

# Course Outline (Higher Education)

|                         |                                    |
|-------------------------|------------------------------------|
| <b>School:</b>          | School of Health and Life Sciences |
| <b>Course Title:</b>    | MEDICAL CELL BIOLOGY               |
| <b>Course ID:</b>       | BTHGC3741                          |
| <b>Credit Points:</b>   | 15.00                              |
| <b>Prerequisite(s):</b> | (BTHGC2741)                        |
| <b>Co-requisite(s):</b> | Nil                                |
| <b>Exclusion(s):</b>    | Nil                                |
| <b>ASCED Code:</b>      | 010901                             |

## Description of the Course :

The unit examines the pathways by which cells receive external information and process this into specific biochemical responses. We begin with a survey of different mechanisms of cellular signalling and their roles in 'normal' cellular activities and overall homeostasis. A diverse set of cellular processes is studied and the normal control mechanisms highlighted. This is followed by investigation of the dysfunction of signalling mechanisms in several disease states. Topics covered are: the cell cycle, apoptosis, haematopoiesis, atherosclerosis and HIV/AIDS. The aim is to demonstrate to students that dysfunction or inappropriate cellular signalling plays a key role in the pathogenesis of many common disease. Methods of clinical diagnosis are introduced and incorporated into the laboratory work, which is designed to illustrate concepts of the theory.

**Grade Scheme:** Graded (HD, D, C, etc.)

## Work Experience:

No work experience: Student is not undertaking work experience in industry.

**Placement Component:** No

**Supplementary Assessment:** Yes

Where supplementary assessment is available a student must have failed overall in the course but gained a final mark of 45 per cent or above and submitted all major assessment tasks..

## Program Level:

| AQF Level of Program |   |   |   |   |   |    |
|----------------------|---|---|---|---|---|----|
|                      | 5 | 6 | 7 | 8 | 9 | 10 |
| <b>Level</b>         |   |   |   |   |   |    |
| Introductory         | ■ | ■ | ■ | ■ | ■ | ■  |
| Intermediate         | ■ | ■ | ■ | ■ | ■ | ■  |
| Advanced             | ■ | ■ | ✓ | ■ | ■ | ■  |

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BTHGC3741 MEDICAL CELL BIOLOGY

## Learning Outcomes:

On completion of this unit students will be able to:

1. Describe a range of cellular signalling mechanisms;
2. Explain endocrine control of cellular processes;
3. Discuss the dysfunction of cell signalling mechanisms in several common disease states;
4. Discuss the role of biochemical and spectroscopic techniques in the diagnosis of disease;
5. Plan and execute complex biochemical laboratory procedures and interpret data acquired;
6. Demonstrate basic competence in the safe handling of hazardous biological materials.

## Course Content:

## Learning Task and Assessment:

| Learning Outcomes Assessed    | Learning Tasks                | Assessment Type               | Weighting |
|-------------------------------|-------------------------------|-------------------------------|-----------|
| Final examination (3 hours)   | Final examination (3 hours)   | Final examination (3 hours)   | 50%       |
| Major assignment (5000 words) | Major assignment (5000 words) | Major assignment (5000 words) | 20%       |
| Practical work                | Practical work                | Practical work                | 30%       |

## Adopted Reference Style: