

UNIVERSITY OF DUBLIN

TRINITY COLLEGE



DISCIPLINE OF PHYSIOTHERAPY

**BACHELOR OF SCIENCE
(HONORS)
PHYSIOTHERAPY**

STUDENT HANDBOOK

The information contained in this document is correct at the time of publication, but may be subject to review from time to time. Students are reminded that they should refer to the University Calendar for further details of General Regulations, and that the General Regulations have primacy over departmental handbooks.

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September 2014

STUDENT INFORMATION SYSTEM (SITS) – ACCESS VIA my.tcd.ie

The way that you do things in College is changing – New student information system

The way that you do things in College is changing – including how you have just registered for the year. The College has recognised that some of the administrative processes in College were becoming somewhat outdated (such as queueing in the rain to register or trying to get a letter to prove that you are a student) and has invested in a brand new student information system which is accessible to all staff and students via the web portal my.tcd.ie

This means that, from 2012/2013 onwards, all communications from College will be sent to you via your online portal which will give you access to an ‘in tray’ of your messages. You will also be able to view your timetables online, both for your teaching and for your examinations. All fee invoices/payments, student levies and commencement fees will be issued online and all payments will be carried out online. You will be able to view your personal details in the new system – some sections of which you will be able to edit yourself. Up until now, all examination results were published online by the Examinations Office at <http://www.tcd.ie/vpcao/examinations.php> – in future, it is planned that your results will also be communicated to you via the online portal. Future plans for the new system include online module registration and ongoing provision of module assessment results.

As this is a brand new way of doing things in Trinity, full user helpline facilities, including emergency contact details, will be available from when you register to guide you through these new processes and to answer any queries that you may have.

Dear Students,

On behalf of the staff in the School of Medicine I would like to welcome you to the course in Physiotherapy.

We hope that the next four years will be stimulating and rewarding for you. We recognise that the course and the commitment it requires may be challenging at times. If, at any time, you need particular help, please do not hesitate to contact me or any of the staff involved in the delivery of this course.

We wish you the very best over the next four years and your professional lives ahead.

Juliette Hussey,
Associate Professor
Head of the Discipline of Physiotherapy

The course is of four years duration. Successful completion leads to professional recognition and entitles graduates to membership of the Irish Society of Chartered Physiotherapists. The major objective of the course is to enable students to become competent professionals with the ability to exercise clinical autonomy in patient care. In addition the aim is to develop scientifically oriented health professionals who are committed to lifelong learning.

In the first year the modules of study are Anatomy, Clinical Anatomy, Physiology, Chemistry and Physics.

The second year subjects include Anatomy; Clinical Sciences in Physiotherapy: Respiratory, Pathology, Musculoskeletal, Orthopaedics, Pain and Burns/Plastics, and Gerontology; Physiotherapy Theory and Practice: which includes Electrotherapy, Exercise therapy and Biomechanics & Movement; Professional Issues 1; Preparation for Clinical Practice and Clinical Placement: Preparation for Clinical Practice, Clinical Observation and a clinical placement of 4 weeks. The clinical placement takes place after the annual examinations.

The third year includes Scientific Investigation: Research Methods, Statistics, Literature Review; Professional Issues II; Psychology; Rehabilitation in Bone and Joint Disease; Prevention and Management of Chronic Disease; Paediatrics and Learning Disability. Students in the third year have two clinical placements.

The fourth year involves three clinical placements in addition to the following: Scientific Investigation: two research assignments; Sports and Exercise Medicine; Ergonomics, Professional Issues III and a specialist option in Advances in Physiotherapy Practice which involves in-depth study of a specific clinical area.

On successful completion of this programme, students should be able to:

- Describe and explain from the perspective of physiotherapy human anatomy and physiology, and human growth and development throughout the lifespan
- Explain how physiotherapy can influence human form and function
- Explain and apply theories of biomechanics, ergonomics and exercise science to physiotherapy
- Describe and explain how psychological factors can influence health and illness
- Describe and analyse the pathological changes and related presenting features of conditions commonly encountered by physiotherapists
- Analyse and assess the physical, psychosocial and environmental state of the patient from a physiotherapeutic perspective
- Synthesise knowledge and assessment of the patient to identify short and long term treatment objectives
- Select, justify and evaluate appropriate treatments
- Plan a therapeutic programme to achieve treatment objectives
- Implement a therapeutic programme with the maximum degree of safety, effectiveness and efficiency
- Promote and maintain health and well-being and prevent disease and disability through education programmes
- Use appropriate methods of recording data in accordance with patient management and legal requirements
- Recognise the need for demonstrating accountability, efficacy of services and cost effectiveness and apply the principles of good management on the provision of physiotherapy
- Recognise the rights of patients and preserve patient dignity
- Describe and work within the legal responsibilities and ethical considerations of the practice of physiotherapy while acknowledging the boundaries of professional competence and refer the patient to other health care professionals as appropriate
- Engage in continuing professional development
- Participate in inter-professional approaches to health care delivery
- Work independently and as part of a team and in multidisciplinary settings
- Describe the developments in current health care practice and delivery
- Communicate effectively with patients, colleagues and the wider community
- Critically evaluate scientific findings, formulate research questions, select appropriate research methods and analyse and interpret research data.

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SUBJECTS OF STUDY

The modules of the first year include Anatomy of the limbs, back and thorax (15 ECTS), Clinical Anatomy (10 ECTS), Physics (5 ECTS), Chemistry (5 ECTS) and Physiology (25 ECTS). The learning objectives, content and reading lists are presented below.

MODULE: ***ANATOMY OF THE LIMBS, BACK AND THORAX***

ECTS VALUE: **15 ECTS**

AIM:

This module provides detailed instruction on the gross anatomy of the limbs, back and thorax. It also includes the anatomy of abdominal and pelvic muscles, the anatomy of the breast, general embryology and development of the limbs.

OBJECTIVES:

On successful completion of this module the student should be able to:

- Recognise, describe and classify bones and joints of the limbs and back.
- Recognise and describe the radiologic features of the limbs and back.
- Recognise and describe the gross structure and functions of nerves and muscles.
- Recognise and describe the blood supply and lymphatic drainage of the limbs.
- Apply anatomical knowledge to explain the pathogenesis and natural history of common clinical disorders of the musculoskeletal system.
- Recognise and describe the bones and joints of the thorax.
- Recognise and describe the radiologic features of the thorax and its organs.
- Recognise and describe the respiratory muscles and their associated nerves.
- Recognise and describe the gross and microscopic structure and function of the heart, lungs and oesophagus.
- Recognise and describe the blood supply and lymphatic drainage of the thorax.
- Apply anatomical knowledge to explain the pathogenesis and natural history of common clinical disorders of the thorax.

COURSE CONTENT:

Upper Limb and Back

- The bones of the upper limb and back
- Their joints and ligaments
- Associated muscles and nerves, in functional groups
- Associated arterial blood supply and venous and lymphatic drainage
- The breast
- Radiology of the upper limb and back
- Clinical applications of anatomy of these regions

Lower Limb and Thorax

- The bones of the lower limb
- Their joints and ligaments
- Associated muscles and nerves, in functional groups
- Associated arterial blood supply and venous and lymphatic drainage
- Radiology of the lower limb
- Clinical applications of anatomy of the region
- The thoracic wall with its bones and joints
- The intercostal muscles and diaphragm
- The mediastinum
- The heart & Lungs
- Anatomy of the abdominal wall
- Radiology of the thorax
- Clinical applications of anatomy of the thorax and abdominal wall

INDICATIVE RESOURCES

Main Textbooks

Clinically Orientated Anatomy: Moore and Dalley (**Lippincott, Williams & Wilkins**)
Anatomy and human movement. Palastanga, Field & Soames, **Elsevier**

Atlases

Atlas of Human Anatomy: Netter: **CIBA-Geigy**

Reference

Last's Anatomy: Sinnatamby: **Churchill Livingstone**

Note:

There is no need to carry your atlas into college; atlases are provided at every dissection station. Use your atlas for study at home.

Radiographic Images: Online resources

ANATOMY.TV

This is an excellent resource for anatomy to which TCD has an institutional subscription. This website should be your first stop for all information about anatomy. It does have some CT and MR datasets under the anatomical regions. <http://www.anatomy.tv.elib.tcd.ie/newhome.aspx>

MODULE: CLINICAL ANATOMY

ECTS VALUE: 10 ECTS

AIM: The aim of this module is to give the student an understanding of the structure and function of the musculoskeletal system:

- To develop an understanding of anatomical structure and function.
- To develop an understanding of the interrelationship between musculoskeletal structures and their nerve supply.
- To develop an understanding of the ranges and types of movement available at joints.
- To develop practical skills of observation and testing of movement to develop skills in muscle testing.
- To develop the ability to analyse human movement from an anatomical perspective.

OBJECTIVES: At the end of the course the student will be able to:

- Use universally recognised anatomical and movement descriptive terminology.
- Identify bony landmarks and joint lines.
- Elicit tendon jerks – neurology.
- Demonstrate normal range of movement, resisted movement and passive movement at peripheral and vertebral joints.
- Apply a resistance force to individual muscles, relate action to functional use.
- Place muscles in positions where gravity is counterbalanced and gravity offers resistance.
- Analyse functional activities.
- Test dermatomes and myotomes.
- Identify and palpate bony points and arterial pulses.
- Describe and indicate on the surface of the body the course of superficial veins, peripheral nerves, dermatomes, position of the heart, lungs and pleurae, lobes and bronchopulmonary segments of the lung.
- Demonstrate on a model the normal active range of movement at joints and the accessory movements available at joints.
- Palpate muscles; put into action and demonstrate function of muscles.
- Elicit tendon reflexes.
- Describe and analyse the following activities: reaching, gripping, carrying a load, pushing, pulling, throwing, lifting, standing, standing on one leg, jumping, kicking, walking, rolling, sitting from lying, pelvic tilting and breathing.

COURSE CONTENT:

- Anatomical position and movements. Bone description. Method of palpation.
- *Head*: Mastoid process of skull; angle of mandible; external occipital protuberance; zygomatic arch; temporomandibular joint. Movements of the TMJ resisted and overpressure.
- *Scapula*: spine; inferior angle; acromion process; coracoid process.
- *Clavicle*: sternal end; manubrium sterni; sternoclavicular joint; acromioclavicular joint.
- *Humerus*: greater & lesser tubercles; medial & lateral epicondyles; glenohumeral joint.
- Movements at the shoulder girdle. Stability tests of the AC joint.
- Movements at the glenohumeral joint. Stability tests.
- *Radius and ulna*: head of radius; radial styloid; dorsal tubercle; head of ulna; posterior border of the ulna; line of the elbow joint.
- Movements at elbow and radio-ulnar joints. Stability tests.
- *Hand*: Carpal and metacarpal bones; movements at the wrist joint; accessory movements at wrist and midcarpal joints. Stability tests.
- Movements at metacarpophalangeal, carpometacarpal and interphalangeal joints.
- *Arterial pulse of the upper limb*: axillary, brachial, radial. Superficial veins.
- Palpation and counting of spinous processes, vertebrae.
- Stretch reflexes in upper and lower limbs.
- Ribs and surface marking of lungs and heart.
- Surface marking of pleurae.
- Lobes of the lung.
- *Pelvic bone and femur*: iliac crest; anterior superior iliac spine; ischial tuberosity; greater tuberosity; hip joint; medial & lateral femoral condyles; adductor tubercle.
- Movements at the hip joint; Special tests.
- The patella and patellar movements.
- *Tibia*: tibial condyles-tibial tuberosity, anterior border of the tibia; medial and lateral malleoli; knee joint; movement of the knee joint. Stability tests.
- Movements in the spine.
- *Foot*: base of the 5th metatarsal; head of metatarsal; head of talus; sustentaculum tali; cuboid; tuberosity of navicular.
- Movements of: sacro-iliac joint; ankle joint; midtarsal joint; metatarsophalangeal joints. femoral, popliteal, posterior tibial, dorsalis

pedis, anterior tibial artery, carotid, superior temporal artery pulses; apex beat of the heart.

- Dermatomes of the upper limb.
 - Trapezius; latissimus dorsi*; rhomboids*
 - Levator scapulae*; serratus anterior; pectoralis major.
 - Supraspinatus; deltoid*; infraspinatus; teres minor; teres major; subscapularis.
 - Biceps brachii; brachialis*; triceps*.
 - The wrist flexors the wrist extensors.
 - Pronator teres; pronator quadratus; flexor carpi radialis; flexor carpi ulnaris; palmaris longus; flexor digitorum superficialis; flexor digitorum profundus; flexor pollicis longus.
 - Brachioradialis; supinator; extensor carpi radialis longus; extensor carpi radialis brevis; extensor digitorum; extensor carpi ulnaris; extensor digiti minimi; extensor indices.
 - Muscles of the hand. Grips and function of the hand.
 - Dermatomes of the lower limb.
 - Psoas; iliacus; tensor fascia lata; sartorius; quadriceps*; gluteus medius; gluteus minimus.
 - Gracilis; pectineus; adductor magnus; adductor longus; adductor brevis; gluteus maximus*; deep lateral rotators of the hips.
 - Hamstrings.*
 - Tibialis anterior*; extensor digitorum longus; extensor hallucis longus; peroneus longus; peroneus brevis; peroneus tertius.
 - Gastrocnemius*; soleus; popliteus; flexor hallucis longus; flexor digitorum longus; tibialis posterior; flexor digitorum brevis; lumbricals; adductor hallucis.
 - Sternocleidomastoid; scalene*; intercostals; diaphragm.
 - Trunk flexors, extensors Erector spinae*; rectus abdominis,* oblique abdominals; transversus abdominis.
 - Dermatomes of the trunk.
- *Denotes muscles that require additional testing in positions against gravity and with gravity counterbalanced
- Accessory movements AC, ST, C, gleno-humeral*, elbow, radio-ulnar, wrist*, intercarpal, interphalangeal hip*, knee*, sup tib fib, ankle, subtalar, calcaneo-cuboid, tarsal joints, interphalangeal
- *Denotes joints that require additional testing in various positions
- Analysis of activities. Defining the movement; type of muscle work; range of movement.

- Analysis of pelvic tilting.
- Analysis of reaching.
- Analysis of pushing.
- Analysis of pulling.
- Analysis of lifting.
- Analysis of standing.
- Analysis of standing on one leg.
- Analysis of jumping.
- Analysis of walking.
- Sitting to standing, sitting to lying, lying to sitting, standing bending forwards and coming up.
- Analysis of various activities involving head, neck and trunk.

RECOMMENDED TEXTS:

Field D. and Hutchinson J., (2012) *Field's Anatomy, Palpation & Surface Markings*, Churchill Livingstone

Kendall, F., Kendall McCreary E., Provance, P. (2010). *Muscles; Testing and Function* .5th Ed. Williams and Wilkins.

Moore, K.L., Dalley A.F. and Agur, A.M.R. (2009) *Clinically Oriented Anatomy* 6th ed. Baltimore: Lippincott Williams and Wilkins

Moore, K.L., Dalley, A.F. and Agur, A.M.R.(2010) *Essential Clinical Anatomy*, 5th ed. Baltimore: Lippincott Williams and Wilkins

Palastanga, N., Field, DR., Soames, R. (2012). *Anatomy and Human Movement; Structure and Function*. 6th Ed. Butterworth Heinmann

Daniels and Worthingham's Muscle Testing: Techniques of Manual Examination and Performance Testing, 9e (Hislop) 2013, Saunders

Delavier F. *Strength Training Anatomy*, 3rd Ed, Human Kinetics

<http://www.3d4medical.com> for Anatomy apps

Cf. www.getanatomy.com

www.anatomy.tv

GENERAL:

Clinical Anatomy is a practical module. It carries with it a requirement of mandatory *attendance* (see University Calendar)

Student participation takes the form of learning with fellow students as models. Students are required to be appropriately dressed for this purpose.

MODULE: ***PHYSIOLOGY (INCLUDING HISTOLOGY)***

ECTS VALUE: 25 ECTS

AIM: The aim of this course is to give the student an understanding of the organisation of normal body tissues and of normal functioning of body systems.

OBJECTIVES: Throughout the course, specific common medical disorders will be used to illustrate the impact that disease represents a disruption of normal physiological function. By the end of the course the student should be able to:

- Predict how specified changes in biological parameters will affect the physiological status of an individual and
- Appreciate the widespread consequences of disruption of the major physiological control pathways which normally ensure homeostasis.

COURSE CONTENT:

The electrocardiogram	The cardiac cycle	Tubular function
Tissue Structure	Body fluid compartments	Cardiac output
Organisation of the CNS	Hormone action	Blood pressure
Excitable cells	Action potentials	Regional circulations
Neurotransmission	Sensory perception	Lung mechanics
Somatosensory system	The eye	Gas exchange
The ear	Autonomic nervous system	Gas transport
Somatic muscle contraction	Neuromuscular communication	Effects of altitude
Muscle mechanics	Cardiac and smooth muscles	Regulation of metabolism
Spinal reflexes	Bone	Upper g.i.t. function
Blood I	Blood II	Water & electrolyte absorption
Organization of the cardiovascular system	The heart	Liver
The electrocardiogram	The cardiac cycle	Tubular function
Properties of blood vessels	Water excretion	Regulation of calcium
Organization of the respiratory system	Acid/base balance	Hypothalamic/pituitary axis
Ventilation	Hypothalamic/pituitary axis	Regulation of gender

Pulmonary circulation	Regulation of growth	Reproductive endocrinology
Respiratory control	Ovarian cycle	Parturition
Thermoregulation	Pregnancy	Organization of the renal tract
		Digestion & absorption

RECOMMENDED TEXTS: Sherwood, L. (1993) *Human Physiology: From Cells to Systems* (8th Edition), West Publishing, Minneapolis.

Also see website http://www.medicine.tcd.ie/physiology/undergraduate/human_form_function/ and the Physiology handbook. The website will provide lecture notes, a list of weekly learning objectives and revision questions.

MODULE: *CHEMISTRY*

ECTS VALUE: 5 ECTS

AIM: The aim of this course is to give the student an understanding of chemical concepts in relation to the human body.

OBJECTIVES: At the end of the course the student will be able to demonstrate an understanding of basic chemical concepts in relation to the physiology of the body.

