Hard Tissue Biology

Module Lead: Dr Sam Cobb
 Term: Autumn
 Level / Credits: Level 7 / 20 Credits
 Module status: Core module

This module provides the opportunity to develop an advanced knowledge and understanding of mineralised skeletal and dental tissues. Weekly topics include tooth development and function, including enamel, dentine, cementum, periodontal ligament; cartilage and bone development, growth and remodelling, structure and function; the mechanical properties of mineralised tissues, the interface of tendons and ligaments with bone.

Each week a topic is introduced in a lecture and, using a combination of self-directed learning and presentations and discussions in the seminar, you will critically assess the literature to broaden and deepen your learning around the topic. Practical sessions will cover comparative anatomy and hard tissue histology.

Learning Outcomes

On successful completion of this module you will be able to show that you can:

1. Describe in detail the structure of skeletal and dental hard tissues.
2. Critically appraise the function and mechanical properties of skeletal and dental hard tissues.
3. Describe in detail the growth and development of skeletal and dental hard tissues and relate this to form.
4. Identify the structure and function of the interface between mineralised and unmineralised skeletal and dental tissues.
5. Critically assess the utility of skeletal and dental hard tissues for the recovery of growth, development and the life history information.

Module Aims

This module provides an advanced knowledge and understanding of the structure, function, growth and development of skeletal and dental tissues.
### Module Workload / Assessment

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<tr>
<th>Category</th>
<th>Time</th>
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<tbody>
<tr>
<td>Lectures</td>
<td>10 hours</td>
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<td>Practicals</td>
<td>4 hours</td>
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<td>Seminars</td>
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<tr>
<td>Self-Directed Learning</td>
<td>100 hours</td>
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<tr>
<td>Assessment</td>
<td>3000-word essay, 2 hours timed essays</td>
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