SECOND YEAR

INTAKE 2009

ACADEMIC YEAR 2010/2011
CODE: PHR 2103*  UNIT TITLE: PHARMACY PRACTICE II

TYPE: Lectures, seminars, practicals and tutorials

NUMBER OF ECTS CREDITS: 8

LEARNING OBJECTIVES
Introduction to minor disorders and their treatment
To give experience in presenting data and material in the form of posters and short oral presentation
Practical experience in Community Pharmacy

CONTENT
Geriatric Pharmacy Practice
Paediatric Pharmacy Practice
Drugs used in Pregnancy and Lactation
Symptoms presented at the Community Pharmacy: ear disorders, abdominal disorders, perianal and perivulval pruritus, musculoskeletal disorders, skin disorders: face and scalp, dandruff, eczema, dermatitis and fungal skin infections.
Foot Care
Eye Care
Oral and Dental Care
Sleep
Travel medicine and first aid
Parapharmaceuticals and medical devices
Wound management
Primary care health services
Community Pharmacy Management: principles of management of a community pharmacy, purchasing and inventory control, financial management
Introduction to hospital pharmaceutical services
Introduction to medicines regulatory affairs
Drug interactions and adverse effects
Medicine usage and patient needs
Formulary Systems: Introduction to policies and procedures involved in running a formulary
Complementary medicines
Pharmacy Practice Research: The scientific approach, basic principles of research, ethics in research, research design, psychometric evaluation, sampling, report writing
Participation at the yearly pharmacy symposium
Practical experience in a community pharmacy

ASSESSMENT
Assessment is aimed to evaluate students’ knowledge and understanding of topics that form the core of knowledge required for effective professional practice.

- Written test: (Duration: 2 hours) 95%
  - Section A: 14 compulsory short questions (5 marks each)
  - Section B: 3 questions (10 marks each)
    - Held at the end of the 2nd semester.
  - No mark will be allocated to partially correct answers.

- Log Book: 5% The marks obtained from all practice sessions presented will be considered for the credit assessment. +

RESULT
Percentage mark and grade

LECTURERS/DEMONSTRATORS
Lilian M. Azzopardi (Co-ordinator)  Anthony Serracino-Inglott
Conrad Buttigieg Scicluna  Gillian Soler
Janis Vella

GENERAL BIBLIOGRAPHY FOR PHARMACY PRACTICE MODULE

- Medical Dictionary
- Monthly Index of Medical Specialties (MIMS) Haymarket Medical Ltd: London (latest edn)
- Code of Ethics, Pharmacy Board, Malta.
- ABPI: Data Sheet Compendium, Walker G. Datapharm Publication: UK (latest ed.)

READING LIST


+ Refer to Guidelines for Community Pharmacy Practice

* Pre-requisite: PHR 1101
UNIT CODE: PHR 2105  
UNIT TITLE: ASPECTS OF NUTRITION

TYPE: Lectures

NUMBER OF ECTS: 2

LEARNING OBJECTIVES
To provide students with a basic understanding of the link between biochemical pathways and nutrition. To introduce fundamental nutritional principles with particular emphasis on the pharmacy setting.

CONTENT
Carbohydrates: nutrition and metabolism
Fats: nutrition and metabolism
Proteins: nutrition and metabolism
Obesity and weight management
Vitamins: structure and function
Nutritional assessment and growth

ASSESSMENT
Written test of 1 hour held at the end of the second semester.

RESULT
Percentage mark and grade

LECTURER
Lilian M. Azzopardi (Co-ordinator)  
Anthony Serracino-Ingliott  
Claire Sillato-Copperstone
UNIT CODE: PHR 2108  UNIT TITLE: REGULATORY AFFAIRS AND PHARMACY ETHICS

TYPE: Lectures, seminars, and tutorials

NUMBER OF ECTS CREDITS: 2

LEARNING OBJECTIVES
Introduction to ethical theories, principles and norms, to analyse ethical issues and to guide ethical decision-making in pharmacy practice and pharmaceutical regulatory affairs. To identify ethical issues, discuss alternative solutions and justify decision using carefully reasoned arguments. To develop moral attitudes and character traits which can subsequently be employed in pharmacy practice.

CONTENT
Pharmaceutical Regulatory Affairs:
Introduction to pharmaceutical regulatory affairs
An overview of global issues, different approaches to regulation, first and second wave markets
The European Union and free movement of goods: liberalisation of trade versus restriction and control
Medicines regulation: placing a medicinal product on the market.
Good Manufacturing Practice (GMP), Good Distribution Practice (GDP) and Good Clinical Practice (GCP)
The rational use of medicinal products in terms of a regulatory framework
Pharmacovigilance and post marketing surveillance
National issues versus harmonization: current initiatives and developments in the regulatory field

Pharmacy Ethics:
Foundations of an ethics of character and virtue
Pharmacy as a profession
Codes of Ethics for Pharmacy and their contemporary relevance
Structure of the pharmacist-patient relationship
• patient as person
• person as patient
Pharmacist and patient: the caring relationship
Inter - and intra - professional relationships
Diagnosis, prognosis and benevolence communication and truth telling
Decision-making and respect for patient as person
Justice and access to health care
Responsibility and accountability

ASSESSMENT
☒ Written test of 2 hours 95%
☐ Assignment and case presentations 5%

RESULT
Percentage mark and grade

LECTURERS/DEMONSTRATORS
Lilian M. Azzopardi (Co-ordinator)  Anthony Serracino-Inglott
Lilian Wismayer  Mary Anne Ciappara
Ray Zammit
UNIT CODE: PHR 2018  UNIT TITLE: PHARMACY PRACTICE PROJECT I

TYPE: Project

NUMBER OF ECTS CREDITS: 2

LEARNING OBJECTIVES
Selection of project and presentation of written short proposal for project

CONTENT
Selection of project on an aspect of practical pharmacy as approved by the Head of Department
Proposal
Poster presentation
Participation at Project Presentations
Literature Review

ASSESSMENT
- "Proposal and Literature Review" 50%
- Poster presentation 30%
- Participation at project presentation 20%

* must be presented by the beginning of the second semester of the second year

RESULT
Percentage mark and grade

LECTURERS
Anthony Serracino Inglott (Co-ordinator)  Lilian M. Azzopardi
Maurice Zarb Adami  Claire Shoemake

READING LIST
UNIT CODE: PHR 2026*  UNIT TITLE: MEDICINAL CHEMISTRY I

TYPE: Lectures, practicals, seminars and presentations

NUMBER OF ECTS CREDITS: 6

LEARNING OBJECTIVES
To present an introduction to medicinal chemistry by reviewing the properties of the major organic functional groups and their influences on the water and lipid solubility; in vitro and in vivo stability; and on the molecular geometry, biological activity of molecules. To proceed to understand the various principles applied to drug design with emphasis on qualitative and quantitative structure-activity and structure property relationships as exemplified by specific drugs, classified pharmacologically and/or chemically. Emphasis will also be made on the importance of pharmaceutical nomenclature.
To introduce basic principles in chemical analysis, in particular with reference to analysis of foods and pharmaceuticals.

CONTENT
Review of organic functional groups with examples of biological and pharmaceutical importance
The effect of geometric isomerism and stereochemistry, chirality on drug formulation, disposition, activity and toxicity
The correlation of structure to biological activity
Photosensitising drugs
Rational drug design based on ionisation studies of H2-antagonists
Bioisosterism
The Prodrug concept and rationale
Historical development and applications of QSAR - methods of drug design, computer aided drug design
Drug profile – Introduction to Structure Activity Relationship (SAR) studies of various drug classes, through formal lectures, group and individual research, presentation and discussion.
Drug classes include: Sympathomimetics and anticholinergic drugs; beta-lactam antibiotics and their subclasses
The prodrug approach to antibiotics.
Practical aspects: Calibration of glassware
Chemical analysis in water for injections – analysis of sulphates, pH testing, conductivity testing
Moisture content in grains – comparison of two different methods
Analysis of active content in Calcium lactate tablets
Determination of shelf life
Methodology researching