COURSE CONTENT:

- Atomic structure.
- The periodic table and chemical properties of the elements Chemical bonds, Reactions and stoichiometry. Thermodynamics.
- Redox reactions.
- Electrochemistry.
- Chemical kinetics and equilibria.
- Acids, bases, pH calculations, buffers.
- Colligative properties.
- Nomenclature of carbon chains and functional groups chemistry of functional groups.
- Redox reactions.
- Substitution, addition, elimination, condensation and hydrolysis reactions.
- Stereochemistry, sugars, aminoacids and peptides.
- Lipids and nucleic acids.

RECOMMENDED TEXT:

Atkins, PW & Beran, JA (1999). *General Chemistry* Fourth Edition, Scientific American Publications, New York.

MODULE: *PHYSICS*

ECTS VALUE: 5 ECTS

OBJECTIVES: At the end of the course the student will be able to:

- Demonstrate an understanding of mechanical principles and apply those principles to the human body;
- Demonstrate an understanding of the properties of matter and fluids;
- Demonstrate an understanding of the laws relating to electromagnetic radiations;
- Demonstrate an understanding of the laws of electricity and the importance of electrical safety.

COURSE CONTENT:

- Applications of the human body including arm, back, knee, ankle, shoulder and hip.
- Principles of levers and pulleys; applications, traction systems.
- Solids: stress and strain.
- Biological applications: bones.
- Liquids, pressure and density.
- Measurement and calculation of blood pressure.
- Viscosity and its importance in physiology.
- Surface tension and the lungs.
- Diffusion and osmosis (Mentioned in Passing).
- Lens systems, glasses and the human eye.
- Electromagnetic waves.
- Inverse square and cosine laws.
- Infra-red, ultra-violet, ultrasound and laser.
- Ohms Law.
- Simple circuits, electric shock hazards and precautions.
- Effects of electric current on the human body.
- Measuring instruments, defibrillators, pacemakers, shortwave diathermy.

RECOMMENDED TEXT:

Introduction to biological physics for the health and life sciences / Kirsten Franklin, Paul Muir, Terry Scott, Lara Wilcocks, Paul Yates Wiley Hamilton Library 574.19 R0

Physics : with health science applications / Paul Peter Urone Harper & Row Hamilton Library 610 M65

Physics : principles with applications / Douglas C. Giancoli Pearson/Prentice-Hall Hamilton Library 530 M0*5

Physics / Joseph W. Kane, Morton M. Sternheim Wiley Hamilton Library 530 L83*2

EXAMINATIONS IN THE JUNIOR FRESHMAN YEAR

The examinations in Anatomy, Chemistry, Physics and Physiology are held in Trinity Term. Practical examinations in Anatomy and Clinical Anatomy are held during the year. Supplemental examinations are held in September. Students who fail a supplemental examination will not be permitted to proceed to the second year of the course but may in certain circumstances be permitted to repeat the year.

Chemistry: Held at the end of Trinity term. 1 x 3 hour paper. There are two sections on the paper, the first concerning general physical and inorganic chemistry, and the second organic chemistry. Three questions out of five are to be answered in each section.

Physics: Held at the end of Trinity term. 1 x 3 hour paper. There are two sections to this paper, each consisting of five questions. Three questions are to be answered from each section.

Anatomy: Assessment is by in-course assessment in Semesters 1 and 2 (Station Based Practical [SBP] Examination), and annual examinations (Question Paper and SBP Examination).

In the SBP students are asked to identify anatomical structures in the Dissecting Theatre and answer functional and clinical questions with and without a member of staff. The Question Paper will consist MCQ and SAQ sections, total time 2 hours. The end of year Station Based Practical is a 5 station examination, with three 'Spot' stations and two Viva stations (one-to-one oral exam with an Anatomy lecturer). Each station is of three minutes duration.

Overall Module Marks Weighting

SBP Examination 1	Upper Limb/Lower Limb	Michaelmas	10%
SBP Examination 2	Back and Thorax	Hilary	10%
Question Paper	Limbs, Back, Thorax	Trinity	40%
SBP Examination	Limbs, Back, Thorax	Trinity	40%

Pass Criteria

In order to pass, students must achieve an overall mark of **50%** (It is not necessary to pass any of the individual elements). **At the module coordinator's discretion borderline students, with an overall mark of < 50%, may be required to attend a pass fail viva voce examination with the External Examiner in Anatomy during the annual examination period.** Subject to a satisfactory performance the External Examiner may raise the mark to 50%. Students who do not satisfy the External Examiner will be required to sit the Supplemental Examination. There is no compensation allowed between the Anatomy module and the other modules within Junior Freshman Physiotherapy.

Clinical

Anatomy: Two assessments in Clinical Anatomy are held in the Discipline of Physiotherapy during the year.

Physiology: Students are referred to the Physiology Handbook & Study Guide issued by the Department of Physiology for further details and the Physiology dept. website www.tcd.ie/Physiology
The exam is held at the end of Trinity Term. 1 x 3 hour paper. The paper consists of a written section consisting of short-answer questions, which is allocated $\frac{2}{3}$ of the time

and is worth $\frac{2}{3}$ of the marks; and a multiple choice section which is allocated $\frac{1}{3}$ of the time and is worth $\frac{1}{3}$ of the marks.

Laboratory Assessment:

Laboratory work is assessed by 15 minute tests held on the dates listed in the timetable. These tests count in aggregate for 15% of the total mark.

The weighting for Physiology is as follows:

- Paper 85%
- Practicals 15%

Candidates may be requested to attend for a viva if their marks fall into a borderline pass/fail category.

END OF YEAR EXAMINATION WEIGHTING

Chemistry	10%
Physics	10%
Anatomy	30%
Clinical Anatomy	20%
Physiology	30%

The pass mark in Anatomy, Clinical Anatomy and Physiology is 50%, the pass mark for Chemistry and Physics is 40%.

The end of year examination results will be published following the Court of Examiners meeting and candidates' overall grades will be identified as follows:

I (70% +) II.i (60 - 69%) II.ii (50 - 59%) III (40 - 49%)

SUPPLEMENTAL EXAMINATIONS

The supplemental examinations will take place in September, at the beginning of the Michaelmas term. The pass marks from the examinations held in Trinity term will be carried forward. Supplemental examinations in Chemistry and Physics will be of a similar format to the examinations at the end of Trinity term. Supplemental examinations in Anatomy will be as follows:

Anatomy

The Supplemental Examination is held in August/September. Marks from the in course assessment in are **not** carried forward. The format of the Supplemental Examination and the standard to pass are the same as those of the Annual Examination (see above), with the exception that the practical examination will consist of a 10 minute viva voce examination with a member of the Anatomy department staff. Question Paper and Practical Examination are each worth 50%.

Overall Weighting of Supplemental exam:

Practical Examination	50%
Question Paper	50%

As in the Annual Examination, borderline students achieving an aggregate mark of < 50% in the supplemental assessment, and at the module coordinator's discretion, may be required to attend a pass/fail viva voce examination with the External Examiner

Students who fail the Supplemental Examination will be required to repeat the year.

Physiology

Supplemental examinations in Physiology will be as follows:

Physiology Paper: This paper is of a similar format to the annual Physiology paper.

Physiology Viva: Candidates may be required to attend a Viva Voce examination if their marks fall into a borderline pass/fail category.

Percentage allocation of marks in supplemental examination:

Physiology Paper 100%

Students will be notified of the results of the supplemental examinations following the Court of Examiners meeting using the same procedure as for the Trinity Term examinations.

Students who have successfully completed the first year of the course may enter the second year.

SUBJECTS OF STUDY

The modules in the second year are Anatomy (5 ECTS); Clinical Sciences in Physiotherapy: Pathology, Orthopaedics, Musculoskeletal I and Respiratory I, Gerontology, Pain, Burns and Plastics (20 ECTS); Physiotherapy Theory and Practice: Electrotherapy, Ergonomics, Exercise Therapy, Biomechanics and Kinesiology (20 ECTS); Professional Issues I (5 ECTS), Preparation for Clinical Practice and Clinical Placement: Preparation for Clinical Practice, Clinical Observation and Clinical Placement (10 ECTS). The learning objectives, course content and reading lists are presented below.

MODULE: ***ANATOMY OF THE HEAD AND NECK/NEUROANATOMY***

ECTS VALUE: **5 ECTS**

AIMS: This module aims to provide a detailed instruction on the gross anatomy of the head and neck and its embryologic development. It considers the structure of the central nervous system, its subdivisions and their connections and uses this knowledge as the basis of understanding of function in health and disease

On successful completion of this module the student should be able to:

Head and Neck

- Recognise, describe and classify bones and joints of the head and neck
- Recognise and describe the gross structure and functions of its muscles and nerves of the region
- Recognise and describe its visceral and endocrine structures
- Recognise and describe the organs of the special senses
- Recognise and describe its blood supply and lymphatic drainage
- Recognise and describe the radiologic features of the head and neck
- Describe the development of the head and neck and related congenital abnormalities
- Apply anatomical knowledge to explain the pathogenesis and natural history of common clinical disorders of the region

Neuroanatomy

- Recognise and describe the major subdivisions of the central nervous system (CNS)
- Recognise and describe the ventricular system and the production, circulation, absorption and role of cerebrospinal fluid
- Recognise and describe the structures associated with sensory and motor systems and their connections
- Recognise and describe the structures associated with language and their connections
- Recognise and describe the limbic system and its connections
- Recognise and classify cranial and spinal nerves and their connections.
- Recognise and describe the blood supply of the CNS
- Describe the development of the CNS and related congenital abnormalities
- Apply anatomical knowledge to explain the normal function of the CNS
- Apply anatomical knowledge to explain the pathogenesis and natural history of common clinical disorders of the CNS

Head and Neck

- The cervical vertebrae and skull, with their joints and ligaments
- The muscles and nerves of the region, in functional groups
- The visceral and endocrine structures of the head and neck
- The organs of the special senses (vision, hearing, taste)
- The arteries, veins and lymphatics of the region
- Radiology of the head and neck
- Embryologic development of the cervical and craniofacial regions
- Clinical applications of anatomy of the region

Neuroanatomy

- Overview of the nervous system
- Cerebral cortex
- Cerebellum; Brainstem; Cerebrospinal fluid
- Blood supply of the central nervous system
- Cranial nerves; Spinal cord
- Ascending and descending pathways
- Language
- Thalamus
- Basal ganglia
- Olfactory, limbic, autonomic, visual and auditory systems
- Radiology of the central nervous system
- Clinical applications

Main Textbooks

Clinically Oriented Anatomy: Moore and Dalley (**Lippincott, Williams & Wilkins**)

Last's Anatomy: Sinnatamby: **Churchill Livingstone**

Atlases

Atlas of Human Anatomy: Netter: **CIBA-Geigy**

Reference

Gray's Anatomy: Williams et al: **Longman**

Essentials of Human Embryology; **Larsen**

Radiographic Images: Online resources

ANATOMY.TV

This is an excellent resource for anatomy to which TCD has an institutional subscription. This website should be your first stop for all information about anatomy. It does have some CT and MR datasets under the anatomical regions. <http://www.anatomy.tv.elib.tcd.ie/newhome.aspx>

MODULE: *PHYSIOTHERAPY THEORY AND PRACTICE*

ECTS VALUE: 20 ECTS

AIM: The module is designed to introduce students to the theoretical principles that support the physiotherapy intervention and process. The module objectives are supported by practical classes that introduce the student to the clinical skills which will be assessed prior to entering the clinical environment.

OBJECTIVES: On successful completion of this course, students will be able to:

- Describe the principles of biomechanics as they apply to the human body.
- Explain how the different tissues of the body respond to biomechanical stress and loads.
- Integrate their knowledge of forces on body segments to describe the role of muscle and anatomical factors in normal and abnormal movement.
- Demonstrate an understanding of the assessment of muscle strength and strength training programmes.
- Demonstrate how to assess factors that affect posture and gait and other human movement patterns.
- Undertake a risk assessment of patient handling activities according to the best available evidence.
- Undertake a risk assessment of manual handling activities according to the best available evidence.
- Demonstrate sound ergonomic manual handling and patient handling activities.
- Describe the physiological & therapeutic uses and indications / contraindications of electrotherapeutic modalities.
- Demonstrate an ability to select and apply appropriate modality (ies) safely and effectively.
- Understand the principles in prescribing exercise therapy.
- Demonstrate an understanding of the cardiovascular risk factors associated with inactivity.
- Demonstrate an understanding of the health consequences of inactivity.

COURSE CONTENT:

Biomechanics

- Introduction to biomechanics terminology
- Biomechanics of bone and joints
- Biomechanics of muscle, tendon and ligaments (connective tissue)
- Biomechanics of neural tissue
- Biomechanics of the spine
- Measurement in Biomechanics

Kinesiology

- Methods of analysing functional human movement

- Movement and rehabilitation techniques (passive, accessory, active and active assisted movements)
- Assessment of Balance & Proprioception including the centre of gravity, base of support, equilibrium and relate to clinical applications
- Changes in posture throughout life stages; factors influencing normal posture; postural sway; assessment of posture
- Gait and demonstrate the principles of gait assessment
- Prescription of the safe use of Mobility Aids (crutches, frames, wheel-chairs, sticks)

Ergonomics I

- Importance of back care and prevention of back injury
- Introduction to current health and safety legislation
- Risk Assessment
- Review of Spinal Anatomy and biomechanics
- General principles of lifting and moving and handling of patients
- Moving and handling techniques
- Moving and handling aids and devices
- Practical lifting and moving and handling methods

Electrotherapy

- Thermotherapy & Cryotherapy
- Ultrasonic Therapy
- Low and Medium Frequency Currents
- Ultraviolet Radiation

Exercise Therapy

- Adaptations to exercise –cardiovascular responses, respiratory system responses, musculoskeletal response.
- Measurement of energy expenditure and fatigue, monitoring intensity of exercise.
- Assessment of fitness including body composition, flexibility, cardiovascular endurance, muscle strength, balance and proprioception.
- ACSM recommendations and components of fitness.
- Exercise prescription - *FITT principles, role of warm up/ cool down, group teaching & safety. Mode, frequency, duration, intensity.*
- Exercise training
 - Principles of training- *individuality, specificity, reversibility, overload, periodisation.*
 - Anaerobic and power training – *interval training, continuous training, circuit.*
 - Adaptations to resistance training
 - Adaptations to anaerobic and aerobic training.
- Muscle Strengthening - factors affecting muscle strength, assessment of muscle strength, principles of strength training programs
- Review of health benefits of exercise
- Physical activity and cardiovascular disease
- Prevention of obesity, diabetes and cardiovascular disease
- Primary and secondary prevention of cardiovascular disease

RECOMMENDED TEXTS:

Biomechanics /Kinesiology

Hamill J, Knutzen K (2008), *Biomechanical Basis of Human Movement*, 3rd ed, Lippincott, Williams and Wilkins, Philadelphia 612.76N5x1

Norkin, C. C. and P.K. Levangie (2011) *Joint Structure and Function, A Comprehensive Analysis*, 5th ed. F A Davis.

Oatis C (2009), *Kinesiology: the Mechanics and Pathomechanics of Human Movement*. Lippincott, Williams and Wilkins, Philadelphia.

Trew M, Everett T (2010), *Human Movement: An Introductory Text*, 6th ed, Churchill Livingstone, Edinburgh 615.82N79

Whittle's Gait Analysis, (2012), David Levine and Jim Richards, Churchill Livingstone;

Specific articles will also be uploaded to Blackboard to support learning

Ergonomics I

Smith, J [Ed] (2011). *The Guide to the Handling of People: a systems approach*. 6th Edition, Backcare in collaboration with National Back Exchange.

Guide to the Safety, Health and Welfare at Work (General Application) Regulations 2007. Chapter 4 of Part 2: Manual Handling of Loads. Available at <http://www.hsa.ie>

Adams J, and Tyson S, (2000) The effectiveness of physiotherapy to enable an elderly person to get up from the floor. *Physiotherapy*, 86, 4, 185 -189

<http://www.hsa.ie>

<http://www.hse.gov.uk>

Electrotherapy

Low, J. & Reed, A. (1994). *Electrotherapy Explained*. 2nd Edition. Butterworth Heinemann, Oxford.

Michlovitz, S. (1986). *Thermal Agents in Rehabilitation*. FA Davis

Savage, B. (1984). *Interferential Therapy*. Faber & Faber

Wadsworth, H. & Chanmugan, A. (1983). *Electrophysical Agents in Physiotherapy*. Science Press.

Wolf, S.L. (1990). *Electrotherapy*. 2nd Edition. Churchill Livingstone, Edinburgh.

Exercise Therapy

ACSM: *Guideline for exercise testing and prescription*, 6th Edition,

Galley P and Foster A (1987) *Human Movement* 2nd Ed. Churchill Livingstone. London

Gormley, J., Hussey, J. (2005). *Exercise Therapy: Prevention and Treatment of Disease*. Blackwell Scientific, Oxford

Harms-Ringdahl K (1993), *Muscle Strength*, Churchill Livingstone, London

Hollis M, Fletcher Cook, P (1999), *Practical Exercise Therapy*, 4th Ed, Blackwell Scientific, London

Jones D (1992), "*Strength of Skeletal Muscle and the Effects of Training*", *British Medical Bulletin*, 48(3): 592-604

Shankar, K., (1998) *Exercise Prescription*, Hanley and Belfus, Philadelphia

MODULE: **CLINICAL SCIENCES IN PHYSIOTHERAPY**

ECTS VALUE: **20 ECTS**

AIM:

The aim of this module is to introduce the student to the clinical conditions managed by physiotherapy. The clinical reasoning/ patient examination process will be introduced and applied to the diagnosis of various disorders. The epidemiology, presentation and management of disorders will be studied. The components of the module are basic pathology, respiratory, gerontology, neurology, musculoskeletal, orthopaedics, pain and burns/plastics.

OBJECTIVES - GENERAL: On completion of this module, the student will be able to:

- Describe the pathophysiology and clinical features of conditions commonly encountered by physiotherapists.
- Perform an appropriate assessment and design a management programme as part of the clinical reasoning process for all conditions.
- Justify selection of treatment as a reflection of current evidence.
- Prescribe exercise in the management of conditions commonly encountered by physiotherapists.

