Module Specification

Module Summary Information

1	**Module Title**	Applied Biosciences
2	**Module Credits**	20
3	**Module Level**	5
4	**Module Code**	ODP5031

5	**Module Overview**

The application of physiology and pharmacology in clinical practice is fundamental in providing high quality patient centred care. Additionally, an understanding of the scientific principles that provide the basis of clinical monitoring and investigation are essential to the operating department practitioner.

This module builds on the knowledge you gained in the level 4 module Introduction to Bioscience. It allows you to explore the application of this knowledge in situations of injury and illness. You will have the opportunity to investigate the use of pharmacological interventions specific to operating department practice and its use in effective care delivery, this knowledge will then continue to develop throughout the other modules you will engage in throughout the year. In addition, this module will be taught to both ODP and Paramedic Science students and will promote and encourage a wider interprofessional understanding which will enhance the learning experience for both professions. As a result there may be opportunities for shared and inter-professional learning within the module thus allowing you to continue to gain a greater understanding of other disciplines within the heath care sector. This inter-professional learning will continue throughout your programme in many other ways and across other modules.

Pathophysiology of common conditions will be explored and compared with normal function. This will enable you to better appreciate the function and mechanisms of different disease processes and the methods employed to treat them.

The teaching methods used in the delivery of this module will include lectures, laboratory practical sessions, on line learning and group work. In addition you will be expected to contribute to your own learning by using self- directed study in both the pre and post learning activities as set out in this module guide.

The Applied Bioscience module will have its own designated Moodle page which you will have access to. This page will contain appropriate resources that are specific to the module such as lecture notes; supporting materials; assessment details and important notices. It is important that you access the site regularly as part of your learning will be to undertake weekly preparatory activities for each session followed by attempting short quizzes to help with your learning.

6	Indicative Content
Haematology Endocrine system disorders Blood groups/blood glucose Laboratory Practical's Homeostasis and shock Nervous system disorders Pain and physiology Respiratory system disorders Cardiovascular system disorders (Acute and chronic) Pharmacology 1 (acute adverse effects/contraindications) Pharmacology 2- (profession specific) – JRCALC drug workbook as self-directed study Renal system disorders- Acute and chronic Urinalysis Infection and Sepsis Digestive system disorder (Acute and chronic) GU system- Acute and chronic Nutrition and Parenteral nutrition Antibiotic therapy	

7	Module Learning Outcomes On successful completion of the module, students will be able to:	
	1	Examine the impact of disease processes on physiological systems.
	2	Discuss the application of pharmacological interventions on pathophysiology.
	3	Discuss the role of clinical investigations and monitoring in the identification and management of disease processes.

8	Module Assessment		
Learning Outcome			
	Coursework	Exam	In-Person
1-3		X	

9	Breakdown Learning and Teaching Activities	
Learning Activities		Hours
Scheduled Learning (SL) includes lectures, practical classes and workshops, peer group learning, Graduate+, as specified in timetable		40
Directed Learning (DL) includes placements, work-based learning, external visits, on-line activity, Graduate+, peer learning, as directed on VLE		60
Private Study (PS) includes preparation for exams		100
Total Study Hours:		200