ASSESSMENT

- Written test (Duration of 3 hours)  95%
- Presentation, assignment and practicals  5%

RESULT
Percentage mark and grade
LECTURERS/DEMONSTRATORS
Claire Shoemake (Co-ordinator) Mary Anne Sant-Fournier
Wendy Scicluna Giusti Gordon Zammit

READING LIST

* Pre-requisite PHR 1026.
UNIT CODE: PHR 2304*  UNIT TITLE: PHARMACEUTICS II

TYPE:
Lectures, Tutorials, Practicals

NUMBER OF ECTS CREDITS: 6

LEARNING OBJECTIVES
To expose the student to the various aspects which have to be considered when formulating preparations (apart from oral solid dosage forms) for use as medicines, how these aspects of formulation are influenced by the desired route of administration, as well as how these same aspects effect the therapeutic profile of the drugs in use.

CONTENT
Dispersed systems: advantages and disadvantages of dispersed systems, types of dispersed systems, classification of dispersed systems according to particle size
Surfactants: hydrophilic-lipophilic balance (HLB), pharmaceutical uses of surfactants, chemical classification of surfactants, HLB calculations
Suspensions: characteristics, physicochemical principles underlying the sedimentation, wetting, rheology, crystal growth and particle interaction of solids in suspension, suspension formulation, types of powders used in suspensions. Extemporaneous preparation.
Percutaneous drug delivery: mechanism of percutaneous absorption, topical dosage forms, gels, emulsion-type semisolids, formulation components and optimisation factors
Aerosols: Drug characteristics, propellants, surfactants, primary packaging, containers, valve structure and function, biophysical issues, formulation of solution and suspension aerosols, manufacture and packaging
Medicinal gases.
Practical sessions in the pharmaceutical industry

ASSESSMENT
Written Test of 2 hours

RESULT
Percentage mark and grade

LECTURERS
Maurice Zarb Adami (Co-ordinator)
Edwina V. Brejza

READING LIST

* Pre-requisite: PHR 1301.
UNIT CODE: PHR2120*  UNIT TITLE: PHARMACY SPECIAL TOPICS II

TYPE: Practicals, Seminars and tutorials

NUMBER OF ECTS CREDITS: 2

LEARNING OBJECTIVES
This study unit enables the student to develop the skills required for critical reading and writing.

CONTENT
- Evaluation of research-based articles
- Collation of background information
- Development of scientific articles

ASSESSMENT
- Appropriate literature search – 20%
- Critical reading – 30%
- Critical writing – 30%
- Participation – 20%

RESULT
Percentage mark and grade

LECTURERS
Anthony Serracino Inglott (Co-ordinator)
Lilian M. Azzopardi Maurice Zarb-Adami
Lilian Wismayer Elaine Vella

* Pre-requisite: PHR 1120.
UNIT CODE: PHB 2042  UNIT TITLE: BIOCHEMISTRY & MOLECULAR BIOLOGY

TYPE
Lectures

NUMBER OF ECTS CREDITS: 4

LEARNING OBJECTIVES
An introduction to the study of Biochemistry and Molecular Biology. Emphasis is given to the application of biochemistry and molecular biology to the health sciences.

CONTENT
Molecular logic of life
Cells
Biomolecules
Water
Amino acids, peptides and proteins
3-D structure of proteins
Protein Function
Enzymes
Carbohydrates and glycobiology
Nucleotide and Nucleic acids
Lipids
Biological membranes and transport
Biosignalling
Glycolysis and catabolism of hexoses
Citric Acid Cycle
Oxidation of fatty acids
Amino acid oxidation and production of urea
Oxidation phosphorylation and photophosphorylation
Carbohydrate biosynthesis
Genes and chromosomes
DNA metabolism, DNA replication and protein metabolism
Recombinant DNA technology

ASSESSMENT
Written Test of 2 hours held at the end of the second semester.