OBJECTIVES – SPECIFIC: At the end of the course the student will be able to:

Pathology:

- Define terms used in pathology.
- Demonstrate an awareness of pathogenic and non-pathogenic organisms.
- Demonstrate an understanding of immune mechanisms.
- Describe the process of inflammation, healing and repair.
- Discuss factors which affect healing and repair.
- Discuss the causes, pathological process and effects of circulatory disorders.
- Describe the classification of tumours and the differences between benign and malignant tumours.
- Describe causes and processes of atrophy, hypertrophy and hyperplasia.

Gerontology:

- Explain the factors that influence the attitudes of the individual & society to ageing & growing older
- Understand what is meant by ageism, its prevalence, how it may influence decision making about older people
- Be familiar with changing global demographic trends in ageing
- Understand how body systems change with age and how this may impact on physiotherapy assessment and intervention
- Be familiar with evidence-based exercise interventions with a particular focus on balance & mobility disorders in later life.

Musculoskeletal:

- Describe and discuss the aetiology, pathophysiology and clinical features of common musculoskeletal conditions.
- Perform an appropriate subjective examination of the peripheral joints.

- Demonstrate the basis of clinical reasoning in respect of a subjective examination
- Perform an appropriate physical examination of the peripheral joints
- Demonstrate the basis of clinical reasoning in respect of an objective assessment.
- Justify the selection of physiotherapeutic techniques using sound clinical reasoning processes.
- Implement a management programme of a patient with peripheral joint dysfunction.
- Describe and discuss the multidisciplinary and physiotherapeutic management of common musculoskeletal conditions.
- To prescribe exercise in the management of peripheral musculoskeletal conditions.

Burn Injury and Rehabilitation:

- Describe the anatomy and physiology of the skin as an organ in the healthy state and damaged condition that occurs with burn injury
- Describe pathology, physiology and sequelae of burn injury
- Describe the physiotherapeutic assessment of a patient with burn injury
- Explain the treatment for a patient with various depths and extent of burn injury in relation to medical surgical and rehabilitation management
- Describe the physiotherapeutic management of patients with respiratory involvement
- Describe the consequences of contracture and the treatment of this condition
- List the guidelines for the management of hypertrophic scars
- Be able to advise the patient on the type of care necessary after burn healing
- Analyse and interpret data, formulate realistic goals and outcomes, develop a plan of care when presented with a clinical case study

Pain:

- Differentiate between acute and chronic pain and understand the principles of treatment of each
- Have an understanding of pain theory and how it has developed to present day
- Have insight into the biological psychological and social aspects of pain experience
- Understand unique features of pain at different life stages
- Describe some methods of pain assessment and measurement. Describe the types of pain evaluation commonly used
- Understand potential role for electrophysical agents in pain management
- Manual therapy pain relieving effects
- Be aware of intervention strategies that will promote active client involvement in pain management programme
- Be able to identify different classes of analgesic drugs and understand possible side effects
- Understand definitions of placebo and placebo effects

- Understand the interrelationship between the motor system and the nociceptive system:

COURSE CONTENT:

Pathology:

- Introduction: definitions; aetiology of disease; extrinsic and intrinsic factors of disease.
- Introduction to terms – congenital, inherited, defect, deformity.
- Atrophy; hypertrophy; hyperplasia; degeneration.
- Introduction to microbiology: viruses, bacteria, fungi, spread of infection, prevention of infection.
- Immunity: innate immunity, mononuclear phagocytic system.
- Adaptive immunity: humoral immunity; formation of antibodies; primary and secondary immune response; complement system.
- Cellular immunity: autoimmune disease; transplant immunology; hypersensitivity reactions.
- Inflammation: causes; types; microscopic change; signs and symptoms of acute inflammation; chronic inflammation.
- Oedema: local and generalised; causes; effects.
- Thrombosis: characteristics; Virchow's triad; stages of thrombus formation; signs and symptoms of thrombosis.
- Embolism: types; effects; treatment.
- Infarction: common causes; collateral circulation; common sites of infarction.
- Haemorrhage: significance of rate of haemorrhage; causes; effects; bleeding diseases; circulatory shock.
- Anaemia: causes; types.
- Atrophy; hypertrophy; hyperplasia; degeneration.
- Neoplasia: classification; benign vs malignant; possible causes of neoplasia.

Respiratory medicine:

- Signs and symptoms of respiratory disease.
- COPD, Asthma, TB, Pneumonia, Lung Cancer, Bronchiectasis, Restrictive Lung Disease
- Chest assessment: subjective, physical examination, pulmonary functions tests, arterial blood gases, chest x-rays, field walking tests, outcome measures
- Mucociliary clearance techniques, active cycle of breathing technique.
- Manual techniques, positioning, postural drainage
- Respiratory failure
- General Surgery and effect on pulmonary system
- Pain relief

Gerontology:

- Attitudes, ageism, age bias in clinical decision making
- Demographics of ageing
- Ageing & physiotherapy intervention

- Mobility & balance in later life – assessment, measurement, interventions

Neurology:

- Cerebrovascular accident
- Multiple Sclerosis
- Parkinson's disease/parkinsonism
- Motor neurone disease
- Spinal lesions (including spinal cord injury)
- Head/Traumatic Brain injury
- Peripheral nerve lesions
- Aims and principles of treatment of neurological conditions
- A review of neuroanatomy and neurophysiology
- Neuropathology – abnormal tone and movement
- Neuroplasticity – basis for recovery
- Outline of different approaches to neurological rehabilitation

Musculoskeletal:

- Assessment of peripheral joints
- Clinical reasoning for assessment and treatment
- Objective tests for common clinical conditions
- Mobilisation techniques (specifically the Maitland approach)
- Joint Stability tests
- Treatment planning and implementation inclusive of massage, exercise prescription and mobilisation
- Joints covered include: Shoulder complex; Elbow; Wrist and Hand; Pelvic girdle; Hip; Knee; Foot and ankle.

Orthopaedics:

- Structure of bone
- Healing of bone
- Principles of treatment of (a) closed fractures and (b) open/ compound fractures.
- Complications of fractures.
- Common fractures – Colles; radius & ulna; metacarpals & phalanges; humerus; elbow fractures; scaphoid. Fractures around the ankle including Potts, calcaneus. Tibia & fibula; femur; hip.
- Arthroplasty of hip and knee.
- Dislocation of hip.
- Chondromalacia patella; normal and abnormal tracking of patella; clinical presentation; special tests; treatment, physiotherapeutic and surgical.
- Osteochondritis: classification, crushing osteochondritis, pathology, clinical features, Perthes disease, Scheuermanns disease. Treatment of these conditions.
- Paget's disease: pathology, differential diagnosis, complications, treatment.
- Osteomyelitis: acute and chronic, causes, pathology, treatment.
- Acute pyogenic arthritis: clinical features, treatment.
- Osteogenesis imperfecta: clinical features, treatment.
- Scoliosis: postural, structural. Treatment: conservative/ surgical, braces, exercise, Harrington rod, spinal fusions.

Burn Injury and Rehabilitation:

- Epidemiology of Burn injuries
- Skin anatomy and burn wound pathology
- Classification of Burn injury
- Indirect impairments and complications of Burn injury- Inhalation injury
- Burn wound healing
- Medical management of Burns
- Physiotherapy management of burns
- Compression garments
- Evaluation of burns – Vancouver Scar assessment sheet.
- Respiratory involvement in burn injury
- Case studies
 - A patient in the immediate post burn phase
 - Pre-graft patient
 - Post –Graft Patient
 - Patient with contracture

Pain:

- Pain Theory – physiology of pain.
- Beneficial and harmful effects of pain: pain types.
- Differentiation between acute and chronic pain.
- Pain across the lifespan.
- Assessment and measurement of pain.
- Pain management, psychologically based strategies, role of exercise.
- Pharmacology of pain management.
- Different pain problems acute and chronic pain problems, cancer pain.

RECOMMENDED TEXTS:

Pathology

Lakhani, S. et al (2009). *Basic Pathology: An Introduction to the Mechanisms of Disease*. 4th Edition. Hodder Arnold, London.

Shamley D. (Ed) (2005) *Pathophysiology: An essential text for the allied health professions*. Elsevier/Butterworth-Heinemann, Edinburgh

Spector, W.G. (1989). *An Introduction to General Pathology*. 3rd Edition, Churchill Livingstone.

Respiratory

Brewis, R.A.L. (1991). *Lecture Notes on Respiratory Disease*. Fourth Edition, Blackwell Scientific Publications.

Pryor, J.A., Prasad, S.A. (Eds) (2001). *Physiotherapy for Respiratory and Cardiac Problems Adults and Paediatrics*. Churchill Livingstone, Edinburgh.

Gerontology

Apple, D., Hayes, W. (1993). *Prevention of Falls and Hip Fractures in the elderly*. AAOS, Illinois.

Compton, A., Ashwin. (1992). *Community Care for Health Professionals*. Butterworth Heinemann, London.

Guccione, A.(1994). *Geriatric Physical Therapy*. Mosby Publishers, St Louis.

Lewis, C. & Bottomley, J. (1994). *Geriatric Physical Therapy* Appleton Lange, Connecticut.

Pickles, B., Compton, A. et al (1995). *Physiotherapy with Older People*. WB Saunders Co, London.

Squires, A. (1988). *Rehabilitation of the Older Patient*. Croom Helm, London.

The Years Ahead - A Policy for the Elderly. (1988). Government Publications, Dublin.

Tideiksaar, R. (1989). *Falling in Old Age*. Springer Publishing Co, New York.

Tinker, A. (1992). *Elderly People in Modern Society*. Longman, New York.

Musculoskeletal

Magee, D, (2013) *Orthopaedic Physical Assessment*, 6th Edition, Saunders, London

Magee D, Zachazewski J, Quillam W (2007) *Scientific Foundations and principles and practice in Musculoskeletal Rehabilitation*, Saunders Elsevier ,London

Magee D, Zachazewski J, Quillam W (2008) *Pathology and intervention in Musculoskeletal Rehabilitation*, Saunders Elsevier London

Petty, N, Moore, A, (2011), *Neuromuscular Examination and Assessment A Handbook for Therapists*, 4th Edition, Churchill Livingstone, Edinburgh

Hengeveld E, & Banks K. (2014) *Maitland's Peripheral Manipulation*, Butterworth Heinmann London

Therapeutic Exercise: Foundations and Techniques,
Kinser C, Colby L F.A. Davis Company; 6 edition (October 8, 2012)

Clinical Sports Medicine, Brukner P and Khan K
(2011) 5th Ed, McGraw-Hill Book Company Australia

Orthopaedics

Apley, A.G. & Solomon, L. (1993). *Apley's System of Orthopaedics and Fractures*. Butterworth Scientific.

Beasley, R.W. (1988). *Hand Injuries*. WB Saunders, London.

Dandy (1995). *Essential Orthopaedics and Trauma*. Blackwell Scientific, Edinburgh.

Donatelli & Wooden (1995). *Orthopaedic Physical Therapy*. Blackwell Scientific, Edinburgh.

McRae, R. (1993). *Clinical Orthopaedic Examination*. Blackwell Scientific, Edinburgh.

Moran, C.A. (1986). *Hand Rehabilitation*. Churchill Livingstone, Edinburgh.

Scurran, B.L. (1995). *Foot and Ankle Trauma*. Blackwell Scientific, Edinburgh.

Burns/plastics

Atiyeh B and Janom HH(2014) Physical rehabilitation of pediatric burns
Ann Burns Fire Disasters. Mar 31;27(1):37-43.

Burn Rehabilitation: An Overview Archives of Physical Medicine and Rehabilitation, Vol.88, Suppl 2, December 2007 (Journal supplement dedicated to Burns) includes:

Esselman P,(2007) *Assets and Liabilities of the Burn Model System Data Model: A Comparison with the National Burn Registry* Archives of Physical Medicine and Rehabilitation, Volume 88, Issue 12 , Supplement 2

Goodarzi, M., Reisi-Dehkordi, N., Daryabeigi, R. & Zargham-Boroujeni, A., 2014. An epidemiologic study of burns: Standards of care and patients' outcomes. *Iran J Nurs Midwifery Res*, 19, 385-9.

Lezotte DC et al , (2007) *Augmented Exercise in the Treatment of Deconditioning From Major Burn Injury*, Archives of Physical Medicine and Rehabilitation, Volume 88, Issue 12

de Lateur BJ et al., (2007) *Effects of Cessation of a Structured and Supervised Exercise Conditioning Program on Lean Mass and Muscle Strength in Severely Burned Children*, Archives of Physical Medicine and Rehabilitation, Volume 88, Issue 12

Suman OE et al., (2007) *Outcomes After Deep Full-Thickness Hand Burns* Archives of Physical Medicine and Rehabilitation, Volume 88, Issue 12,

Holavanahalli RK et al Acute Pain at Discharge From Hospitalization is a Prospective Predictor of Long-Term Suicidal Ideation After Burn Injury Archives of Physical Medicine and Rehabilitation, Volume 88, Issue 12

Edwards RR et al , *Physical and Psychologic Rehabilitation Outcomes for Young Adults Burned as Children* Archives of Physical Medicine and Rehabilitation, Volume 88, Issue 12

Baker CP et al., (1998) *Burn Care and Therapy*, Mosby, Inc.

Duncan RT and Dunn KW,(2006) *Immediate management of burns*, Plastic Surgery,24,1,9-14

Falanga V [Ed] (2001) Cutaneous Wound Healing, Martin Dunitz,Ltd.

Herndon, DN [Ed] (2012) *Total Burn Care*, 4th ed. WB Saunders

Leveridge A [Ed] (1991) *Therapy for the Burned Patient*, Chapman &Hall

Meenakshi Rani and Martin G. Schwacha (2012) Aging and the Pathogenic Response to Burn Ageing and Disease, Volume 3, Number 2; 171-180, April 2012

Settle J AD [Ed] (1996) *Principles and Practice of Burns Management*, Churchill Livingstone

Weber, J and McManus A, (2002) *Infection Control in Burn Patients*, Shriners Burns Hospital, Boston,[Online:
<http://www.worldburn.org/documents/infectioncontrol.pdf>]

Pain

Apkarian AV, Baliki MN, Geha PY. Towards a theory of chronic pain. Prog Neurobiol. 2009 Feb;87(2):81-97. Epub 2008 Oct 5. Review

Foster G, Taylor SJC, Eldridge S, Ramsay J, Griffiths CJ. Self-management education programmes by lay leaders for people with chronic conditions. Cochrane Database of Systematic Reviews 2007, Issue 4. Art. No.: CD005108. DOI:

Main C, Sullivan and Watson p, (2008) M, Pain Management: Practical Applications of the Biopsychosocial Perspective in Clinical and Occupational Settings, Edinburgh, Elsevier Health Sciences

Main C. J. & Spanswick C.C. (2000) *Pain Management; An Interdisciplinary Approach*, Churchill Livingstone

Moseley, G. L., Nicholas M K, et al. (2004). *A randomized controlled trial of intensive neurophysiology education in chronic low back pain.*" Clin J Pain 20(5): 324-30

Strong J, Unruh A, Wright A, Baxter D [Ed] (2002) *Pain a Textbook for Therapists*, Churchill Livingstone

Sluka KA, Mechanisms and Management of Pain for the Physical Therapist, IASP Press, 2009

Turk D and Melzack R (2010) *Handbook of Pain Assessment* 3rd Ed, The Guilford Press

Twycross A, Dowden S and Stinson J (2014) *Managing Pain in Children: A guide for Nurses and Healthcare Professionals*, 2nd ed. Wiley Blackwell & sons

Warfield C Fausett H (2002) 2nd Ed. *Manual of Pain Management*, Lippincott Williams and Wilkins

Warfield C.A. & Bajwa Z.H. (2004) *Principles and Practice of Pain Medicine* 2nd Edition, McGraw Hill

Wells, Frampton and Bowsher (Eds) (1997) *Pain Management and Control in Physiotherapy*, Heinemann Physiotherapy, London

Wittink H. & Hoskins Michel T (2002) *Chronic Pain Management for Physical Therapists* 2nd Edition, Butterworth Heinemann

Neurology

ESSENTIAL TEXTS

Carr J, Shepherd, R. (1998). *Neurological Rehabilitation: Optimising Motor Performance*. Butterworth Heinemann, Oxford

Stokes, M. (2004), *Physical Management in Neurological Rehabilitation*. Mosby London

RECOMMENDED TEXTS

Asbury, K.A., McKhann G.M., McDonald, W.I., Goadsby, P.J. & McArthur, J.C. [Eds]. *Diseases of the Nervous System: Clinical Neuroscience and Therapeutic Principles*. 3rd ed, Cambridge University Press, Cambridge

Bradley, W.G., Daroff, R.B., Fenichel, G.M. & Jankovic, J. [Eds] (2004). *Neurology in Clinical Practice*. 4th ed, Butterworth Heinemann, Philadelphia

Davies, P. (1994). *Starting Again*. Springer Verlag, New York.

Edwards, S. (2002), *Neurological Physiotherapy: A Problem Solving Approach*. 2nd ed, Churchill Livingstone, Edinburgh

Fuller, G. (2004). *Neurological Examination Made Easy*. 3rd ed, Churchill Livingstone, Edinburgh.

Fussey, I. & Muir, G.G. (1988). *Rehabilitation of the Severely Brain-Injured Adult*. Croom Helm, London.

Freeman Somers M. (2002) *Spinal Injury: Functional Rehabilitation* Prentice Hall; 2nd Edition

Gjelsvik, B. (2007) *The Bobath Concept in Adult Neurology*, Thieme Medical Publishers

Harvey. L. (2008) *Management of Spinal Cord Injuries: A Guide for Physiotherapists*. Butterworth Heinemann

Katirji, B., Kaminski, H.J., Preston, D.C., Ruff, R.L. & Shapiro, B.E. [Eds] (2002). *Neuromuscular Disorders in Clinical Practice*. Butterworth Heinemann, Boston

Meadows, Raine and Lynch. (2009). *The Bobath Concept: Theory and Clinical Practice in Neurological Rehabilitation*. Ellerington.

