in animals and plants and the consequential effect on humans. To equip the students with the necessary knowledge, skills and techniques that are used to measure the effects of climate change on biological processes.*

## **Learning Outcomes**

After completing the module the student should be able to:

- 1 Gain practical and theoretical understanding on how terrestrial and aquatic plants and algae are influenced by climate change drivers
- 2 Gain practical and theoretical understanding on how terrestrial and aquatic animals are influenced by climate change drivers
- 3 Gain theoretical understanding on how human health and disease are influenced by climate change drivers

## **Learning Outcomes of Assessments**

The assessment item list is assessed via the learning outcomes listed:

|                            |   |   |   |
|----------------------------|---|---|---|
| Series of tests and report | 1 | 2 |   |
| Exam                       | 1 | 2 | 3 |

## **Outline Syllabus**

*Terrestrial plants, aquatic plants and algae, terrestrial and aquatic animals. Soils. Impacts on pollution and health and disease.*

## **Learning Activities**

Lectures, practicals, and workshops. Laboratory and numerical skills will be used to understand and interpret the affects of climate change on the biological systems.

## **Notes**

This module will examine the key biological processes that are affected in plants and animals due to climate change driven biotic and abiotic stresses. This will include examining from biochemical to organismal processes and their link to the environment.