RESULT
Percentage mark and grade

LECTURER
Renald Blundell

READING LIST
  ISBN 9-781572599314
  Williams & Williams ISBN 0-397-51091-8
UNIT CODE: PAT2322  UNIT TITLE: GENERAL AND PHARMACEUTICAL MICROBIOLOGY II

TYPE: Lectures

Number of ECTS Credits: 4

ASSESSMENT Written, one paper, at the end of the 2nd semester

RESULT Percentage mark and grade

LECTURERS Prof Paul Cuschieri (Co-ordinator)
Dr. Christopher Barbara
Dr. Anna McElhatton

Description This study unit comprises
Advanced Microbiology (Bacteriology) – Prof. Paul Cuschieri (PVC)
Advanced Microbiology (Virology and Bacteriology) – Dr Christopher Barbara (CB)
Selected Bacterial Pathogens – (AM)

Advanced Microbiology (Bacteriology):
- Counting bacteria; principles, techniques, indications for use, importance in industry and food bacteriology
- The bacterial growth curve; clinical and chemotherapeutic applications; introduction to microbicidal and microbistatic agents
- Bacterial nutrition; growing organisms
- Oxygen requirements, clinical implications
- Principles of bacterial metabolism and respiration
- Physical conditions required for growth
- Media – classification, uses, components

Advanced Microbiology (Virology and Bacteriology):
Varicella; Japanese encephalitis virus; Cholera; Diphtheria; Haemophilus invasive disease and Pneumococcal invasive disease

Selected Bacterial Pathogens:
Staphylococcus, Streptococcus; Haemophilus; Mycobacterium; Neisseria and Nocardia

LEARNING OBJECTIVES

To deal with systematic microbiology where the biological characteristics of the major genera and species are described, together with the clinical infections that these organisms cause. The principles underlying bacterial nutrition and physiology, and isolation on artificial culture media are explained.

Reading List Recommended Textbooks:


Advanced Microbiology (Bacteriology):
- Counting bacteria – viable and total counts; principles and techniques; indications for use in clinical, nursing, midwifery, and pharmaceutical circumstances; importance in industry and food bacteriology (3 lectures, PVC)
- The bacterial growth curve; clinical and chemotherapeutic applications; introduction to microbicidal and microbistatic agents (1 lecture, PVC)
- Bacterial nutrition; growing organisms (1 lecture, PVC)
- Oxygen requirements, clinical implications in polymicrobial infections (1 lecture, PVC)
- Principles of bacterial metabolism and respiration (1 lecture, PVC)
- Physical conditions required for growth (1 lecture, PVC)
- Media – Classification and uses (2 lectures, PVC)
- Common components of media (3 lectures, PVC)

**Advanced Microbiology (Virology and Bacteriology):**

- Varicella (1 lecture, CB)
- Japanese encephalitis virus (1 lecture, CB)
- Cholera (1 lecture, CB)
- Diphtheria (1 lecture, CB)
- *Haemophilus* invasive disease caused by capsular type b (1 lecture, CB)
- Pneumococcal invasive disease (1 lecture, CB)

**Selected Bacterial Pathogens (not otherwise dealt with in the immunisation lectures in the first semester of the third year by PVC):**

- *Staphylococcus* (2 lectures, AM)
- *Streptococcus* (2 lectures, AM)
- *Haemophilus* (1 lecture, AM)
- *Mycobacterium* (3 lectures, AM)
- *Neisseria* (2 lectures, AM)
- *Nocardia* (1 lecture, AM)
UNIT CODE: PHR 2203  UNIT TITLE: PHARMACEUTICAL ANALYSIS I

TYPE: Lectures, Tutorials

NUMBER OF CREDITS: 4

LEARNING OBJECTIVES
To reinforce and extend the knowledge and understanding of the basic principles underlying the use of electrochemical, enzymatic and other methods of analysis of drugs and their derivatives and the factors influencing the choice of method of analysis used including limits of detection, sample preparation, derivatisation, interference, sample size, etc. Special attention will be given to the selection of appropriate methodologies for specific problems in the qualitative and quantitative analysis of drugs.