Shumway-Cook, A., Woollacott, M. (2001). *Motor Control – Theory and Practical Applications*. 2nd ed, Lippincott, Williams and Williams, London

MODULE: ***PROFESSIONAL ISSUES 1: THE INDIVIDUAL AND THE ORGANISATION***

ECTS: **5 ECTS**

AIM: This module is part of a theme – professionalism, advocacy, leadership and management – that runs through the course from SF to SS. The overall aim of

the theme is to prepare graduates with knowledge and understanding of the profession they will enter on graduation

OBJECTIVES:

At the end of this module the student will be able to:

- Understand his/her own learning style preference and how to use this information to optimise learning experiences and opportunities
- Recognise how different learning style preferences can influence learning in various circumstances
- Understand Belbin Team Roles and how various roles may impact on how teams work
- Understand his/her own Myers Briggs type
- Be familiar with advantages and challenges of working in teams
- Be familiar with the various types of units/teams and organisations in which PTs work in Ireland
- Develop a basic understanding of motivation within the work setting
- Adhere to the basic tenets of ethical professional behaviour i.e. probity, beneficence, justice, consent, confidentiality and respect for autonomy and conform to rules of professional conduct
- Recognise/demonstrate a knowledge and understanding of the practice standards of their profession and relevant legislative requirements
- Recognise that responsibility and accountability accompany professional autonomy
- Demonstrate professional behaviours such as clear communication, operate with a suitable degree of self-protection.
- Define conflict and contrast the functional with the dysfunctional role of conflict in a therapeutic relationship
- Recognise/demonstrate a knowledge of behavioural responses used to resolve conflict
- Recognise that responsibility and accountability accompany professional autonomy
- Understand the communication principles that inform history taking from a patient/client
- Understand the concept of whistle blowing

RECOMMENDED READING - – additional reading will be provided during the module

Arnold E, Boggs K [Eds]. *Interpersonal Relationships: Professional Communication Skills for nurses*. 2nd Edition. WB Saunders

Blake C, Cooney M, Cooke G , Morrissey A, *Professional Development Portfolio*, ISCP, 2002

Bub B, (2006) *Communication skills that heal; a practical approach to a new professionalism in medicine*, Radcliffe Publishing Ltd.

Burnard, P. (1996). *Acquiring Interpersonal Skills: A handbook of experiential learning for Health Professionals*. 2nd Edition. Chapman & Hall

Cooney M , Blake C, Continuing Professional Development Portfolio- Background and Response, *Physiotherapy Ireland*, 22, (1), 2001, p16 – 18

Greenfield, B.,(2006)*The meaning of caring in five experienced physical therapists* ,*Physiotherapy Theory and Practice*, 22(4):175187,

European Core Standards of Physiotherapy Practice. Irish Society of Chartered Physiotherapists. (2008) [Online:
http://www.iscp.ie/images/stories/european_core_standards_of_physiotherapy_practice_2008.pdf]

ISCP: Rules of Professional Conduct (2012).

Kolt G, Anderson M Eds(2004) *Psychology in the Physical and Manual Therapies*. Churchill Livinstone

Martin & Fellenz (2010) *Organizational behaviour & management*. Andover, CENGAGE Learning.

Nichols K, (2003) *Psychological Care for ill and Injured people; a clinical guide*, Open University press, McGraw Hill.

Jones & Jenkins (2006) *Leading and managing in the allied health professions*. Abington, Radcliffe Publishing Ltd.

Purtillo, R., Haddad A. (1996). *Health Professional and Patient Interaction*. 5th Edition. WB Saunders

Purtilo RB. Thirty-First Mary McMillan Lecture: A time to harvest, a time to sow: ethics for a shifting landscape. *Phys Ther*.2000;80:1112-1119

Rules of Professional Conduct Incorporating Code of Ethics and Guidelines for Professional Behaviour, (2014)ISCP

MODULE: ***PRACTICE EDUCATION I: Preparation for clinical practice and Clinical Placement 1(Preparation for clinical practice and clinical placement 1)***

ECTS VALUE: **10 ECTS**

AIM:

The aim of this module is to introduce students to the practice education component of the course. It will explore some issues relating to professional practice in the clinical setting and prepare students to undertake their first clinical placement. The module begins the process of integrating theory and practical skills into the clinical setting. It also prepares students to begin to develop physiotherapy assessment and treatment skills in the core areas of physiotherapy practice.

OBJECTIVES:

Practice Education P1 will offer the student the opportunity to develop and demonstrate:

- Knowledge of the structure and the process of the practice education component of the course.
- An ability to plan a fundamental subjective and objective assessment for a patient with guidance in the core areas of physiotherapy practice.
- The basic skill of analysing the assessment findings and formulating some fundamental treatment options with guidance.
- A fundamental ability to apply physiotherapy assessment and treatment techniques safely with guidance.
- Under guidance, a fundamental ability to evaluate treatment outcomes and a basic understanding of some of the factors that influence outcomes with guidance.
- Under guidance, a fundamental ability to work as a member of a health care team and understand the roles of the members of the multidisciplinary team.
- A fundamental ability to communicate effectively with patients, relatives, colleagues and other members of the multidisciplinary team.
- An ability to formulate an essential database in the core areas of physiotherapy practice and complete POMR format for all patient notes with guidance.
- An elementary appreciation of the Irish health care system in which physiotherapy is delivered.
- A basic knowledge of infection control and safety in the hospital environment.
- An awareness of cultural differences, and how they may impact on patient care and colleagues in the health care setting.

COURSE CONTENT:

- The structure of clinical placements and the practice education process including assessment of clinical practice.
- Planning and formulating SMART learning outcomes for clinical placement.
- Reflective practice and how to use the undergraduate learning portfolio for reflection, TCD website: Practice Education section
- Database collection and S.O.A.P. note writing.

- Introduction to respiratory, musculoskeletal, neurological, paediatric and orthopaedic assessment.
- Cultural differences in the clinical setting.
- Health issues and infection control on clinical placement.

- Introduction to the roles of the multidisciplinary team Introduction to basic conflict management in the clinical setting.
- Understanding the health service: overview of the HSE and the National Health Strategy.
- CPR training.
- Five week clinical placement. The first week will be a preparatory week focusing on reflective practice, documentation skills, communication skills and developing an understanding of the role of the physiotherapist as a health professional in the clinical environment.
- Cardiac First Response Training

RECOMMENDED TEXTS:

TCD Practice Education Handbook

Guidelines for Good practice in Practice Education (2008) HSE

Cooney M, Beswetherick N, Van der Wees P, Bouieri G, Hanneborg M (2002). *European Core Standards of Physiotherapy Practice*. Irish Society of Chartered Physiotherapists.

ISCP: Rules of Professional Conduct (2012).

EXAMINATIONS

The written examinations in Anatomy, Physiotherapy Theory and Practice (Electrotherapy, Exercise Therapy, Ergonomics, Biomechanics and Kinesiology) and in Clinical Sciences in Physiotherapy

(Respiratory, Musculoskeletal, Burns, Plastics, Orthopaedics, Gerontology, Pathology) take place at the end of the academic year during the annual examination period.

Practical examinations in Physiotherapy Theory and Practice and practical aspects of the Clinical Sciences in Physiotherapy take place during the terms. Students must achieve a satisfactory performance in each component of practical exams. Where a student fails one component he/she will repeat this component. Where the student fails more than one component all components must be repeated. Supplemental practical examinations will take place during the annual examination period and the student needs to have satisfactorily completed the practical examinations prior to clinical placement.

Supplemental examinations are held in September. Students who fail a supplemental examination are not permitted to proceed to the third year of the course but may, in certain circumstances, be permitted to repeat the year.

Anatomy

Assessment is by **in-course assessment** (Station based practical format [SBP]) during Semester 1 and 2, and by **end of module annual examinations** (Question Paper and Station Based Practical [SBP] Examination). In the SBP students are asked to identify anatomical structures in the Dissecting Room and answer functional and clinical questions with and without a member of staff. The Question Paper will consist of Multiple Choice Question (MCQ) and Short Answer Question (SAQ) sections, total time 2 hours. The end of module Station Based Practical is a 5 station examination, with three 'Spot' stations and two Viva stations (one-to-one oral exam with an Anatomy lecturer). Each station is of three minutes duration.

Overall Module Marks Weighting

SBP Examination 1	Head and Neck	Michaelmas	10%
SBP Examination 2	Neuroanatomy	Hilary	10%
Question Paper	All	Trinity	40%
SBP Examination	All	Trinity	40%

Pass Criteria

In order to pass, students must achieve an overall mark of **50%** (It is not necessary to pass any of the individual elements). **At the module coordinator's discretion borderline students, with an overall mark of < 50%, may be required to attend a pass fail viva voce examination with the External Examiner in Anatomy during the annual examination period.** Subject to a satisfactory performance the External Examiner may raise the mark to 50%. Students who do not satisfy the External Examiner will be required to sit the Supplemental Examination. There is no compensation allowed between the Anatomy module and the other modules within Senior Freshman Physiotherapy.

Distinctions

Students attaining an aggregate mark for year 1 and year 2 of **≥ 75%** in anatomy, and at the Module Coordinator's discretion, will be awarded a **Distinction in Anatomy**.

Physiotherapy Theory and Practice:

The module will be assessed via two methods. An end of year written exam will be held in term 3. It will contain six questions, of which five are to be answered. The questions on this paper are concerned with the underlying principles and theoretical background to physiotherapy techniques and

modalities and are based on the topics covered in Electrotherapy, Exercise Therapy, Biomechanics, Kinesiology and Ergonomics. Practical exams make up 40% of the year end mark, and the written examination makes up the remaining 60%. Students must successfully complete the practical exams before entering the clinical environment. This is to ensure that students are safe and competent in the practical skills acquired during the module. Failure to complete the assessment will require the student to re-sit the practical assessment at another time within the academic year before proceeding to the clinical component of the course. A mark of 50% will be awarded for a successful second attempt at the practical assessment. The student will be assessed in ergonomics, electrotherapy, biomechanics and kinesiology.

Clinical Sciences in Physiotherapy Assessment is in written examination format in the summer examination period at the end of year 2 (80%) and practical assessments held prior to students going on their first clinical placement (20%). The practical assessments will be in the areas of musculoskeletal medicine and respiratory medicine. In the written paper the pathology component will be in the form of short answers/MCQ and the remainder of the paper will be in long questions. There will be four questions in the areas of Orthopaedics, Respiratory, Musculoskeletal, Gerontology, Pain, Neurology, Plastics and Burns, and students will be required to answer three questions. One third of the paper is allocated to Pathology and two thirds to the remainder.

Practice Education P1 Continuous Assessment: Clinical competencies are evaluated by the Common Assessment Form (CAF) Level 1, in the areas of assessment, treatment and management, professionalism, communication, documentation and safety. Students also submit planned and unplanned learning activities which contribute to their undergraduate learning Portfolio. These are not graded but feedback is given.

Professional Issues 1 Group presentations (30%) and reflective writing in Michaelmas Term (30%) and Hilary Term (40%)

END OF YEAR EXAMINATION WEIGHTING

The pass mark in Anatomy and Practical components of the modules on Physiotherapy Theory and Practice and Clinical Sciences in Physiotherapy is 50%. The pass mark in the written examinations Physiotherapy Theory and Practice and Clinical Sciences in Physiotherapy and all submitted assignments is 40%.

OVERALL WEIGHTING

Anatomy	20%	
Physiotherapy Theory and Practice	25%	(paper 60%/practical 40%)

Clinical Sciences in Physiotherapy	25%	(paper 80%/practical 20%)
Practice Education I	20%	
Professional Issues 1	10%	

The end of year examination results will be published following the Court of Examiners' meeting and candidates' grades will be identified as follows:

I (70% +) II.i (60 - 69%) II.ii (50 - 59%) III (40 - 49%)

PRIZES

NEUROTECH Prize

The Neuro Tech Prize will be awarded annually to the Senior Freshman student who achieves first place in the annual Senior Freshman Physiotherapy examinations. The prize is sponsored to the value of €190.

SUPPLEMENTAL EXAMINATIONS

Supplemental examinations will take place in September at the beginning of Michaelmas term except for the Practical Assessments. The pass marks from the examinations held in Trinity term will be carried forward. Supplemental examinations will be of a similar format to the annual examinations.

Anatomy

The Supplemental Examination is held in August/September. Marks from the in course assessments are **not** carried forward. The format of the Question Paper in the Supplemental Examination and the standard to pass is the same as those of the Annual Examination. However, the practical examination will consist of a 10 minute viva voce examination with a member of the Anatomy department staff. Question Paper and Practical Examination are each worth 50%.

Overall Weighting of Supplemental exam:

Practical Examination	50%
Question Paper	50%

As in the Annual Examination, borderline students achieving an aggregate mark of < 50% in the supplemental assessment, and at the module coordinator's discretion, may be required to attend a pass/fail viva voce examination with the External Examiner.

The Practical Assessment Supplemental will take place in Trinity Term prior to Clinical Placement. Candidates must be successful in the Practical Assessment prior to undertaking Clinical Placement.

Students will be notified of the results of the supplemental examinations following the Court of Examiners meeting using the same procedure as for the Trinity term examinations.

Students who fail the Supplemental Examination will be required to repeat the year.

CLINICAL PRACTICE

Clinical practice commences in the second semester of the second year and continues throughout the third and fourth years of the course. Students are assigned to recognised hospitals, which are listed in the pre-placement information on the website. www.medicine.tce.ie/physiotherapy/clinical. Students may be assigned to placements outside the Dublin area (See Practice Education Handbook for all regulations and details).

FOUNDATION SCHOLARSHIPS

Students who wish to consider entering for the Scholarship examinations should refer to the relevant section in the University Calendar.

The areas of study related to the Scholarship examination will be:

- Two papers on Special Topics
- Clinical Sciences in Physiotherapy

The Special Topics examinations will be related to courses of reading prescribed by the Discipline staff. Details of the reading material, which will change annually, may be obtained from the office in the Discipline of Physiotherapy.

<i>Year 3 - Junior Sophister</i>

Students who have successfully completed the second year of the course may enter the third year.

SUBJECTS OF STUDY

The modules of the third year include Scientific Investigation (15 ECTS): Research Methods, Statistics, Literature Reviews; Psychology (5 ECTS); Rehabilitation in Bone and Joint Disease (10 ECTS) Women's Health, Bone and Joint Rehabilitation, Musculoskeletal Disease, Rheumatology; Prevention and Management of Chronic Disease (10 ECTS) Respiratory II, Cardiovascular Sciences, Neurology, Oncology/ Haematology, Mental Health; Paediatrics and Learning Disability (5 ECTS); Professional Issues II (5 ECTS). Practice Education II: Clinical Placement 2 & 3 are completed in Semester 2, consisting of two clinical placements of 6 week duration. A preparation week is scheduled between the placement blocks (10 ECTS).

MODULE: *SCIENTIFIC INVESTIGATION 1*

ECTS VALUE: 15 ECTS

AIM: The aim of this course is to introduce the student to an understanding of research methods and data analysis and the nature of scientific knowledge. It also aims to enable the student to develop skills in reviewing literature.

OBJECTIVES: At the end of this module the student will be able to:

- Demonstrate an understanding of statistical principles.
- Demonstrate an understanding of the basic principles of scientific research.
- Demonstrate an ability to carry out statistical tests.
- Select and apply statistical tests correctly.
- Interpret data obtained from research studies.
- Evaluate critically the statistical analysis in published research studies.
- Demonstrate a clear knowledge of the concepts of validity and reliability.
- Demonstrate the ability to choose an appropriate standardised outcome
- Summarise an article.
- Critically appraise an article.
- Combine summary and critique into an article review.
- Combine article reviews into a literature review.
- Present a literature review on selected articles.

COURSE CONTENT:

- Introduction to the scientific method.
- Experimental design - sampling, single, double and multiple group designs,

- double blind trials.
- Non experimental design - surveys, questionnaires.
- Planning and reporting research - defining the research question, generation of hypotheses.
- Reliability and validity of measures.
- Validity (including face, content, criterion, convergent and construct validity as well as responsiveness to change).
- Reliability (inter and intra rater).
- Methods and levels of measurement.
- Measurement instrumentation.
- Measures of central tendency - mean, mode, median.
- Normal distribution curve.
- Standard deviation.
- Populations and samples.
- Probability.
- Hypothesis testing and levels of significance.
- Parametric tests.
- Non parametric tests.
- Correlation and regression.
- Hierarchy of evidence.
- Types of literature review.
- Summarising an Article succinctly.
- Critical analysis of article.
- Combining critical analysis with summary.
- Organisation of Literature review.
- Combining reviews of articles into a review.
- Presentation of review.

RECOMMENDED TEXTS:

Altman, D.G. *The Scandal of Poor Medical Research*. BMJ (1994), 308 283-284

Bowers, D., House A., Owens, D (2001) *Understanding Clinical Papers*. Wiley

Bowling A (2005) *Measuring Health: A Review of Quality of Life Measurement Scales*. Berkshire: Open University Press.

Bowling A (2001) *Measuring disease: A Review of Disease-specific Quality of Life measurement scales*. 2nd edn. Buckingham: Open University Press.

Currier, D.P. (1990). *Elements of Research in Physical Therapy*. 3rd Edition. Williams & Wilkins, Baltimore.

Finch E, Brooks D, Stratford P, Mayo E (2002) *Physical Rehabilitation Outcome Measures- A guide to enhanced clinical decision making* (2nd Edition). BC Decker, Ontario.

Hicks, C.M. (1995). *Research for Physiotherapists*. 2nd Edition. Churchill Livingstone, Edinburgh.

Hicks, C.M. (2009) *Research Methods for Clinical Therapists: Applied project Design and Analysis*. Churchill Livingstone, Edinburgh.

Kirkwood, B.R. (2003). *Essential Medical Statistics*. Blackwell Scientific, Oxford.

McDowell I, Newell C (1996) *Measuring Health. A Guide to Rating Scales and Questionnaires* (2nd Edition) New York: Oxford University Press.

Oppenheim, A.N. (1992). *Questionnaire Design, Interviewing and Attitude Measurement*. Pinter, New York.

Payton, O.D. (1994). *Research: The Validation of Clinical Practice*. FA Davis, Philadelphia.

Polgar, S. & Thomas, S.A. (2013). *Introduction to Research in the Health Sciences*. 3rd Edition. Churchill Livingstone, Edinburgh.

Stokes EK (2010) *Rehabilitation Outcome Measures*. Elsevier, London.

