

<b>Course Code</b>	BG2119
<b>Course Title</b>	Anatomy & Physiology
<b>Pre-requisites</b>	Nil
<b>No of AUs</b>	3
<b>Contact Hours</b>	<i>26 hours lecture, 13 hours team-based learning and project</i>

### **Course Aims**

This course will provide you with the basic knowledge of human anatomy and physiology in the context of macroscopy and microscopic structure, mechanics and function. The focus is on the healthy body, with reference to diseases and ageing. It provides basic biological knowledge in human systems for bioengineering applications.

### **Intended Learning Outcomes (ILO)**

Students are expected to be able to:

1. Identify basic human anatomical parts and organ systems
2. Describe key physiological processes
3. Explain the interplay between structure and function, in health, disease and ageing
4. Communicate the application of anatomy and physiology knowledge to bioengineering solutions

### **Course Content**

This is a one semester course on basic human anatomy and physiology. It is tailored for engineering students and does not require biology at GCE "A" level.

You will be introduced to key concepts in anatomy and physiology. A systems approach will be used covering: Skin, Musculo-skeletal, Cardio-respiratory, Nervous, Gastro-intestinal, Endocrine, Urinary and Reproductive systems. The emphasis is to understand how structure enables function and how these are perturbed in disease and ageing.

The course covers physiology, gross anatomy, tissue histology (microscopy) and basic pathology. It does not include molecular & cell biology and immunology (which are covered in other modules).

The course also covers broader aspects of how anatomical and physiological knowledge are applied for biomedical engineering and instrumentation, in real-world medical and research contexts, and in interaction with scientists and clinicians. The course includes a session viewing real and plastinated specimens at the Anatomy Learning Centre at the Clinical Sciences Building, Novena.

Details of the Course Curriculum are available online:

<https://sites.google.com/view/aandp3/contents/course-curriculum>

**Assessment (includes both continuous and summative assessment)**

<b>Component</b>	<b>Course LO Tested</b>	<b>Related Programme LO or Graduate Attributes</b>	<b>Weighting</b>	<b>Team /Individual</b>	<b>Assessment rubrics</b>
1. Mid-term Assessment	1, 2, 3, 4	a, b, f	40%	Individual	Single Best Answer (MCQ)
2. Final Exam [2.5hr, Open Book]	1, 2, 3, 4	a, b, c, e, j, l	60%	Individual	Single Best Answer (MCQ) and Short Questions
<b>Total</b>			100%		