ERASMUS

Course Programme

Erasmus Radiography Group
www.erasmus-rad-group.org

UNIVERSITY OF MALTA
FACULTY OF HEALTH SCIENCES
DEPARTMENT OF RADIOGRAPHY

ERASMUS COURSE PROGRAMME - MALTA

The course programme for ERG ERASMUS students is composed of the following study units:

Code	Unit Title	ECTS Credit Value	Level	Theory / Practice	Assessment Mode
CPH 3201	**Pharmacology for Radiographers**	**2**	**3**	**T**	**Assignment (40%)** **Written Exam (60%)**
RAD 1062	**Medical Imaging Theory & Practice: Pharmacology**	**4**	**1**	**T**	**Online Postings (40%)** **Oral Presentation (60%)**
RAD 2060	**Clinical Imaging Practice: General and Speciality Imaging**	**8**	**2**	**P**	**Clinical Placement** **(Min. 200 hrs)** **Portfolio (4,000 words)**
RAD4123	**Radiography Theory & Practice: Professional Issues 1**	**2**	**4**	**T**	**Presentation (20%)** **Practical Exercise (30%)** **Workshop (50%)**
MAL 0004	**Introduzzjoni ghall-Ilsien Maltija** ***(kors applikat)***	**2**	**0**	**T**	**Oral Exam (40%)** **Written Exam (60%)**
IHC 0101	**Maltese Culture**	**2**	**0**	**T**	**Assignment**

Study Unit Summary

Theoretical	12 ECTS
Clinical	8 ECTS
Total	20 ECTS

STUDY UNIT DESCRIPTION

CPH3201 - PHARMACOLOGY FOR RADIOGRAPHERS (2 ECTS)

DESCRIPTION

This introductory study-unit serves to provide a sound understanding of the principles underlying the therapeutic action of drugs used in radiography especially contrast media. It will include an understanding of the various phases of drug action, from the molecular level to drug analysis, as well as understanding of pharmacokinetic and pharmacodynamic principles and general pharmacological activity. The study-unit will also consider practical aspects of the role of pharmacology for the work, graduates in radiographic science will be undertaking especially in an understanding of the drugs used in emergency situations encountered in their practice.

STUDY-UNIT AIMS:

- To provide a sound understanding of the principles underlying the therapeutic action of drugs used in radiography especially contrast media.
- An understanding of the various phases of drug action, from the molecular level to drug analysis.
- An understanding of pharmacokinetic and pharmacodynamic principles and general pharmacological activity of contrast media and emergency drugs.
- Practical aspects of the role of pharmacology in understanding drugs used in emergency situations.
- Using pharmacological principles to understand differences in the mode of action and selection of contrast media.

LEARNING OBJECTIVES

By the end of this study unit, the student will be able to understand:

Knowledge & Understanding:

- general mechanisms of drug action.
- different modes of drug administration in radiography.
- principles of pharmacokinetics and pharmacodynamics of drugs used in radiography.
- selection and differences between different contrast media used in radiography.
- mechanism of action of drugs available on the emergency trolley.
- predict and manage adverse reactions to drugs used in radiography.
- aseptic procedures in drug preparation.

Skills:

- Apply the basic principles of drug action in the selection of contrast media used radiography.

- Apply knowledge of the molecular mode of action of drugs to specific clinical scenarios encountered emergency situations in radiography.
- Manage drug related problems in radiography.
- Adopt aseptic techniques in the preparation of drugs used in radiography.
- Use principles in pharmacology in understanding use of drugs available on the emergency trolley

ASSESSMENT MODE

Assignment (40%)
Written Examination (60%) – 1 hour

LECTURERS

Dr. Anthony Fenech
Dr. Patricia Vella Bonanno
Dr. Gabriel Galea
Mr. Mark Zammit

RECOMMENDED TEXTS

- Jensen SC and Peppers MP. Pharmacology and Drug Administration for Imaging technologists. Mosby. 2nd Ed.
- British National Formulary. Pharmaceutical Press.