MODULE: ***PROFESSIONAL ISSUES II: EVALUATION AND MANAGEMENT IN PHYSIOTHERAPY***

ECTS: **5 ECTS**

OBJECTIVES: At the end of this module the student will be able to:

- Outline with key management issues in physiotherapy practice
- Understand the extent to which standardised outcome measures are used in physiotherapy practice
- Understand the measurement properties of common outcome measures used in physiotherapy practice and how they can inform decision making
- Be able to describe the ICF and how it may be used in clinical practice
- Understand how to choose an appropriate outcome measurement including an analysis of the measurement properties
- Describe the principles of client/patient-centre care and how the views of users of services may be incorporated into quality management of services and decision making
- Demonstrate a knowledge of quality assurance frameworks encompassing, for example, audit, clinical governance, clinical guidelines, and professional standards;

RECOMMENDED READING – additional reading will be provided during the module

Jones & Jenkins (2006) *Leading and managing in the allied health professions*. Abington, Radcliffe Publishing Ltd.

Stokes EK (2010) *Rehabilitation Outcome Measures*. Elsevier, London.

Partridge C (1982) The outcome of physiotherapy & its measurement. *Physiotherapy* 68(11): 362-363.

Stokes EK, O'Neill D (2008) Use of outcome measures in physiotherapy practice in Ireland from 1998 to 2003 and comparison to Canadian trends. *Physiotherapy Canada* 60:109-116

Skinner EH, Berney S, Warrillow S, Denehy L (2009) Development of a physical function outcome measure and a pilot exercise training protocol for use in ICU. *Critical Care & Resuscitation* 11(2): 110-115.

Denehy L, de Morton NA, Skinner E, Edbrooke L, Haines K, Warrillow S, Berney S (2013) A physical function test for use in the ICU: validity, responsiveness & predictive utility *Physical Therapy* 93:1636-1645.

Nordon-Craft et al (2014) The Physical Function Intensive Care Test: Implementation in Survivors of Critical Illness. *Physical Therapy* 94:1499-1507

Stratford P (2004) Getting more from the literature: Estimating the standard error of measurement from reliability studies. *Physiotherapy Canada* 56:27-30.

Donoghue D, PROP, Stokes EK (2009) How much change is true change? The minimal detectable change of the Berg Balance Scale in elderly people. *Journal Rehabilitation Medicine* 41:343-346.

Downs S, Marquez J, Chiarelli P (2013) The Berg Balance Scale has high intra- and inter-rater reliability but absolute reliability varies across the scale: a systematic review. *Journal of Physiotherapy* 59: 93-99.

Websites used as follows

<http://www.iscp.ie>

<http://www.csp.org.uk>

<http://www.apta.org>

<http://www.physiotherapy.ca>

<http://www.physiotherapy.asn.au>

<http://www.who.int/classifications/icf/en/>

<http://www.wcpt.org>

MODULE: *PSYCHOLOGY*

ECTS VALUE: 5 ECTS

AIM: The aim of the psychology component is to introduce the student to the discipline of health psychology.

OBJECTIVES: On completion of this module the student will demonstrate:

- A basic knowledge of the main theoretical positions and the empirical evidence base of health psychology.
- A basic knowledge of the main theoretical positions and the empirical evidence base of health psychology.
- An understanding of the potential contribution of psychology to physiotherapy practice.
- Evaluate how psychology and sociology can inform an understanding of health, illness and healthcare.

COURSE CONTENT:

- Perspectives and Occupations within the field:
- Learning – Classical and Operant conditioning.
- Memory - Processes; divisions; forgetting and associated defects.
- Emotion – Anger; Aggression and Frustration.
- Intelligence - Definition; quantification; sub-types; performance ranges.
- Personality - Traits and assessment.
- Developmental psychology. Cognition, emotion and continuity in childhood and adolescence.
- Psychology of Gender and Aging – sex-typed phenomena; cognitive and behavioural features of ageing.
- Motivation – Humanistic Psychology.
- Psychopathology – the major types of disorder: aetiology and manifestation.
- Psychology and Illness. Perceptions; protective behaviour; hospitalisation.

RECOMMENDED TEXT:

Atkinson et al. (1996). *Hilgard's Introduction to Psychology*, 3rd Edition, International Thomson Publishing.

MODULE: *PREVENTION AND MANAGEMENT OF CHRONIC DISEASE*

ECTS VALUE: 10 ECTS

GENERAL: This module builds on Clinical Sciences in Physiotherapy in the Senior Freshman year. Common non-communicable diseases and their management including physiotherapy and rehabilitation will be considered. The clinical sciences that will be studied are respiratory medicine, cardiology, obesity/diabetes, oncology, neurology, and mental health.

AIM: The aim of this module is to provide the student with an understanding of the role of the physiotherapist in the prevention and management of chronic diseases. The epidemiology, diagnosis and overall management will be studied.

OBJECTIVES - GENERAL: On successful completion of this course the student will be able to:

- Evaluate the evidence for the main modifiable risk factors for the common non-communicable disease
- Justify the role of the physiotherapist in health promotion and primary prevention of chronic diseases.
- Describe the pathophysiology and clinical features of clinical conditions commonly encountered by the physiotherapist.
- Undertake appropriate assessment and treatment of the patient with the clinical conditions covered by this module.
- Justify the selection of physiotherapeutic techniques using sound clinical reasoning processes.
- Discuss the differing approaches to physiotherapy treatment of clinical conditions supported by the relevant literature.
- Describe the multidisciplinary management of both the acutely ill patient and the patient with chronic disease.
- Demonstrate proficiency with methods of physiotherapy treatment in the clinical conditions covered and understanding of indications and contraindications of these.
- Educate the patient and family/carers so that a responsible and active role in treatment/management is fostered with adherence to strategies for achieving optimum quality of life.

OBJECTIVES – SPECIFIC: At the end of the course the student will be able to:

Cardiovascular disorders - Amputees

- Demonstrate knowledge of ‘donning and doffing’ of prosthesis.
- Demonstrate an awareness of possible postoperative complications in the amputee and appropriate physiotherapeutic interventions.

Neurology

- Demonstrate knowledge and understanding of neurological assessment.
- Apply the principles of clinical reasoning to the assessment findings, in order to formulate a problem list.
- Demonstrate an ability to formulate treatment goals and a treatment plan based on the problem list.
- Discuss the evidence base for neurological physiotherapy rehabilitation.

COURSE CONTENT:

- Introduction to Non communicable diseases and the role of Physiotherapy
- Global context of chronic diseases and the four main causes: physical inactivity, smoking, diet and alcohol.
- Role of the Physiotherapist in population health
- Screening and promotion of physical activity to healthy and clinical populations
- Interventions to promote healthy lifestyles and support behaviour change

Respiratory Medicine

- Surgery: effects on the respiratory system, thoracic surgery, cardiac surgery, upper abdominal surgery.
- Trauma: head injuries, spinal injuries.
- Ventilation including non-invasive ventilation
- ITU techniques: suctioning, manual hyperinflation
- Monitoring in ITU

Cardiology

- Cardiovascular disorders, peripheral vascular disease, obesity, diabetes, hypertension, acquired valve disorders fitness testing, exercise prescription, cardiovascular risk factors, amputation, preoperative assessment, post operative mobilisation and rehabilitation.
- Investigations in heart disease. Cardiovascular rehabilitation.

Oncology and Haematology

- Cancer, haemophilia, cancer related fatigue, myopathies, lymphodema and its management.
- Risk factors for cancer, screening programmes, diagnostics,
- Lung cancer, head and neck cancer, breast cancer, haemophilia and physiotherapy treatment, Spinal Cord compression and bone metastases and bone marrow transplant.
- Role of the physiotherapist in oncology.
- HIV/AIDS and physiotherapy management.

Neurology

Neurological Assessment

- Subjective assessment
- Objective assessment of impairments and function
 - Analysis of normal and pathological movement patterns
 - Gait analysis
 - Upper limb function

Evidence based neurological rehabilitation

- Rehabilitation of the upper limb
- Hemiplegic shoulder pain
- Rehabilitation of the lower limb and gait
- Balance re-education
- Rehabilitation of the trunk and pelvis
- Exercise therapy
- Problem based group work aimed at formulating problem lists and treatment plans
- Video analysis workshops aimed at assessing and analysing movement patterns and gait
- Practical workshops including the application of assessment and treatment techniques

This section is supported by WebCT which will provide students with online access to all course material.

Interprofessional learning workshops

- This is a series of workshops which sees the physiotherapy student interact with students from medicine, nursing and other allied health professions to solve patient centred problems. Students will work in small interdisciplinary groups designed to model working professional teams. The emphasis is on developing an understanding of other disciplines' roles and improving awareness of how effective teamwork and communication may benefit the care of patients with chronic diseases.

Mental Health

- Organic Brain diseases: Alzheimer's disease, Multi-infarct dementia, Acute confusional state.
- Anxiety states, Neuroses: Phobias, Depression,
- Personality Disorders. Psychoses: Manic depressive psychosis, Schizophrenia.

RECOMMENDED TEXTS:

Respiratory Medicine Pryor, J.A., Prasad, S.A. (Eds) (2012). *Physiotherapy for Respiratory and Cardiac Problems*. Churchill Livingstone, Elsevier

Hough A. (2014) *Physiotherapy in Respiratory Care: an evidence-based approach to respiratory and Cardiac Management*

Beverley Harden, Jane Cross, Mary Ann Broad. *Respiratory Physiotherapy: An On-call Survival Guide*. Elsevier Health Sciences

American Association of Cardiovascular and Pulmonary Rehabilitation. (2011) *Guidelines for Pulmonary Rehabilitation Programs*

Cardiovascular

Physical Medicine and Rehabilitation (2014) *Clinics of North America Amputee rehabilitation* / editor Robert H. Meier III. Elsevier. Philadelphia.

Engstrom, B. & Van de Ven, C. (1999). *Therapy for Amputees: 3rd edition The Roehampton Approach*. Churchill Livingstone

Chartered Society of Physiotherapy. (2006) *Clinical guidelines for the pre and postoperative physiotherapy management of adults with lower limb amputation* / produced by Penny Broomhead ... [et al.] and members of the BACPAR Guidelines Development Group. CSP London

American Association of Cardiovascular and Pulmonary Rehabilitation. (2006) *AACVPR cardiac rehabilitation resource manual: promoting health and preventing disease*

British Heart Foundation (2009) *Cardiac Rehabilitation* British Heart Foundation London

Halliday J. (2010) *Cardiac Rehabilitation*. Nova Science Publishers New York

American College of Sports Medicine. (2013) *ACSM's guidelines for exercise testing and prescription*: Lippincott Williams & Wilkins, Philadelphia, PA

Guidelines for Cardiac Rehabilitation and secondary prevention programs/American Association of Cardiovascular and Pulmonary Rehabilitation (2013)

Neurology

ESSENTIAL TEXTS

Carr J, Shepherd, R. (2010). *Neurological Rehabilitation: Optimising Motor Performance*. Churchill Livingstone

Gjelsvik, B. (2007) *The Bobath Concept in Adult Neurology*, Thieme Medical Publishers

Meadows, Raine and Lynch. (2009). *The Bobath Concept: Theory and Clinical Practice in Neurological Rehabilitation*. Ellerington.

Stokes, M. (2011), *Physical Management for Neurological Conditions* 3rd Edition Churchill Livingstone

RECOMMENDED TEXTS

Daroff RB, Fenichel GM, Jankovic J, Maziotta J. *Neurology in Clinical Practice*. 6th Edition, Philadelphia: Saunders Elsevier; 2012.

Davies, P. (1994). *Starting Again Early Rehabilitation after Traumatic Brain Injury or other Severe Brain Lesion*. Springer Verlag, New York.

Edwards, S. (2002), *Neurological Physiotherapy: A Problem Solving Approach*. 2nd ed, Churchill Livingstone, Edinburgh

Fuller, G. (2013). *Neurological Examination Made Easy*. 5th ed, Churchill Livingstone, Edinburgh.

Harvey. L. (2008) *Management of Spinal Cord Injuries: A Guide for Physiotherapists*. Butterworth Heinemann

Shumway-Cook, A., Woollacott, M. (2012). *Motor Control Translating Research into Clinical Practice 4th Edition* Lippincott, Williams and Williams, North American Edition

Mental Health

Everett T, Donaghy M and Feaver S (2003) *Interventions for Mental Health: An Evidence-based Approach for Physiotherapists and Occupational Therapists* Butterworth-Heinemann

Donaghy M (2008). *Cognitive-Behavioural Interventions in Physiotherapy and Occupational Therapy*. Elsevier/Butterworth-Heinemann

Cancer

Rankin, J. *Rehabilitation in Cancer Care* (2008). Oxford: Wiley-Blackwell

Irwin, M. 2012 *ACSM's Guide to Exercise and Cancer survivorship*. Leeds. Human Kinetics

MODULE: *PAEDIATRICS AND LEARNING DISABILITY*

ECTS: 5

OBJECTIVES - GENERAL:

On successful completion of this course the student will be able to:

- Describe the pathophysiology and clinical features of clinical conditions commonly encountered by the physiotherapist.
- Justify appropriate assessment and treatment of the patient with the clinical conditions covered by this module.
- Justify the selection of physiotherapeutic techniques in paediatric conditions.
- Discuss the differing approaches to physiotherapy treatment of clinical conditions supported by the relevant literature.
- Describe the multidisciplinary management of both the acutely ill patient and the patient with chronic disease.
- Educate the patient and family/carers so that a responsible and active role in treatment/management is fostered with adherence to strategies for achieving optimum quality of life.

Paediatrics

- Respiratory –
 - Anatomical & Physiological Differences,
 - Normal Paediatric Values,
 - Paediatric Respiratory Assessment. Signs of distress, Indications for CPT, treatment techniques.
 - The Intensive Care, ECLS, HFOV, PHT.
 - Specific Disease Pathologies - Cardiac, Surgical, Medical.
 - Cyanotic & Acyanotic CHD
 - CHD, ToF, Oesophageal Atresia, Exomphalous, Gastroschisis
 - Acute pneumonia, bronchiolitis, CLD, inhaled FB, meconium aspiration.
 - CF – including CF treatment modalities.
 - Prematurity.
- Neurodevelopmental / Neurology
 - Normal Foetal Development, Development of the Human Brain, Maturation of the CNS, Normal Motor Development, The Normal Neonate, Factors influencing Development.
 - Developmental Milestones 0-18 months.
 - Paediatric Neurological Assessment (< 1yo)
 - Conditions – hydrocephalus, developmental delay, genetic conditions (T21), environmental
 - Cerebral Palsy
 - Neural Tube Defects
 - Acquired Brain Injury
 - Prematurity
 - Developmental Coordination Disorder's
 - Brachial Plexus Lesions

- Orthopaedics
 - Normal Variance
 - Hip Pathologies – DDH, SUFE, Perthes
 - Knee Pathologies – Osgood Schlatters, Patellar Instabilities
 - Foot and Ankle Pathologies – CTEV, Severs
 - Orthopaedic interventions in Neurology Presentations
 - Scoliosis
 - Osteogenesis Imperfecta
 - Torticollis
 - Limb Reconstruction / Lengthening
 - Sports Injuries in Paediatric's

- Rheumatology
 - Juvenile Idiopathic Arthritis
 - Joint Hypermobility Syndrome

- Haematology / Oncology
 1. Paediatric Haemophilia
 2. Sickle Cell Disease
 3. Malignant Haematology Overview – ALL, AML, Non Hodgkin's Lymphoma
 4. CNS Tumours
 5. Bone Tumours
 6. Treatment Related Side Effects

RECOMMENDED READING

Tecklin, J S (Ed) *Pediatric Physical Therapy* Lippincott Williams & Wilkins 4th Edition

Sheridan M.D, Sharma A, Cockerill H (2008) *From Birth to Five Years*. Routledge

Levitt, S. *Treatment of Cerebral Palsy and Motor Delay*,. John Wiley & Sons

Pryor, J.A., S. Ammani Prasad, A (2008). *Physiotherapy for Respiratory and Cardiac Problems: Adults and Paediatrics* Churchill-Livingston, 2008

Poutney T. E. (2007) *Physiotherapy for Children*, (2007) Butterworth Heinmann

Szer, I. S., Kimura, Y., Malleon, P.N. Eds (2006), *Arthritis in Children and Adolescents: JIA*, Oxford University Press (2006)

Keer, R., Graeme, R. (2003) *Hypermobility Syndrome*, Elsevier Health Sciences

MODULE: *REHABILITATION IN BONE AND JOINT DISEASE*

ECTS VALUE: 10 ECTS

GENERAL:

This module builds on Clinical Sciences in Physiotherapy in the Senior Freshman year. The clinical sciences that will be studied are musculoskeletal medicine (rheumatology) and women's health.

AIM:

The aim of this module is to provide the student with an understanding of the clinical conditions managed by Physiotherapy. The epidemiology, diagnosis and overall management will be studied.

OBJECTIVES - GENERAL:

On successful completion of this course the student will be able to:

- Describe the pathophysiology and clinical features of clinical conditions commonly encountered by the physiotherapist.
- Undertake appropriate assessment and treatment of the patient with the clinical conditions covered by this module.
- Justify the selection of physiotherapeutic techniques using sound clinical reasoning processes.
- Discuss the differing approaches to physiotherapy treatment of clinical conditions supported by the relevant literature.
- Describe the multidisciplinary management of both the acutely ill patient and the patient with chronic disease.
- Demonstrate proficiency with methods of physiotherapy treatment in the clinical conditions covered and understanding of indications and contraindications of these.
- Educate the patient and family/carers so that a responsible and active role in treatment/management is fostered with adherence to strategies for achieving optimum quality of life.
- To prescribe exercise in the management of bone and joint disease.

OBJECTIVES - SPECIFIC:

Musculoskeletal

- Describe and discuss the aetiology, pathophysiology and clinical features of the musculoskeletal spinal conditions listed below.
- Perform an appropriate subjective examination of the cervical, thoracic and lumbar spine.
- Demonstrate the basis of clinical reasoning in respect of a subjective examination.
- Perform an appropriate physical examination of the cervical, thoracic and lumbar spine.
- Demonstrate the basis of clinical reasoning in respect of a physical examination.
- Identify the principles of management of musculoskeletal injury.

- Justify the selection of physiotherapeutic techniques using sound clinical reasoning processes.
- Plan a management program for a patient presenting with spinal dysfunction.
- Describe and discuss the multidisciplinary and physiotherapeutic management of the musculoskeletal spinal conditions listed below.
- To prescribe exercise in the management of spinal musculoskeletal disorders.