To reinforce and extend the knowledge and understanding of the basic principles underlying the use of spectroscopic methods and the factors influencing the choice of method of analysis used including limits of detection, sample preparation, derivatization, interference, sample size etc. Relevance to methods used to quality assurance will also be highlighted.

CONTENT
Basic principles underlying the use of various methods of analysis of drugs and their derivatives:
Electrochemistry: theoretical basis, ion-selective electrodes, potentiometric titrations, biological cell-potentials
Consideration of spectroscopic methods: Ultraviolet and visible, Fluorescence, Emission and Atomic Absorbance, Qualitative Infra-Red, Nuclear Magnetic Resonance, Mass Spectroscopy, Instrumentation, Interpretation of spectra

ASSESSMENT
Written test of 2 hours

RESULT
Percentage mark and grade

LECTURERS
Claire Shoemake (Co-ordinator)
Victor Ferrito

READING LIST
CLARKS. Isolation and Identification of Drugs. Pharmaceutical Press, London
UNIT CODE: PHR 2036
UNIT TITLE: PHARMACEUTICAL KINETICS & STABILITY TESTING

TYPE
Lectures, Tutorials

NUMBER OF ECTS CREDITS: 4

LEARNING OBJECTIVES
To introduce the student to the concept of kinetics as representing a time-dependent change in a parameter. The student will become familiar with the basic concepts of kinetic processes, and the various factors that can affect the kinetics of a particular process.
To demonstrate the applications of kinetics in pharmaceutics, particularly the concept of stability of dosage forms and the methods used to monitor stability.

CONTENT
Pharmaceutical kinetics
Aims and applications of kinetics studies
Order of kinetic processes, rates and order of reactions, definition of law of mass action, order, molecularity, complex reactions, specific rate constant.
Order of reactions and units of the basic rate constants for zero, first and second order, pseudo order. Determination of order, description of substitution method, graphic method and half-life method
Complex reactions: reversible reactions, parallel or side reactions, series or consecutive reactions, rate determining step
Influence of temperature on reaction rates: Arrhenius equation, determination of A and E using graphic methods
Classic collision theory of reaction rates: Boltzmann distribution law, comparison between the collision rate theory and the Arrhenius equation, transitional state theory, comparison of the transitional state theory with the collision rate theory and the Arrhenius Equation
Effects of solvent on reaction rates: rate equations in terms of the activity of species in their transition state and in terms of activity coefficients, influence of the polarity of solvents on reaction rates
Influence of ionic strength on reaction rates: definition of ionic strength, activity coefficient in terms of ionic strength using the Debye-Huckle equation for a bimolecular reaction, graphic relationship between reaction rates and ionic strength
Effect of dielectric constant on reaction rates: definition of dielectric constant, relationship between reaction rates and dielectric constant, influence of the nature of solvents, solutions and ionic strength on dielectric constant and reaction rates, pharmaceutical significance of dielectric constant
Catalysis: definition and types of catalysts, operation of catalysts, specific acid-base catalysis and their rate-pH profiles, general acid-base catalysis and their rate-pH profiles, enzymes as biological catalysts, co-operativity and hysteresis

Stability testing
Application of kinetic principles of pharmacy: shelf-life and the Q10 method
Stability concerns in dosage forms: physical, chemical, therapeutical and microbiological changes in a dosage form, hydrolysis and oxidation as the major reactions providing stability concerns
Methods for determining the stability of a dosage form: isothermal and nonisothermal accelerated stability studies, handling and plotting of data from an isothermal accelerated stability study to extract the shelf-life of a product.