- Reference
  Humphrey P. Rang HP, Dale MM, Ritter JM, Flower R. Rang & Dale's Pharmacology. Churchill Livingstone. 6th Ed.

RAD1062 - MEDICAL IMAGING THEORY AND PRACTICE: PHARMACOLOGY (4 ECTS)

DESCRIPTION

This study-unit is designed to encourage students to obtain an understanding of the safe use of the various contrast agents used in different medical imaging examinations. It also allows the student to be aware of international guidelines and protocols that are to be considered before, during and after the administration of different contrast agents.

LEARNING OBJECTIVES

By the end of the study-unit the student will be able to:

Knowledge & Understanding:

- Describe how the various types of contrast agents may be used in different imaging examinations;
- Explain the differences between the various types of contrast media used in different medical imaging examinations (eg. injectable vs non-injectable; ionic vs non-ionic; soluble vs insoluble);
- List and explain the indications and contraindications for the use of contrast agents in different medical imaging examinations;
- Discuss the recommendations of international guidelines concerning the safe use of different contrast agents in medical imaging;
- Describe the protocols or procedures followed by radiographers prior to, during and after the administration of the various types of contrast media for different medical imaging examinations;
- Describe the different types of reactions that may be induced by administration of injectable and non-injectable contrast media;
- Describe the importance and use of the drugs present on the emergency trolley in the Department.

Skills:

- Compare local practices related to the use and administration of contrast media in medical imaging to those adopted in other countries;
- Appraise and reflect on best practice relating to the use and administration of contrast media in radiography.

ASSESSMENT MODE

Online Postings (40%)
Oral Presentation (60%)

LECTURERS

Dr. Paul Bezzina
Mr. Jonathan Portelli
Ms. Deborah Mizzi
Ms. Karen Borg Grima

IHC0101 - MALTESE CULTURE (2 ECTS)

LEARNING OBJECTIVES

By the end of the units the students will learn about the history and culture of the Maltese islands.

CONTENT

This unit will consist of various lectures, discussions and site visits to various historical places of interest. The content will include:

- The geographical position of Malta in relation to its history
- The artistic treasures in Malta from prehistory to modern times
- The archaeological remains of the Maltese islands
- The order of St John in Malta
- The impact of the order of St John on the Maltese Islands
- The British in Malta

ASSESSMENT MODE

Assignment

LECTURER

Mr. Vince Zammit

MAL0004 - INTRODUZZJONI GHALL-ILSIEN MALTI (KORS APPLIKAT) - (2 ECTS)

DESCRIPTION

L-għan tal-kors hu li jgħin lill-istudenti barranin jibnu qafas bażiku fil-lingwa Maltija u jitħarrġu fil-ħiliet ta' l-ilsien - taħdit, smigħ, qari u kitba. It-tema ġenerali li torbot id-damma ta' lezzjonijiet tindirizza sitwazzjonijiet varji u r-relazzjoni bejn it-tabib/radjografista u l-pazjent/a f'kuntest fejn tidħol il-kura medika. Is-sessjonijiet jagħtu wkoll lok għal taħdit f'sitwazzjonijiet komuni li kull persuna tiltaqa' magħhom.

The aim of this course is to help foreign students build a basic knowledge in the Maltese language. Students will learn about the pronunciation and phonetics of the Maltese language and will be taught how to read and write some basic words in Maltese that can help in the radiography clinical setting as well as in basic day to day conversations.

ASSESSMENT MODE

Ezami orali (40%) u ezami miktub (60%)
Oral examination (40%) and written examination (60%)

LECTURER

Dr. Michael Spagnol

RAD4123 – RADIOGRAPHY THEORY AND PRACTICE: PROFESSIONAL ISSUES 1 (2 ECTS)

DESCRIPTION

This study-unit will facilitate comparison of the current and future roles of radiographers in the delivery of services both locally and across Europe.