Bone and Joint Rehabilitation

- Justify of the components of a pre and a post operative elective orthopaedic assessment.
- Demonstrate knowledge of: background pathology, clinical features, indication for surgery, fundamental surgical procedures.
- Demonstrate an understanding of the underlying principles of rehabilitation.
- Justify the selection and progression of physiotherapeutic treatments supported with relevant literature.
- Demonstrate knowledge of the common complications post surgery and management of the complications.
- Discuss the outcome measure options and their use in orthopaedic patient assessment and rehabilitation.
- Demonstrate a knowledge and understanding of the role of the interdisciplinary team.
- Identify behaviours that would facilitate the promotion of optimal bone density
- Identify risk factors for osteoporosis
- Evaluate patients with a diagnosis of compromised bone health
- Design an exercise programme for the management of osteopenia/osteoporosis

Women's Health

- Outline physiological, structural and psychological changes that occur during the childbearing year and their impact on women's well-being.
- Demonstrate understanding of the activities of daily living which prevent or minimise musculoskeletal discomfort of pregnancy.
- Describe the stages of parturition.
- Appreciate indications for medical/surgical intervention: forceps, vacuum, episiotomy, caesarean section.
- Demonstrate understanding of the complications of pregnancy and the puerperium.

COURSE CONTENT:

Musculoskeletal conditions

- Subjective assessments of the lumbar, thoracic and cervical spine.
- Physical examination of the lumbar, thoracic and cervical spine, including observation, assessment of active movement, passive physiological intervertebral movement, (PPIVM), passive accessory intervertebral movement, (PAIVMs), neurological tests.

- Joint mobilisations.
- Rehabilitation of trunk and spine musculature.
- Spondylolysis, Spondylosis, Spondylolisthesis, Degenerative disc disease, Lumbar instability, Disc protrusion/prolapse, Spinal stenosis. Facet joint dysfunction. Chronic low back pain. Thoracic outlet syndrome. T4 syndrome. Whiplash Associated disorders. Cervical headaches. Acute wry neck.

Rheumatology

- Physiotherapy interventions in rheumatology: principles, exercise, fitness, joint problems, splinting.
- Pharmacology in rheumatology: disease modifying agents, steroids, non-steroidal anti-inflammatory agents, cytotoxic drugs, uses, implications for physiotherapy intervention.
- Rheumatoid arthritis, Sjogren's syndrome, psoriatic arthropathy, Raynaud's phenomenon.
- Degenerative joint disease: spinal and peripheral joints.
- Spondyloarthropathies: ankylosing spondylitis. Connective tissue disorders: systemic lupus erythematosus, scleroderma/systemic sclerosis, polymyositis, dermatomyositis.
- Vascular disorders: polymyalgia rheumatica, giant cell arteritis, polyarteritis nodosa.
- Crystal associated disorders: gout. Metabolic bone disease: osteoporosis, osteomalacia, Paget's disease.
- Arthritis as a manifestation of other systemic disease: HIV, haemophilia.

Bone and joint rehabilitation

- Pre and post operative elective orthopaedic assessment, hip arthroplasty, revision hip arthroplasty, hip resurfacing, knee arthroplasty, revision knee arthroplasty, anterior cruciate ligament reconstruction, spinal surgery: discectomy, nerve root decompression, spinal fusion.
- An outline of alternative common spinal surgical procedures including: facet joint and nerve root block, intervertebral disc replacement, facet joint replacement.
- Overview of shoulder surgery including: shoulder arthroplasty, acromioplasty, shoulder stabilisation and labral repairs.
- Overview of foot and ankle surgery, other common elective orthopaedic procedures: Ilizarov procedure
- Promotion of bone health, identification of risk factors for osteoporosis, evaluation of patients with compromised bone health, management of patients with osteopenia, management of patients with osteoporosis.

Women's Health

- Physical and psychological changes in pregnancy, musculoskeletal discomfort, backache, posture, lifting, exercise, circulatory disorders.
- Multidisciplinary obstetric team.
- Physiology and mechanism of labour; resources and skills called upon during labour including relaxation, induction, augmentation, episiotomy, forceps, vacuum, elective and emergency section.
- Puerperium, postnatal distress, urinary tract infections, deep venous

thrombosis.

- Antenatal education, rationale and importance of postnatal exercises.
- Promotion of continence, awareness of the pelvic floor, general exercises to prevent later complications.
- Incontinence: types, assessment, management.
- Bone Health: changes over lifetime, importance of exercise, role of physiotherapist.
- Menopause: physiological changes, major gynaecological problems, surgery, osteoporosis, cardiac disease.

RECOMMENDED READING:

Musculoskeletal

Beeton, K, (2003). *The Vertebral Column; Manual Therapy Masterclasses*, Churchill Livingstone, Edinburgh.

Corrigan, B, Maitland, G, (1994). *Practical Orthopaedic Medicine*, Butterworth Heinemann, Cambridge.

Levangie P, Norkin C, (2001). *Joint Structure and Function; A Comprehensive Analysis*, 3rd Edition, F.A. Davis Company, Philadelphia.

Petty, N, Moore, A, (2002). *Neuromuscular Examination and Assessment; A Handbook for Therapists*, 2nd Edition, Churchill Livingstone, Edinburgh.

Magee, D, (2002). *Orthopaedic Physical Assessment*, 4th Edition, Saunders, London.

Maitland, G, (1991). *Peripheral Manipulation*, 3rd Edition, Butterworth Heinemann, London.

Boyling, J.D, Jull GA, (2004). *Grieve's modern manual therapy: the vertebral column* Elsevier Churchill Livingstone, Edinburgh.

Rheumatology

Arthritis and Rheumatism Council for Research. (2000). *Reports on Rheumatic Diseases*. Series 3.

Banwell, F & Gall, V. (1988). *Physical Therapy Management of Arthritis Clinics in Physical Therapy*, Vol.16, Churchill Livingstone, New York.

Hyde, S. (1980). *Physiotherapy in Rheumatology*. Blackwell Scientific, London.

Kelley, W.N. et al (1993). *Textbook of Rheumatology*. Vols 1 & 2 WB Saunders, Philadelphia.

Resnick, D. (2002). *Diagnosis of Bone and Joint Disorders* 4th Edition WB Saunders, Philadelphia.

Orthopaedic Rehabilitation

Atkinson, K, Coutts, F & Hassenkamp, A.M., (2005). *Physiotherapy in Orthopaedics: A Problem Solving Approach*. 2nd Edition, Churchill Livingstone, Edinburgh.

Bassey J, Dinan S (2001) *Exercise for strong bones*. Carroll and Brown. London

Dandy, J.D. (1993). *Essential Orthopaedics and Trauma*. 2nd Edition, Churchill Livingstone, Edinburgh.

Hoppenfeld, S. & Murthy, V. (2000). *Treatment & Rehabilitation of Fractures*. Lippincott Williams & Wilkins, Philadelphia.

Khan K et al (2001). *Physical activity and bone health*. Human Kinetics. Leeds

McRae, R. & Esser, M. *Practical Fracture Treatment*. (2002). 4th Edition, Churchill and Livingstone, Edinburgh.

Norkin, C. & White, D.J. (2003). *Measurement of Joint Motion: A Guide to Goniometry*. 3rd Edition, F.A. Davis Company, Philadelphia.

Berry Reese, N. & Brandy, W.D. (2002), *Joint range of Motion and Muscle Length Testing*. Saunders, Philadelphia.

Finch, Brooks, Stratford & Mayo. (2002). *Physical Rehabilitation Outcome Measures*. 2nd Edition, Lippincott Williams & Wilkins, Philadelphia.

Soloman, L., Warick, D. & Nayuagam, S., (2005). *Aply's Concise System of Orthopaedics and Fractures*. 3rd Edition, Oxford University Press, New York.

Chipchase, L., Brumby, S.A., (2001). *In-patient Physiotherapy: Management of Orthopaedic Surgery*. Butterworth-Heinemann, Oxford.

Women's Health

Sapsford R, Bullock-Saxton J and Markwell S (1998). *Women's Health: A Textbook for Physiotherapists* W. B Saunders

Polden M and Mantle J (2003) *Physiotherapy in Obstetrics and Gynecology* 2nd Edition Butterworth Heinemann

Bradshaw E (2003) *Exercises for Pregnancy and Childbirth: A Practical Guide for Educators, Books for Midwives*, Elsevier Science

Laycock J and Haslm J (2002) *Therapeutic management of incontinence and pelvic pain: pelvic organ disorders*. Springer London

Chamberlain G and Hamilton-Fairley D (1999) *Lectures notes on Obstetrics and Gynecology*. Blackwell Scientific Publications

MODULE: PRACTICE EDUCATION II

ECTS VALUE: **10 ECTS**

Clinical Placements 2 & 3

AIM: The aim of this module is to progress the students fundamental knowledge and understanding of the physiotherapy assessment process and treatment of patients. Students will have the opportunity to practice and build on clinical skills learned in previous modules. Student develop clinical reasoning skills in the core areas of physiotherapy practice and manage a patient caseload. Students advance their understanding of the role of multidisciplinary team. Students will progress to reduced levels of guidance in all learning outcomes over the placement.

OBJECTIVES: Practice Education II will offer the student the opportunity to develop and demonstrate:

- An ability to formulate and evaluate SMART learning goals appropriate to the clinical environment.
- An ability to plan and apply a subjective and objective assessment for a patient
- An ability to analysis the assessment findings and apply clinical reasoning to the assessment and reassessment findings in order to plan, prioritise, implement and modify appropriate physiotherapy treatment.
- An ability to apply physiotherapy assessment and treatment techniques safely.
- An ability to evaluate treatment outcomes and understand some of the factors that influence outcomes.
- An ability to work as a member of a health care team and understand the roles of the members of the multidisciplinary team
- An ability to communicate effectively with patients, relatives, colleagues and other members of the multidisciplinary team.
- An ability to formulate a database in the core areas of physiotherapy practice and complete with guidance Patient Orientated Medical Record (POMR) format for all patient notes.
- An appreciation of the Irish health care system in which physiotherapy is delivered.
- An understanding of infection control and safely procedures in the hospital environment.
- An understanding of the ethical, moral and legal issues in relation to physiotherapy practice.

CONTENT: Clinical placement are undertaken in the core areas of musculoskeletal and/or orthopaedics, respiratory, neurology and/or care of the elderly and

paediatrics. Clinical placements are undertaken in a variety of settings reflecting the diversity of work settings available to qualified physiotherapist.

The teaching is carried out in the clinical setting supervised by a qualified physiotherapist (Practice Educator), Practice Tutor or Regional Placement Facilitator. The clinical learning environment involves a variety of teaching methods including patient teaching sessions, tutorials, case presentations, practical skills practice, attending surgery, respiratory labs etc.

EXAMINATIONS

Examinations in Prevention and Management of Chronic Disease, Rehabilitation and Bone and Joint Rehabilitation and Paediatrics are taken at the end of Trinity term. Scientific Investigation is assessed by two literature reviews (one in Michaelmas term and one in Hilary term) and an assessment in Statistics will take place during the year. An assessment in Psychology will take place during the year. An assessment in Paediatrics and Learning Disability will take place during the year. Clinical placements are assessed by the Common Assessment Form. Supplemental examinations are held in September. Students who fail a supplemental examination will not be permitted to proceed to fourth year of the course but may, in certain circumstances, be permitted to repeat the year.

Prevention and Management of Chronic Disease, & Bone and Joint Rehabilitation:

Held in the annual examination period. 2 x 3 hour papers. Each paper will have six questions of which five are to be answered.

Paediatrics:

Held in the annual examination period. It is a two hour paper which will require 3 out of four questions to be answered.

Scientific Investigation:

Two literature reviews are to be submitted. These reviews shall be double-spaced on one side of paper. The first review will be of approximately 1,500 words and the second 2,500 words. The marks shall contribute towards the overall grade for the year. The topic for the first literature review will be given during Michaelmas term. Students will be given a number of articles on a particular topic and will be asked to write a review of these articles. The topic for the second literature review will be chosen by the student in an area of interest in physiotherapy.

Students who fail a review will be required to revise and resubmit it, once only. Resubmitted reviews will be granted a maximum of Grade III. The aggregate mark for the two literature reviews must be of a pass standard (40%). Written and verbal feedback is provided to the student. See Research Handbook for further information.

There will be an assessment during the year in Statistics.

Professional Issues II:

Group presentation (50%) and reflective writing (50%) will be used to assess the module

Psychology

Submitted assignment during the year

Practice Education II:

Continuous Assessment: Clinical competencies are evaluated by the Common Assessment Form (CAF) Level 2 in the areas of assessment, treatment and management, professionalism, communication, documentation and safety. Students also submit planned and unplanned learning activities which contribute to their undergraduate learning portfolio. These are not graded but feedback is given.

END OF YEAR EXAMINATION WEIGHTING

<i>Overall Weighting</i>	
Chronic Disease Management	16%
Bone and Joint Rehabilitation	16%
Paediatrics and Learning Disability	8%
Scientific Investigation	25%
Professional Issues II	8%
Practice Education II	19%
Psychology	8%

The pass mark for all areas is 40%.

I (70% +) II.i (60 - 69%) II.ii (50 - 59%) III (40 - 49%)

PRIZES

Amy Allen and Henriette Micks Memorial Prize in Physiotherapy

This prize was founded in 1986 from funds subscribed by the ex-students of the Dublin School of Physiotherapy in memory of two former directors of the School, Miss Amy Allen and Miss Henriette Micks. It is awarded to the Junior Sophister physiotherapy student who gains first place overall in the Junior Sophister year examinations and assessments. The prize will be in the form of books, to the value of €127.

SUPPLEMENTAL EXAMINATIONS

Supplemental examinations will take place in September at the beginning of Michaelmas term. Supplemental examinations will be of a similar format to the examinations at the end of Trinity term. The mark for the two literature reviews will be carried forward from the Michaelmas and Hilary terms. The pass marks from the examinations held in Trinity term will also be carried forward. The percentage allocation of marks will be the same as that for the Trinity term examinations.

Students will be notified of the results of the supplemental examinations following the Court of Examiners meeting using the same procedure as for the Trinity term examinations.

Students who have successfully completed the third year of the course may enter the fourth year.

SUBJECTS OF STUDY

The modules of study in the fourth year include Scientific Investigation 2 (20 ECTS), Professional Issues III (5 ECTS), Ergonomics II (5 ECTS), Sports and Exercise Medicine (5 ECTS), Special Option- Advanced Physiotherapy Practice (5 ECTS) and Clinical Practice (20 ECTS).

MODULE: ***SCIENTIFIC INVESTIGATION 2***

ECTS VALUE: **20 ECTS**

AIM: The aim of the module is to facilitate the students to actively participate in a research process, and in so doing understand the theoretical and practical aspects of research. The module aims to develop a solid appreciation of the value of research in clinical practice. It aims to encourage ongoing critical evaluation in clinical practice. It aims to foster an evidence based practice approach that will ensure the optimal management of patients. It aims to foster an interest in continuing professional development.

OBJECTIVES: On successful completion of this module, the student will be able to:

- Critically review the relevant literature, and present this review in written format.
- Formulate a research proposal.
- Design a research project.
- Demonstrate practical research skills.
- Implement a research project.
- Demonstrate effective teamwork and communication skills.
- Critically analyse the research findings.
- Evaluate the research process.

Draw conclusions from the research project.

- Write an accurate report of the research project in a specified format.

COURSE CONTENT:

Students are guided by staff in the completion of the literature review and project proposal. Academic staff supervise the research project; see the Research Handbook.

ASSESSMENT: Assessment is by written assignments - (i) Literature review/ Research Proposal; (ii) Research Project
The review and research proposal account for 50% of the overall mark for the module. The research project accounts for the other 50%.

RECOMMENDED TEXTS:

Altman, D.G. *The Scandal of Poor Medical Research*. BMJ (1994), 308 283-284

Bowers,D., House A., Owens., D (2001) *Understanding Clinical Papers*. Wiley

Bowling A (2005) *Measuring Health: A Review of Quality of Life Measurement Scales*. Berkshire: Open University Press.

Bowling A (2001) *Measuring disease: A Review of Disease-specific Quality of Life measurement scales*. 2nd edn. Buckingham: Open University Press.

Currier, D.P. (1990). *Elements of Research in Physical Therapy*. 3rd Edition. Williams & Wilkins, Baltimore.

Finch E, Brooks D, Stratford P, Mayo E (2002) *Physical Rehabilitation Outcome Measures- A guide to enhanced clinical decision making* (2nd Edition). BC Decker, Ontario.

Hicks, C.M. (1995). *Research for Physiotherapists*. 2nd Edition. Churchill Livingstone, Edinburgh.

Hicks, C.M. (2009) *Research Methods for Clinical Therapists: Applied project Design and Analysis*. Churchill Livingstone, Edinburgh.

Kirkwood, B.R. (2003). *Essentials Medical Statistics*. Blackwell Scientific, Oxford.

McDowell I, Newell C (1996) *Measuring Health. A Guide to Rating Scales and Questionnaires* (2nd Edition) New York: Oxford University Press.

Oppenheim, A.N. (1992). *Questionnaire Design, Interviewing and Attitude Measurement*. Pinter, New York.

Payton, O.D. (1994). *Research: The Validation of Clinical Practice*. FA Davis, Philadelphia.

Polgar, S. & Thomas, S.A. (2013). *Introduction to Research in the Health Sciences*. 3rd Edition. Churchill Livingstone, Edinburgh.

Stokes EK (2010) *Rehabilitation Outcome Measures*. Elsevier, London.

