**Liverpool** John Moores University

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| Title: | FUNCTIONAL MORPHOLOGY |
| Status: | Definitive |
| Code: | **6007NATSCI** (101270) |
| Version Start Date: | 01-08-2019 |
| Owning School/Faculty: | Natural Sciences & Psychology |
| Teaching School/Faculty: | Natural Sciences & Psychology |

| Team | Leader |
|---|---|
| James Ohman | Y |
| Carlo Meloro | |
| Claudia Mettke-Hofmann | |

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| **Academic Level:** | FHEQ6 | **Credit Value:** | 24 | **Total Delivered Hours:** | 46 |
| **Total Learning Hours:** | 240 | **Private Study:** | 194 | | |

**Delivery Options**
Course typically offered: Standard Year Long

| Component | Contact Hours |
|---|---|
| Lecture | 23 |
| Practical | 7 |
| Seminar | 9 |
| Workshop | 5 |

**Grading Basis:** 40 %

**Assessment Details**

| Category | Short Description | Description | Weighting (%) | Exam Duration |
|---|---|---|---|---|
| Exam | exam | Examination | 50 | 2 |
| Presentation | Present | Presentation | 50 | |

**Aims**

*To investigate the biomechanical and developmental factors affecting functional adaptations in vertebrates, with emphasis on reconstruction of the appearance, movements and behaviours of extinct vertebrates.*

## Learning Outcomes

After completing the module the student should be able to:

1 Perform biomechanical analyses of the musculoskeletal system.
2 Critically analyse the interpretation of function from form.
3 Discuss the evolution of human bipedality.
4 Discuss morphological analyses from a developmental perspective.

## Learning Outcomes of Assessments

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

| | | | | |
|---|---|---|---|---|
| Examination | 1 | 2 | 3 | 4 |
| Presentation | 2 | 3 | 4 | |

## Outline Syllabus

*Biomechanics, including theoretical bases and methodologies. The use of modern imaging technologies (e.g., computed tomography and radiographs) and analyses in biomechanical studies. Critical analyses of the interpretation of function from form, with examples from extant and extinct animals. Interpretation of the evolution of human bipedality, with critical assessment of existing hypotheses. The impact of modern developmental biology and embryogensis on the interpretation of functional adaptations in animals.*

## Learning Activities

The module will be taught through a combination of lectures, seminars and practicals.

## Notes

This module explores the modern role of functional morphology for the interpretation of functional adaptations in animals. Emphasis is placed on reconstruction of the appearance, movements and behaviours of extinct animals, and the impact of modern developmental biology is discussed.