Biomedical Ultrasound (MPHY0018)

Description

Ultrasound is the most widely used clinical imaging modality, and its application to therapy has grown rapidly over the last decade. This module provides an introduction to the physics, mathematical modelling, and applications of biomedical ultrasound, both diagnostic and therapeutic. The content briefly covers the historical beginnings of ultrasound, then progresses through the physics and mathematical theory of wave propagation, ultrasound generation and detection, image formation, therapeutic mechanisms, and ends with a brief introduction to the emerging ideas that may play a significant role in the future. Students who take this course will have a solid grounding in ultrasound physics, modelling, and instrumentation to take into research or applied work.

A video description can be found at the UCL Media Central.

Key information

Year: 2019/20
Credit value: 15 (150 study hours)
Delivery: UG L6, Campus-based
Reading List: View on UCL website
Tutor: Dr Ben Cox
Term: Term 1
Timetable: View on UCL website

Assessment

- Written examination (main exam period): 80%
- Coursework: 20%

Find out more

For more information about the department, programmes, relevant open days and to browse other modules, visit ucl.ac.uk
Biomedical Ultrasound (MPHY0018)

**Description**
Ultrasound is the most widely used clinical imaging modality, and its application to therapy has grown rapidly over the last decade. This module provides an introduction to the physics, mathematical modelling, and applications of biomedical ultrasound, both diagnostic and therapeutic. The content briefly covers the historical beginnings of ultrasound, then progresses through the physics and mathematical theory of wave propagation, ultrasound generation and detection, image formation, therapeutic mechanisms, and ends with a brief introduction to the emerging ideas that may play a significant role in the future. Students who take this course will have a solid grounding in ultrasound physics, modelling, and instrumentation to take into research or applied work.

A video description can be found at the UCL Media Central.

**Key information**

- **Year**: 2019/20
- **Credit value**: 15 (150 study hours)
- **Delivery**: PGT L7, Campus-based
- **Reading List**: [View on UCL website](#)
- **Tutor**: Dr Ben Cox
- **Term**: Term 1
- **Timetable**: [View on UCL website](#)

**Assessment**

- Written examination (main exam period): 80%
- Coursework: 20%

**Find out more**
For more information about the department, programmes, relevant open days and to browse other modules, visit [ucl.ac.uk](http://ucl.ac.uk)
Biomedical Ultrasound (MPHY0018)

**Description**

Ultrasound is the most widely used clinical imaging modality, and its application to therapy has grown rapidly over the last decade. This module provides an introduction to the physics, mathematical modelling, and applications of biomedical ultrasound, both diagnostic and therapeutic. The content briefly covers the historical beginnings of ultrasound, then progresses through the physics and mathematical theory of wave propagation, ultrasound generation and detection, image formation, therapeutic mechanisms, and ends with a brief introduction to the emerging ideas that may play a significant role in the future. Students who take this course will have a solid grounding in ultrasound physics, modelling, and instrumentation to take into research or applied work.

A video description can be found at the UCL Media Central.

**Key information**

- **Year**: 2019/20
- **Credit value**: 15 (150 study hours)
- **Delivery**: UGM L7, Campus-based
- **Reading List**: View on UCL website
- **Tutor**: Dr Ben Cox
- **Term**: Term 1
- **Timetable**: View on UCL website

**Assessment**

- Written examination (main exam period): 80%
- Coursework: 20%

**Find out more**

For more information about the department, programmes, relevant open days and to browse other modules, visit [ucl.ac.uk](http://ucl.ac.uk)

**Disclaimer**: All information correct as of August 2019. Please note that aspects of the module may be subject to change. UCL will make best efforts to inform applicants of major changes.