MODULE: **OPTION – ADVANCES IN PHYSIOTHERAPY PRACTICE**

ECTS: **5 ECTS**

OBJECTIVES:

At the end of this module the student will be able to:

- Demonstrate an understanding of the changing professional and regulatory environment in a global context
- Evaluate the advances in the scope of physiotherapy practice and the attendant governance, service delivery and clinical practice responsibilities
- Demonstrate an understanding of the key advanced learning and practice associated with advanced physiotherapy practitioners in a number of clinical areas e.g. musculoskeletal and rheumatology, neurology, respiratory
- Demonstrate an understanding of how to prepare a proposal for a new physiotherapy service

RECOMMENDED READING: Will be provided during the module

MODULE: *ERGONOMICS II*

ECTS VALUE: 5 ECTS

OBJECTIVES:

On successful completion of this module, students will be able to:

- Assess the effectiveness of intervention in different healthcare settings.
- Comply with health and safety legislation and integrate it into physiotherapy practice.
- Justify safety at work practices and explain risk assessment.
- Analyse posture, and work practices in the workplace.
- Analyse manual handling and moving and handling in the workplace.
- Justify modifications that may be required to work practices and workstations.
- Discuss the incidence, causes, management and prevention of work-related musculoskeletal disorders.
- Develop manual handling training programmes.

COURSE CONTENT:

- Assessment of posture with particular emphasis on working postures.
- Advanced risk assessment.
- Sitting and seating - biomechanics, assessment of sitting posture, chair evaluation.
- Work related musculoskeletal disorders.
- Back pain – incidence, risk factors and prevention
- Advanced moving and handling.
- Role of the Health and Safety Authority in the Health Care Sector.
- Manual handling training programmes

RECOMMENDED READING

Buckle, P. & Devereux, J. (2007). The nature of work-related neck and upper limb musculoskeletal disorders. *Applied Ergonomics*, 33, 207-217.

Bullock, M. [Ed.] (1990). *Ergonomics: the Physiotherapist in the Workplace*. Churchill Livingstone, Edinburgh.

Glover, W. et al (2005). Work-related musculoskeletal disorders affecting members of the CSP, *Physiotherapy*, 91 138-147.

Kroemer & Grandjean (1997). *Fitting the Task to the Human*. 5th Edition, Taylor and Francis, London.

Pheasant, S. & Stubbs, D. (1991). *Lifting and Handling: An Ergonomic Approach*. National Back Pain Association.

Jacobs, K. & Bettencourt, C. (1995), *Ergonomics for Therapists*. Butterworth Heinemann, London.

Smith, J. [Ed] (2011). *The Guide to the Handling of People: a systems approach*. 6th Edition, Backcare in collaboration with the National Back Exchange. (SD)

Nordin, M., Anderson, G. & Pope, M. (1997). *Musculoskeletal Disorders in the Workplace*. Mosby, New York 21

Smith, J. [Ed] (2005). *The Guide to the Handling of People*. 5th Edition, Backcare in collaboration with the Royal College of Nursing and the National Back Exchange.

Further references will be given at the time of dealing with a particular subject.

MODULE: *PROFESSIONAL ISSUES III: PHYSIOTHERAPY LEADERSHIP & MANAGEMENT*

ECTS: 5 ECTS

OBJECTIVES: **At the end of this module the student will be able to:**

- Outline how the health service in general and physiotherapy service in particular is organised in Ireland

- Demonstrate an appreciation of the changing and diverse context within which physiotherapy is delivered
- Describe the role of the Professional Association, WCPT and the regulatory authority, CORU
- Understand the scope of physiotherapy in a range of health care settings
- Appreciate the significance professional standards of practice and working within personal standards of proficiency
- Demonstrate an awareness of contemporary health and safety legislation and integrate into physiotherapy practice
- Explain how to handle information with due regard for legal and ethical requirements
- Be aware of medico-legal issues that concern physiotherapists including common diagnostic errors
- Understand the role of the expert witness
- Have an awareness of the role of physiotherapy in risk assessment
- Recognise the significance of continuing professional development
- Understand the difference between management and leadership
- Be familiar with the role of advocacy within physiotherapy
- Understand career options for physiotherapy including CV preparation and interview

RECOMMENDED READING

Dimond B, Legal aspects of nursing, Pearson Educationpress, 2008

Doyle G., Cafferky K., and Fullham J., (2012)The European Health Literacy Survey: Results from Ireland[Online: www.healthliteracy.ie/wp.../EU-Health-Literacy-Survey-Full-Report.]

European Core Standards of Physiotherapy Practice. Irish Society of Chartered Physiotherapists. (2008) [Online: http://www.iscp.ie/images/stories/european_core_standards_of_physiotherapy_practice_2008.pdf]

French S and Sim J, (2004)3rd Ed. Physiotherapy a psychosocial approach ISCP: Rules of Professional Conduct (2012).

Hope T, Savulescu, Hendrick J. 2nd Ed. Medical Ethics and Law; the core curriculum, Churchill Livingstone, Edinburgh (228)

Jensen G, Gwyer J, Hack L, Shepard K. (1999) Expertise in Physical Therapy Practice, Butterworth Heinemann

Klein J., (2005) Five Pitfalls in decisions about diagnosis, BMJ, VOL 33 April

O'Connor T, Health Literacy in Ireland: Benchmarking the Present State of the Art and Examining Future Challenges and opportunities

[Online:https://www.nala.ie/sites/.../health_literacy_in_ireland_nala_2012.pdf]

MARKING GUIDELINES – will be provided for the presentations and reflective writing

MODULE: *SPORTS AND EXERCISE MEDICINE*

ECTS VALUE: 5 ECTS

OBJECTIVES: At the end of the course the student will be able to:

- Demonstrate an understanding of the physiological changes that occur in the musculoskeletal, cardiovascular and respiratory systems during exercise in healthy subjects and in subjects with pathology.
- Assess physical activity levels by a number of means that can be used in the clinical setting.
- Assess aerobic capacity in subjects with pathology.
- Assess muscle strength and endurance in subjects with pathology.
- Justify the use of hydrotherapy in a variety of clinical settings.
- Prescribe exercise (theoretically and practically) in a way which is appropriate to different pathologies.
- Demonstrate an understanding of factors influencing adherence to exercise.
- Demonstrate an understanding of exercise within health promotion.
- Describe the role of the sports physiotherapist.
- Demonstrate an understanding of issues affecting management of injury in sport.
- Apply the clinical reasoning process in sports injury.
- Demonstrate an understanding of the principles of assessment and management of neural tissue pain disorders.
- Develop manual therapy skills.
- Develop an understanding of the MDT in musculoskeletal management.

COURSE CONTENT:

- Assessment of physical activity
- Exercise programmes for specific pathologies and populations; cardiovascular, pulmonary, obesity, musculoskeletal, osteoporosis, paediatrics, adolescent, elderly (case presentations).
- Strength and conditioning: Principles, practical applications, case studies.
- Hydrotherapy.
- Adherence to exercise and health promotion.
- Sports physiotherapy to include: injury surveillance; psychology; ethics; doping; injury management; risk factors; sport specific profiles; role of a team physiotherapist.
- Optimisation of training for sport – *excess training, overreaching. Overtraining, tapering and detraining.*
- The mechanical and physiological properties of neural tissue.
- The pathology of neural tissue pain disorders.
- Examination of nerve conduction – dermatomes, myotomes, reflexes.
- Examination for increased neural tissue mechanosensitivity- including neural tissue provocation tests and palpation of specific nerve trunks.
- Management of patients presenting with neural tissue pain disorders.
- Strength and conditioning in physiotherapy management.

RECOMMENDED TEXTS:

Beeton, K, (2003) *The Vertebral Column; Manual Therapy Masterclasses*, Churchill Livingstone, Edinburgh

Petty, N, Moore, A, (2002), *Neuromuscular Examination and Assessment; A Handbook For Therapists*, 2nd Edition, Churchill Livingstone, Edinburgh

Boyling JD, Jull GA, (2004) *Grieve's modern manual therapy: the vertebral column* Elsevier Churchill Livingstone, Edinburgh

Gormley J, Hussey J [Eds] (2005) *Exercise Therapy: Prevention and Treatment of disease*, Blackwell Scientific, Oxford,

Wilson F, Gormley J, Hussey J [Eds] (2011) *Exercise Therapy in the Management of Musculoskeletal Disorders*, Wiley Blackwell, Oxford.

Ehrman JK, Gordon PM, Visich PS, Keteyian SJ. *Clinical Exercise Physiology* Second Ed Human Kinetics

Mc Ardle Katch and Katch. *Exercise Physiology*, Williams and Wilkins

Kenney WL, Wilmore JH, Costill DL. *Physiology of Sport and Exercise*. Fifth Ed. Human Kinetics

Heyward VH. *Advanced Fitness Assessment and Exercise Prescription*. Sixth Ed. Human Kinetics

Durstine JL, Moore GE, Painter PL, Roberts SO. *ACSMs Exercise Management for Persons with Chronic Diseases and Disabilities*. Third Ed Human Kinetics

Journals: British Journal of Sports Medicine

Journal of Sports Sciences, Medicine and Science in Sports and Exercise

MODULE: ***PRACTICE EDUCATION III: Clinical Placement 4, 5 & 6***

ECTS VALUE: **20 ECTS**

AIM: The aim of this module is to progress the integration of theory and practical skills into the clinical setting, allowing the development of critical thinking

skills, communication skills and professional practice. It provides the student with the opportunity to continue to build on managing a clinical case load and enables them to develop core competencies in the area of clinical placement. Students will progress to reduced levels of guidance in all learning outcomes over the placement.

OBJECTIVES:

Practice Education level III involves clinical placement in the area of physiotherapy practice and will offer the student the opportunity to develop and demonstrate:

- Physiotherapy assessment and treatment techniques that are safe, effective and relevant to the area taking account of the patient's physical, psychological, social and cultural needs.
- A clear ability to apply problem solving and clinical reasoning skills to the assessment and reassessment findings in order to plan, prioritise, implement and modify appropriate physiotherapy.
- Application of condition specific appropriate treatment outcomes and understanding of the factors that influence outcomes including age, race, psychological and socioeconomic factors.
- Effective participation as a member of a health care team based on the understanding of individual and team-working practices and the role of the team members.
- Effective participation in the holistic patient management of the patient within the health care team and understanding of preventative measures that can lessen the incidence and/or severity of disease.
- Communication skills sufficient to communicate safely and effectively as a professional with patients, relatives, patient carers and colleagues.
- An ability to document clear, concise, legible POMR.
- An ability to reflect successfully, both on practice and learning in order to identify personal, professional and therapeutic goals within a context of lifelong learning.
- An appreciation of the complexities of the health care system in which physiotherapy is delivered.
- The application of clinical practice based on research evidence and best practice.
- An integrated understanding of the ethical, moral and legal issues in relation to physiotherapy practice

CONTENT:

Clinical placements are undertaken in the core areas of musculoskeletal and/or orthopaedics, respiratory, neurology and/or care of the elderly and paediatrics physiotherapy practice. Clinical placements are undertaken in a variety of settings reflecting the diversity of work settings available to qualified physiotherapist.

The teaching is carried out in the clinical setting supervised by a qualified physiotherapist (Practice Educator), Practice Tutor or regional placement facilitator. The clinical learning environment involves a variety of teaching

methods including patient teaching sessions, tutorials, case presentations, practical skills practice, attending surgery, respiratory labs etc.

EXAMINATIONS

The final examination is held at the end of Trinity term and consists of two written papers. To be admitted to the final examination, students must have successfully completed the first, second and third years of the course. In addition the written report of the research assignment must be submitted.

Students who have not completed the required minimum of 1,000 hours of clinical practice at the time of the final examination may be permitted to enter for the examination and if the Court of Examiners so agrees, a conditional result may be recorded, subject to the satisfactory completion of clinical practice within a time limit set by the examiners.

A supplemental examination is held in September. Students who fail a supplemental examination may in certain circumstances be permitted to repeat the year.

Scientific Investigation A literature review and research proposal and the write up in paper format of the supervised research project. See Research Project Handbook for details of the two assignments.

Option – Advanced Physiotherapy Practice The option will be assessed by a group oral presentation and an individual written essay.

Sports and Exercise Medicine Held at the end of Trinity term. 1 x 3 hour consisting of six questions of which four are to be answered.

Professional Issues III: The option will be assessed by a written assignment

Ergonomics Written assignment (1,500-2000 words). Clinically-based case study or risk assessment. Submitted at the end of Michaelmas Term.

AND

Written paper held at the end of Trinity Term. 1x1.5 hour consisting of three questions, of which two are to be answered.

Practice Education III: Continuous Assessment: Clinical competencies are evaluated by the Common Assessment Form (CAF) Level 3 in the areas of assessment, treatment and management, professionalism, communication, documentation and safety. Placement 4 is scored on a pass/fail basis. The clinical appraisal marks awarded on clinical placement 5, & 6 will contribute 15% towards the final award. In addition the clinical assessment of a patient will be examined whilst on placement during the final year in the Final Patient Assessment examination. This will also contribute 15% towards the final award.

END OF YEAR EXAMINATION WEIGHTING

Overall Weighting:

Research Assignments	30%
Advanced Physiotherapy Option	10%
Sports and Exercise Medicine	10%
Professional Issues III	10%
Ergonomics	10%
(Written assignment 5%; written paper 5%)	
Practice Education III	
- Clinical Placement	15%
- Patient Assessment	15%

The pass mark in all areas is 40%. The final examination results will be published following the Court of Examiners meeting and candidates' grades will be identified as follows:

I (70% +) II.i (60 - 69%) II.ii (50 - 59%) III (40 - 49%)

PRIZES

Dublin School of Physiotherapy Prize

The Dublin School of Physiotherapy prize will be awarded annually to the final year physiotherapy student presenting the best project. The award will be made on the recommendation of the Director of the School of Physiotherapy and a panel drawn from the academic staff of the School. The prize is sponsored to the value of €152.

Irish Society of Chartered Physiotherapists' Prize

The Irish Society of Chartered Physiotherapists' prize will be awarded annually to the final year physiotherapy student who, in the Junior and Senior Sophister years, presents with the best overall clinical placement reports. The award will be made on the recommendation of the Director of the School of Physiotherapy and a panel drawn from the academic staff of the School. The prize is sponsored to the value of €127.

Murray Surgical Prize

The Murray Surgical Prize will be awarded annually to the Senior Sophister student who achieves overall first place in the final physiotherapy examinations. The prize is sponsored to the value of €127.

Irish Society of Chartered Physiotherapists Student Research Prize

The ISCP student research prize will be awarded annually to the final year student who presents the best research project. The award will be made on the recommendation of the Director of the School and a panel drawn from the academic staff of the School.

SUPPLEMENTAL EXAMINATIONS

Supplemental examinations will take place in September. Supplemental examinations will be of a similar format to the examination at the end of Trinity term. A candidate who fails the project must resubmit the revised project by 1st September.

The pass marks from the examinations held in Trinity term will be carried forward. The percentage allocation of marks will be the same as that for the Trinity term examinations.

Students will be notified of the results of the supplemental examinations following the Court of Examiners meeting using the same procedure as for the Trinity term examinations.

APPENDIX 1

Clinical Anatomy for Assessment I (Semester 1)

- Anatomical position and movements. Bone description. Method of palpation
- Head: Mastoid process of skull; angle of mandible; external occipital protuberance; zygomatic arch; temporomandibular joint. Movements of the TMJ resisted and overpressure
- Scapula: spine; inferior angle; acromion process; coracoid process.
- Clavicle: sternal end; manubrium sterni; sternoclavicular joint; acromioclavicular joint.
- Humerus: greater & lesser tubercles; medial & lateral epicondyles; glenohumeral joint.
- Movements at the shoulder girdle. Stability tests of the AC Joint
- Movements at the glenohumeral joint. Accessory movement at the gleno-humeral joint. Stability tests.
- Radius and ulna: head of radius; radial styloid; dorsal tubercle; head of ulna; posterior border of the ulna; line of the elbow joint
- Movements at elbow and radio-ulnar joints. Stability tests.
- Hand: Carpal and metacarpal bones; movements at the wrist joint. Stability tests at wrist and midcarpal joints.
- Movements at metacarpophalangeal, carpometacarpal and inter phalangeal joints
- Arterial pulse of the upper limb: axillary, brachial, radial. Superficial veins
- Palpation and counting of spinous processes, vertebrae.
- Stretch reflexes in upper and lower limbs.
- Ribs and surface marking of lungs and heart.
- Surface marking of pleurae.
- Lobes of the lung.
- Pelvic bone and femur: iliac crest; anterior superior iliac spine; ischial tuberosity; greater tuberosity; hip joint; medial & lateral femoral condyles; adductor tubercle.
- Movements at the hip joint. Special tests
- Patella and patellar movements.
- Tibia: tibial condyles-tibial tuberosity, anterior border of the tibia; medial and lateral malleoli; knee joint; movement of the knee joint. Stability tests.
- Movements in the spine.
- Foot: base of the 5th metatarsal; head of metatarsal; head of talus; sustentaculum tali; cuboid; tuberosity of navicular.
- Movements of: sacro-iliac joint; ankle joint; midtarsal joint; metatarsophalangeal joints. femoral, popliteal, posterior tibial, dorsalis pedis, anterior tibial artery, carotid, superior temporal artery pulses; apex beat of the heart.
- Dermatomes and myotomes of the upper limb.
- Dermatomes and myotomes of the lower limb.

- Dermatomes of the trunk.

Accessory mvts AC, ST C, gleno-humeral*, elbow, radio-ulnar, wrist*, intercarpal, interphalangeal hip*, knee*, sup tib fib , ankle , sub-talar, calcaneo-cubid, tarsal joints, interphalangeal

Clinical Anatomy for Assessment II (Semester 2)

- Throughout, 'muscles' refer to the actions and functions. Students are expected to have learned the attachments of muscles prior to a practical.
- Trapezius*; latissimus dorsi*; rhomboids*
- Levator scapulae*; serratus anterior; pectoralis major.
- Supraspinatus; deltoid*; infraspinatus; teres minor; teres major; subscapularis.
- Biceps brachii; brachialis*; triceps*.
- The wrist flexors the wrist extensors
- Pronator teres; pronator quadratus; flexor carpi radialis; flexor carpi ulnaris; palmaris longus; flexor digitorum superficialis; flexor digitorum profundus; flexor pollicis longus.
- Brachioradialis; supinator; extensor carpi radialis longus; extensor carpi radialis brevis; extensor digitorum; extensor carpi ulnaris; extensor digiti minimi; extensor indices.
- Muscles of the hand. Grips and function of the hand.
- Psoas; iliacus; tensor fascia lata; sartorius; quadriceps*; gluteus medius; gluteus minimus.
- Gracilis; pectineus; adductor magnus; adductor longus; adductor brevis; gluteus maximus*; deep lateral rotators of the hips.
- Hamstrings*.
- Tibialis anterior*; extensor digitorum longus; extensor hallucis longus; peroneus longus; peroneus brevis; peroneus tertius.
- Gastrocnemius*; soleus; popliteus; flexor hallucis longus; flexor digitorum longus; tibialis posterior; flexor digitorum brevis; lumbricals; adductor hallucis.
- Sternocleidomastoid; scalene*; intercostals; diaphragm.
- Trunk flexors, extensors Erector spinae*; rectus abdominis;* oblique abdominals; transversus abdominis.
- Analysis of activities. Defining the movement; type of muscle work; range of movement.
- Analysis of pelvic tilting.
- Analysis of reaching.
- Analysis of pushing.
- Analysis of pulling.
- Analysis of lifting.
- Analysis of standing.
- Analysis of standing on one leg.
- Analysis of stair climbing.
- Analysis of walking.
- Sit to stand, sit to lie, lie to sit, standing bending forwards and coming up.
- Analysis of various activities involving head, neck and trunk.