During the study-unit students will be required to look at:

- National and international directives on the use of ionising and non-ionising radiation for medical purposes;
- Current and future roles in radiography, scope of practice, role development, drivers for change and skill mix;
- Continuous professional development in radiography;
- Codes of practice, ethics, patient advocacy models;
- Influence of national and international societies.

STUDY UNIT AIMS:

The aim of this study-unit is to develop students' understanding and appreciation of the difference in the:

- Role of the radiographer across Europe and provision of radiography;
- Role Development;
- Transposition and implementation of EU directives in the different member states;
- Provision of services.

LEARNING OUTCOMES:

By the end of the study-unit the student will be able to:

Knowledge

- Critically reflect on influences of cultural and social variation that have the potential to impact on the provision of radiography and the role of the radiographer;
- Evaluate ways in which radiography services are currently delivered;
- Critically express implications of variations in design and interpretation of relevant regulations and legislations;
- Critically evaluate factors which have influenced the development of the role of the radiographer in both a national and European context;
- Plan CPD in order to develop their professional skills.

Skills

By the end of the study-unit the student will be able to:

- Analyse differences/similarities in the professional role and responsibilities of radiographers and other healthcare practitioners involved in the delivery of care;
- Critically evaluate the current and future needs for radiography;
- Discuss technological developments as a way forward in meeting future demands;
- Draw up and deliver a small group teaching session with students and/or others.

ASSESSMENT MODE:

Presentation (20%)
Practical Exercise (30%)
Workshop (50%)

LECTURERS

Dr. Paul Bezzina
Mr. Nicholas James Agius
Ms. Danika Marmara
Mr. Jose' Guilherme Couto
Mr. Joseph Castillo

MAIN TEXT/S AND ANY SUPPLEMENTARY READINGS:

- Bury T & Mead J (2001) Evidence-based Healthcare: A Practical Guide for Therapists. Butterworth Heinemann.
- Carlton R R & Alder A M (2001) Principles of Radiographic Imaging An Art and a Science.
- Carter P (2006) Imaging Science Blackwell Publishing.
- Dimond B (2002) Legal Aspects of Radiography and Radiology.
- Lisle D A (200) Imaging for Students, 3rd Ed, Hoddler Arnold.
- Witz A (1992) Professions and Patriarchy Routledge.

RAD2060 - CLINICAL IMAGING PRACTICE: GENERAL AND SPECIALITY IMAGING (8 ECTS)

DESCRIPTION

Students registered for this study-unit will need to perform a minimum of 200 supervised hours in clinical placement in different general and speciality areas within the medical imaging department. During this clinical placement students will be assigned various tasks to build up their clinical portfolio. Each task is designed to motivate students to further develop their understanding of the evidence-base underpinning the practices within the different general and speciality areas in the medical imaging department.

STUDY-UNIT AIMS:

The aim of the study-unit is to engage students within their clinical placement and to motivate them to further develop their understanding of the evidence-base underpinning the radiography practices within the different general and speciality areas in the medical imaging department.

LEARNING OUTCOMES

By the end of the study-unit the student will be able to:

Knowledge & Understanding:

- Explain the different types of medical imaging examinations most commonly performed in general and speciality areas within the medical imaging department;
- Describe the most common clinical indications for various general and speciality medical imaging examinations;
- Discuss the radiation protections considerations for both patients and staff as applicable to the different general and speciality areas within the Medical Imaging Department;
- Discuss the safety issues associated with the administration of IV contrast agents as well as the use of the power injector;
- Recognise and describe examples of good patient care and communication practices within the different general and speciality areas;
- Explain the radiographic appearance of common pathologies/conditions as applicable in different general and speciality areas.

Skills:

- Compare and discuss how the role of the radiographer may change across the different general and speciality areas;
- Compare and evaluate how the role of the radiographer may differ across different countries and cultures.

ASSESSMENT MODE:

Clinical Placement (Min. 200 Hrs)
Portfolio (4000 words)

LECTURERS

Ms Deborah Mizzi

Dr. Frances Zarb