ASSESSMENT
Written test of 2 hours

RESULT
Percentage mark and grade
LECTURERS
Maurice Zarb Adami (Co-ordinator)
Edwina Brejza
Claire Shoemake

READING LIST
- The British Pharmacopoeia Vols I & II. The Stationery Office.
  ISBN 0113222580.
UNIT CODE: PAT 2121
UNIT TITLE: PATHOLOGY

TYPE
Lectures

NUMBER OF ECTS CREDITS: 4

Pre-requisite study units: Basic Anatomy, Physiology & Biochemistry

DESCRIPTION:
This study unit provides an introduction to the study of general and systematic pathology. General pathology topics include: the causes of disease, cell injury, disorders of cell growth and differentiation, acute and chronic inflammation, repair mechanisms, atherosclerosis, thrombosis, embolism, ischaemia, infarction, genetic disorders and neoplasia. There is an introduction to the study of fluid and electrolyte imbalance and of environmental and nutritional disorders. Systematic pathology lectures cover the major common diseases affecting the various body systems, including the blood and immune system.

LEARNING OBJECTIVES
By the end of the course the student should:
1. become familiar with pathological terminology
2. understand the basic pathological processes underlying disease
3. become familiar with pathological mechanisms in inflammation, ischaemia, genetic disorders, neoplasia, homeostasis and immunity
4. become familiar with the common medical conditions discussed
5. appreciate the role of pathology in clinical management

ASSESSMENT
Subject Test – Written Paper – MCQs

RESULT
Percentage mark and grade

Attendance: Attendance is obligatory

LECTURERS/DEMONSTRATORS
B. Ellul – CO-ORDINATOR
L. Agius, A. Aquilina, G. Buhagiar, D. Busuttil, J. Degaetano

READING LIST
UNIT CODE: CPH 2010

UNIT TITLE: PHARMACOLOGY A

TYPE: Lectures and seminars

NUMBER OF ECTS CREDITS: 6

LEARNING OBJECTIVES

i. To provide a sound understanding of the principles underlying the therapeutic action of drugs
ii. To give students a general introduction to pharmacokinetics i.e. the determinants of the time course of the drug in the body, applying pharmacokinetic principles in order to provide rational drug therapy.
iii. To understand the mechanism, modes of actions and pharmacology of NSAIDS, vitamins, and drugs used in GI tract

CONTENT

Molecular pharmacology, drug development and pharmacogenetics
Drug-drug interactions, adverse drug reactions, drug allergies
Pharmacotoxicology and drug abuse in sports
New methodologies in pharmacological therapy
Pharmacoeconomics in therapeutics
Paediatric and geriatric pharmacology
Introduction and definitions of pharmacokinetics and pharmacokinetic terms - half-life, volume of distribution, protein binding, clearance
LADME system: drug absorption mechanisms, distribution, metabolism, elimination
Compartmental pharmacokinetic models: interpretation of plasma concentration time curves; curve fitting, method of residuals, area under the curve; problem solving with use of semi-log paper
Drugs used in the GI tract: antacids and other drugs for dyspepsia, ulcer healing drugs, H2 antagonists, proton pump inhibitors, laxatives, antidiarrheals, antiemetics
NSAIDS: mode of action; clinical use and indications, COX1 and COX2 inhibitors; ADRs
Vitamins: lipid and water-soluble vitamins, mode of action, indications

ASSESSMENT

In the continuous and final mode: i.e. continuous assessments and final credit test at end of study unit

☐ Written test of 3 hours: 85%
☐ Assignment: 15%

RESULT

Percentage mark and grade

LECTURERS

Roger Ellul-Micallef
Janet Mifsud
Anthony Fenech
Frederick Fenech
Doriette Soler

READING LIST

☐ Laurence and Bennett. Clinical Pharmacology. Churchill Livingston
☐ Rowland and Tozer. Clinical Pharmacokinetics: concepts and applications. Lippincott, Williams & Wilkins.
UNIT CODE: CPH 2011*  UNIT TITLE: PHARMACOLOGY B

TYPE: Lectures and seminars

NUMBER OF ECTS CREDITS: 4

LEARNING OBJECTIVES
I. This module deals with the principles of neuropharmacology and the covers various aspects of how different classes of drugs affect the brain. Various neurotransmitter systems are discussed together with the interaction of drugs on the various neurophysiological processes involved in brain function.

