

MODULE DESCRIPTOR

Module Title

Clinical Immunology

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|-----------|----------------|-------------|--------|
| Reference | AS3901 | Version | 4 |
| Created | August 2021 | SCQF Level | SCQF 9 |
| Approved | May 2011 | SCQF Points | 15 |
| Amended | September 2021 | ECTS Points | 7.5 |

Aims of Module

To provide students with the ability to discuss the molecular and cellular basis of diseases affecting the immune system, and the applications of immunological techniques designed to diagnose and monitor them.

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

- 1 Discuss lymphocyte activation and control, and the interaction of the immune system with antigen.
- 2 Explain the immunology of hypersensitivity, autoimmunity, immunodeficiency, transplantation and cancer.
- 3 Explain the features and applications of immunoassays in the diagnosis and monitoring of diseases affecting the immune system.

Indicative Module Content

Lymphocyte Activation & Control: first and second signals, accessory molecules, soluble immunoregulators (cytokines, interleukins, chemokines). Defence against Infection: vaccination, subversion by pathogens, superantigens. Hypersensitivity : types I to V. Autoimmunity: MHC, rheumatological (SLE, RA, autoantibodies) and kidney(Goodpastures) and organ-specific (thyroid, coeliac, pernicious anaemia, diabetes) diseases. Immunodeficiency: Complement, primary (T & B & NK cell) and secondary (HIV). Transplantation: rejection, solid organs, bone marrow. Cancer : tumour antigens, evasion. Immunoassays: haemagglutination, RIA, ELISA, tissue typing, functional assays.

Module Delivery

This is a lecture based module supplemented by tutorials and group discussions.

| Indicative Student Workload | Full Time | Part Time |
|--|-----------|-----------|
| Contact Hours | 40 | N/A |
| Non-Contact Hours | 110 | N/A |
| Placement/Work-Based Learning Experience [Notional] Hours | N/A | N/A |
| TOTAL | 150 | N/A |
| <i>Actual Placement hours for professional, statutory or regulatory body</i> | | |

ASSESSMENT PLAN

If a major/minor model is used and box is ticked, % weightings below are indicative only.

Component 1

| | | | | | |
|--------------|-----------------------------|------------|-----|--------------------|------|
| Type: | Examination | Weighting: | 70% | Outcomes Assessed: | 2, 3 |
| Description: | Extended response questions | | | | |

Component 2

| | | | | | |
|--------------|--------------------------|------------|-----|--------------------|---|
| Type: | Coursework | Weighting: | 30% | Outcomes Assessed: | 1 |
| Description: | Problem solving exercise | | | | |

MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

The first grade represents Component 1 (EX1) weighted as major and the second, Component 2 (CW1), weighted as minor. A minimum of Module Grade D is required to pass the module, with compensation of grade E in Component 1 or Component 2 permitted. Non-submission of either component will result in an NS grade.

| Module Grade | Minimum Requirements to achieve Module Grade: |
|--------------|--|
| A | AA, AB |
| B | AC, AD, AE, BA, BB, BC, CA |
| C | BD, BE, CB, CC, CD, DA, DB |
| D | CE, DC, DD, DE, EA, EB, EC |
| E | AF, BF, CF, DF, ED, EE, EF, FA, FB, FC, FD |
| F | FE, FF |
| NS | Non-submission of work by published deadline or non-attendance for examination |

Module Requirements

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|--------------------------|--|
| Prerequisites for Module | Successful completion of Stage 2 of the course, or equivalent. |
| Corequisites for module | None. |
| Precluded Modules | None. |

INDICATIVE BIBLIOGRAPHY

- HALL, A., SCOTT, C., and BUCKLAND, M. *Clinical Immunology*. Current edition. Oxford University Press.
- DELVES, P.J., MARTIN, S.J., BURTON, D.R and ROITT, I.M. *Roitt's Essential Immunology*. Current Edition. Wiley-Blackwell Publishing.