II. To understand the basic pharmacology and mode of action of drugs used to treat disorders associated with the cardiovascular system

III. Review of drugs that affect blood and blood forming organs; haematopoiesis and blood coagulation; drugs used in endocrine disorders.

CONTENT
Classification of the nervous system and the role of the blood brain barrier
Nerve cells and neural communication: neurons and glial cells
Electrical properties of neurons: generation and conduction of nerve impulse
Action potential; ion channels; synaptic transmission
Receptors: ionotropic and metabotropic receptors. Drugs acting as agonists and antagonists
Neurotransmitters. Pharmacological intervention on various neurotransmitter pathways
Methods of studying the nervous system. Pharmacological methods.
Drugs affecting cholinergic transmission. The role of acetylcholine
Drugs affecting major inhibitory neural transmissions: GABA and glycine
Serotonin and dopamine. Pharmacological intervention in diseases involving higher cognitive functions; Excitatory neurotransmission: drugs acting on glutamate and the NMDA receptor
Neuropeptides
Noradrenergic transmission. Adrenoreceptor agonists and antagonists
Relevant physiology and anatomy of cardiac function and circulation
Beta and alpha blockers; calcium antagonists
Centrally acting drugs and vasodilators
Ace inhibitors; diuretics; nitrates and cardiac inotropes
Antiarrhythmic drugs and thrombolytics and anticoagulants; Lipid lowering drugs
Drugs acting on blood and blood forming organs e.g. Iron, vitamin B12, folic acid
Coagulation disorders, Vitamin K, Warfarin and heparin
Anti-platelet drugs and fibrinolytic agents

ASSESSMENT
Written test of 2 hours held at end of the second semester.

RESULT
Percentage mark and grade

LECTURERS
Janet Mifsud  Frederick Fenech
Charles Scerri

READING LIST
- Laurence and Bennett. Clinical Pharmacology. Churchill Livingston
- Rowland and Tozer. Clinical Pharmacokinetics: concepts and applications. Lippincott, Williams & Wilkins.

Pre-requisite: CPH 2010
UNIT CODE: SOR 0230*  UNIT TITLE: STATISTICAL ANALYSIS IN PRACTICE USING SPSS

TYPE: Lectures

NUMBER OF ECTS: 2

LEARNING OBJECTIVES

- Parametric Tests
  - One sample t-test
  - Independent sample t-test
  - Paired sample t-test
  - One-way ANOVA test
  - Two-way ANOVA test
- Non-Parametric Tests
  - Kolmogorov Smirnov Test
  - Sign Test
  - Mann Whitney Test
  - Wilcoxon signed rank test
  - Kniskal Wallis test
  - Friedman test
  - Runs test
- Regression Models
  - Simple Linear Regression Models
  - Multiple Linear Regression Models
  - Non-Linear Regression Models
- Generalized Linear Models
  - Analysis of Variance Models
  - Analysis of Covariance Models
- Factor Analysis by Principal Components
- Log Linear Models
  - Chi square test for independence
  - Two way log linear models
  - Three way log linear models
- Project
  - Use of some sophisticated Statistical Software package, like SPSS, in a project which will involve material treated above

The emphasis of this unit will be exclusively on the practical side. Interpretation of results rather than theoretical justification of their use forms the bulk of the material covered.

ASSESSMENT

Project

RESULT

Percentage mark and grade

LECTURERS

Various

READING LIST


* Pre-requisites: SOR 0210 and SOR 0220 or equivalent.