There will be two assessments, on the format included. Each assessment will occur at the completion of each section, which will approximately coincide with the end of each term. Both assessments total 100 marks.

APPENDIX 2

THE UNIVERSITY OF DUBLIN
FACULTY OF HEALTH SCIENCES
DISCIPLINE OF PHYSIOTHERAPY

Clinical Anatomy Semester I

Date

Candidate's Name Total Mark (Max 50)
.....

1. Identify two bony points/joint line:
 - (i) sterno-clavicular, post border ulna (6)
 - (ii) TibTuberosity (6)

2. Demonstrate active range of movement /resisted /passive/overpressure - describe information that you gain from carrying these out
 - (i) active overpressure and stability metacarpo phalangeal (7)
 - (ii) mid tarsal active, overpressure , resisted (7)

3. Palpate a pulse in the upper limb OR the lower limb (1)

4. Surface mark EITHER an area of lung, the lower limits of the pleurae OR the heart lower lobe (4)

5. Demonstrate a tendon 'jerk' in EITHER the upper OR the lower limb triceps (1)

6. Indicate a dermatome/ test a myotome area in:
 - (i) the upper limb/trunk (3)
 - (ii) the lower limb/trunk (3)

7. Demonstrate the accessory movements in:
- (i) an upper limb joint (5)
 - (ii) a lower limb joint (5)
8. Overall handling / instruction of model (2)

Examiner:

THE UNIVERSITY OF DUBLIN
FACULTY OF HEALTH SCIENCES
DISCIPLINE OF PHYSIOTHERAPY

Clinical Anatomy Semester 2

Date

Candidate's Name	Total	Mark	(Max	50)
.....				
1. Demonstrate (i) the actions and (ii) State a function of ONE muscle in the upper limb/trunk			(4)
2. Demonstrate (i) the actions and (ii) State a function of TWO muscles in the lower limb/trunk			(4)
3. Position the following ONE upper limb/trunk muscles so that it is tested (i) with Gravity counterbalanced and (ii) against gravity			(5)
4. Position the following ONE lower limb/trunk muscles so that it is tested (i) with Gravity counterbalanced and (ii) against gravity			(5)
5. Analyse an upper limb activity/or head neck or trunk activity			(15)
4. Analyse a lower limb activity/or head neck or trunk activity			(15)
5. Overall handling / instruction of model			(2)

Examiner:

Supplemental Clinical Anatomy Assessment

Date: _____

Candidate's Name: _____

Total Mark: _____ (Max 100)

Examiners name _____

1. Identify two bony points/joint line: (3)
..... (3)
2. (You will be asked to demonstrate 3 of the following)

Demonstrate the range of active movements, overpressure, resisted movements, passive movements, accessory movements (and describe information that you gain from carrying these out) in

(i) an upper limb joint/head neck trunk (9)
(ii) a lower limb joint/head neck trunk (9)
3. Test the stability/integrity of the joint (5)
(You will be marked on patient position, position of hands, accuracy in execution of task)
4. Palpate a pulse in the upper limb OR the lower limb (3)
5. Surface mark EITHER an area of lung, the lower limits of the pleurae OR the heart (8)
6. Demonstrate a tendon 'jerk' in EITHER the upper OR the lower limb (3)
7. Demonstrate (i) the actions and (ii) State a function of a muscle in the upper limb/lower limb/trunk (8)
8. Indicate the dermatome area of (one dermatome) (3)

9. Test the myotome of (3)

10. Position the following ONE upper limb/ lower limb/trunk muscle so that it is tested

(i) with gravity counter balanced and
(4)

(ii) against gravity (4)

11. Demonstrate the accessory movements in:

(i) an upper limb joint (5)

(ii) a lower limb joint (5)

12. Analyse an upper limb / lower limb / neck/trunk activity (25)

Examiner:

APPENDIX 3

SENIOR FRESHMAN PRACTICAL ASSESSMENT –PHYSIOTHERAPY THEORY AND PRACTICE

SAMPLE STATION 1

Demonstrate the technique of applying ultrasound to the lateral ligament of the ankle.

SCORING SHEET

STUDENT'S NAME

Explanation and advice to patient

Position and comfort of patient

Warning and safety of treatment

Application of apparatus to lesion

Understanding of appropriate dose and frequency

Understanding of technique

TOTAL

Comments:

SENIOR FRESHMAN PRACTICAL ASSESSMENT- PHYSIOTHERAPY THEORY AND PRACTICE

SAMPLE STATION 2

Using the model, show three progressive strengthening exercises for the following:

(a) gluteus maximus;

(b) gastrocnemius

SCORING SHEET

STUDENT'S NAME

(a)

Explanation to patient

Position of patient

Location of resistance

Handling skills

Instruction to patient

(b)

Explanation to patient

Position of patient

Location of resistance

Handling skills

Instruction to patient

TOTAL

Comments

APPENDIX 4

THE UNIVERSITY OF DUBLIN - TRINITY COLLEGE

DISCIPLINE OF PHYSIOTHERAPY

Feedback Form for Literature Review 1

Student's Name **Term 20**

Examiner's Name

1.	Use of English
2.	Proof Reading
3.	Referencing
4.	Organisation of Content - logical sequence
5.	Development of points/arguments
6.	Evidence of critical analysis of the literature
7.	Summary/conclusions
Other comments	

DISCIPLINE OF PHYSIOTHERAPY

Feedback Form for Literature Review 2

Student's Name **Term 20**

Examiner's Name

1.	Use of English
2.	Proof Reading
3.	Referencing
4.	Relevance of content to title
5.	Evidence of reading appropriate to selected title
6.	Organisation of content - logical sequence
7.	Development of points/arguments
8.	Evidence of critical analysis of the literature
9.	Summary/conclusions

GUIDELINES FOR THE APPRAISAL OF LITERATURE REVIEWS

These guidelines are designed to help students and staff regarding points that can be taken into consideration when preparing and marking literature reviews.

Title	Is it succinct and accurate?
Literature Review	<p>Is the material relevant to the title?</p> <p>Is the material appropriate?</p> <p>Is there evidence of critical appraisal or is it mainly descriptive?</p> <p>Is it organised and integrated?</p> <p>Has it identified themes or trends?</p> <p>Is there a summary of essential features?</p> <p>Is the use of English correct and clear?</p> <p>Is the review correctly referenced?</p>

Grade 1 70%+	Maximum use of information and excellent level of critical appraisal. Clear presentation and organisation of material with correct use of English and good proof-reading. Excellent summary/summaries. Correctly referenced.
Grade 2i 60-69%	Interpretation good. Sees most of the implications of the review. Good presentation and organisation of most major points. Occasional repetition and obscure statements. Generally a clear grasp of major themes and trends. Good summary/summaries, correct referencing.
Grade 2ii 50-59%	General understanding of the review but interpretation may be weak leading more to a descriptive form of review. Some lack of integration and has not identified the major themes or trends. Presentation adequate though use of English could be improved.
Grade 3 40-49%	Some basic knowledge and relevant information although there are misunderstandings. Very little appraisal/ interpretation. A descriptive type of review. Presentation of information illogical/poor. Inadequate or incorrect references. Poor use of English. Poor proof reading. Poor summary/summaries.
Fail 39% or below	Some knowledge of the general field. Very muddled. No evidence of appraisal/interpretation. Failure to summarise. No evidence of proof reading. Poor English.

APPENDIX 6

APPENDIX 6 CRITERIA FOR EXAMINING RESEARCH REPORT

**THE UNIVERSITY OF DUBLIN - TRINITY COLLEGE
SCHOOL OF PHYSIOTHERAPY – RESEARCH REPORT CHECKLIST**

CRITERIA FOR EXAMINING ASSIGNMENT 2

PRESENTATION /APPENDIX	SCORE - SECTION 1
Effective use of grammar	
Good Proof Reading	
Correct Pagination	
Appendices/Figures Numbered (if required)	10%
Cross-referencing	
	10 9 8 7 6 5 4 3 2 1 0

COMMENTS

REFERENCES	SCORE - SECTION 2
Proper Referencing in text (Harvard system)	
Primary referencing	
Reference list complete	10%
Reference list accurate	
	10 9 8 7 6 5 4 3 2 1 0

COMMENTS

• **INTRODUCTION ABSTRACT** **SCORE - SECTION 3**

Concise introduction. Concise Abstract
 Background of study Main findings included
 Justification for study

10%

10 9 8 7 6 5 4 3 2 1 0

COMMENTS

• **METHODOLOGY** **SCORE - SECTION 4**

Clear aims and objectives.
 Appropriate methodology for aim of study.
 Clarity of admission criteria.
Reliability and validity measurements.
 Clear procedure to enable repeatability

20%

20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0

COMMENTS

• **RESULTS** **SCORE - SECTION 5**

Availability of raw data.
 Accurate reporting of results.
 Clear presentation of appropriate statistics.

20%

20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0

COMMENTS

• **DISCUSSION**

SCORE - SECTION 6

- Discussion and interpretation of results.
- Understanding of the significance of the subject.
- Ideas intelligently handled.
- Good choice of specific issues to illustrate general points. 30%
- Critical evaluation of own work.
- Indications for further work.

30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

COMMENTS

• **SCORE**

1	PRESENTATION/APPENDIX	.....	(10)	
2	REFERENCES	.....		(10)
3	INTRODUCTION / ABSTRACT	.....	(10)	
4	METHODOLOGY	.....	(20)	
5	RESULTS	.....	(20)	
6	DISCUSSION	.....		(30)

GRAND TOTAL **(100)**

STUDENT NAME.....

EXAMINER NAME.....

Appendix 7

READABILITY AND CLARITY

Jill Whitehouse BA
Executive Editor, *Physiotherapy*
Physiotherapy, March 1993, vol 79, no 3.

This paper was written to identify the responsibilities of reviewers of articles for *Physiotherapy* in helping authors to improve their writing style. The Journal Committee thought it could also be useful for prospective writers before starting work on an article. It is therefore published here in a modified form.

The purpose of this paper is to identify an appropriate style for *Physiotherapy*. The twin aims of style are clarity of communication and elegance. The way in which it is achieved varies according to the medium; Keats and St John of the Cross would not have much of their work accepted for a scientific journal.

The pursuit of clarity starts before anything is written. Authors have to make sure their concepts are logical and orderly before starting to write. There is little hope that things will sort themselves out as they set them down.

Logic is the foundation of style. It also determines readability.¹ A research paper should set out to find or prove one fact, and the conclusion of the article should state whether it has been found/ not found or proved/ not proved/ disproved. Testing two aspects at once will not do, and dragging in irrelevant findings, however interesting, adulterates the plan. This seems self-evident but almost any review article shows that it must be very difficult to achieve.

Keep It Simple

Two important aids to clarity are simplicity and brevity. Physiotherapists seem to have an innate tendency to pretentiousness. This can be demonstrated by a glance at the personal column in any issue of *Physiotherapy*. Very few members live anywhere; they always reside. Physiotherapists also tend to prefer Roman numerals, even though the legions left our shores almost 2,000 years ago, and their mathematical system was never outstanding. Members seldom buy anything; they prefer to purchase.

Allied to this a common distrust of full stops – sentences tend to run on interminably until the original subject can be forgotten in a multitude of subordinate clauses. Page long paragraphs are also to be avoided.

When writing articles one underlying motive is perhaps to make them seem as important as possible, with a view to impressing colleagues and future employers. The result is sometimes to bore and even confuse the reader.

There also seems to be a competition to produce the longest title. Obviously a one-word title such as 'Joints' or 'Chests' would not be specific enough, but a four-line title is in danger of paraphrasing most of the first paragraph.

¹ If you doubt this, why has no one ever finished reading *Finnegan's Wake*?

Conversely, there is a tendency among some writers to use note form. This is a good way to trigger the memory about facts which are already known but not to explain previously unfamiliar concepts. It also lacks elegance. Excessive use of heavy type, underlining and so on should also be unnecessary.

On the borderline between logic and convention is the use of singular and plural. A title such as 'The use of the hoist for the respiratory patient' implies there is only one hoist and only one respiratory patient. Even in these cash-starved times and until we achieve health for all by the year 2000, there will always be more than one of most types of equipment and patient in the world. The preliminary 'The' is also unnecessary and creates a complication for indexing – 'Use of hoists for respiratory patients' is quite adequate and saves three words. Likewise there is no such person as 'the physiotherapist' or 'the doctor'. Very usefully, the plural also avoids the him/ her dilemma; it is always 'them'.

Clichés abound in all forms of communication today and can occasionally be effective. However, a paper full of phrases such as 'up and running', 'as it were', 'the bottom line', 'all in all' and so on, does suggest that the author has not many original thoughts or ways of expressing them.

Jargon, on the other hand, can be useful, if it serves as a form of shorthand. Provided the intended readership is likely to understand a phrase, it does not matter much whether the man on the Clapham omnibus would do so. (Whoops! See clichés above). Close to jargon is medical terminology, which is desirable so long as it is not too abstruse, and is correctly spelt.

A factor which few contributors consider or even know about is the overseas circulation of the Journal. About three thousand copies of *Physiotherapy* go to subscribers whose first language is not English. The simpler the expression the more they will benefit from each issue. There are also Braille and taped versions of the Journal and (I assume) the more straightforward the text; the easier it will be to transcribe and understand in those media.

References

References should be set out in the Harvard style. (It is easier to look at examples in the Journal than to describe it, but instructions are given in the guidelines for authors). The main reason is that they appear in alphabetical order. In the Vancouver style they are listed in the order which they are mentioned in the text, and if the author later inserts an additional reference, all the numbers in the text and at the end have to be changed. It is very easy to forget to alter everything with the result that the numbers in the text refer to the wrong titles at the end. The International Committee of Medical Journal Editors recommends the Vancouver style, but in the opinion of both editors of *Physiotherapy* it is misguided in that respect.

Additionally, the titles of references are spelt out in full in *Physiotherapy*. Librarians may be familiar with the abbreviations but some of our readers, here and overseas, are not. The scientific editor insists that all works listed at the end as references must appear in the main text; other titles should be labelled 'Further reading'.

Keep It Human

An aspect of style which I think is very important is to make the subjects of any study seem human. It is easy to forget that patients are people, especially when they are being crunched into statistics. But they are not numbers or test tubes, and they should be respected as individuals. Where would you (and I) be without them? For this reason they should be given fictitious names, or at least reversed initials, rather than constantly be referred to as 'the subjects'. This also gives a paper more appeal to the readers.

The Borderline

All these points affect the successful expression of meaning and are linked to the content of an article. Therefore they are the concern of authors.

Writers need not worry about the details of house style – alternative spellings, capitalisation, when to use hyphens and so on. Every periodical uses a different system and the Journal staff will attend to it. There is no need to staunch the flow of creative genius while deciding whether or not to use a Z in ‘realise’.

Development of the body of knowledge specific to physiotherapy is essential to its progress. Clear and free communication of new ideas and findings is crucial – knowledge is useless until it is made available. I hope these comments will help prospective writers to play their part in building the future of the physiotherapy profession.

APPENDIX 8

PLAGIARISM

Plagiarism is interpreted by the University as the act of presenting the work of others as one's own work, without acknowledgement. Plagiarism is considered as academically fraudulent, and an offence against University discipline. The University considers plagiarism to be a major offence, and subject to the disciplinary procedures of the University.

Plagiarism can arise from deliberate actions and also through careless thinking and/or methodology. The offence lies not in the attitude or intention of the perpetrator, but in the action and in its consequences. Plagiarism can arise from actions such as:

- (a) copying another student's work.
- (b) enlisting another person or persons to complete an assignment on the student's behalf.
- (c) quoting directly, without acknowledgement, from books, articles or other sources, either in printed, recorded or electronic format.
- (c) paraphrasing, without acknowledgement, the writings of other authors.

Examples (c) and (d) in particular can arise through careless thinking and/or methodology where students:

- Fail to distinguish between their own ideas and those of others.
- Fail to take proper notes during preliminary research and, therefore, lose track of the sources from which the notes were drawn.
- Fail to distinguish between information which needs no acknowledgement because it is firmly in the public domain, and information which might be widely known, but which nevertheless requires some sort of acknowledgement.
- Come across a distinctive methodology or idea and fail to record its source.

All the above serve only as examples and are not exhaustive.

Students should submit work done in co-operation with other students only when it is done with the full knowledge and permission of the lecturer concerned. Without this, work submitted which is the produce of collusion with other students may be considered to be plagiarism.

It is clearly understood that all members of the academic community use and build on work of others. It is commonly accepted also, however, that we build on the work of others in an open and explicit manner, and with due acknowledgement. Many cases of plagiarism that arise could be avoided by following some simple guidelines: Any material used in a piece of work, of any form, that is not the original thought of the author should either be quoted directly or paraphrased. Either way, an explicit citation of the work referred to should be provided, in the text, in a footnote, or both. Not to do so is to commit plagiarism.

When taking notes from any source it is very important to record the precise words or ideas that are being used and their precise sources. While the Internet often offers a wider range of possibilities for researching particular themes, it also requires particular attention to be paid to the distinction between one's own work and the work of others. Particular care should be taken to keep track of the source of the electronic information obtained from the Internet or other electronic sources and ensure that it is explicitly and correctly acknowledged.

It is the responsibility of the author of any work to ensure that he/she does not commit plagiarism.

Students should ensure the integrity of their work by seeking advice from their lecturers, tutor or supervisor on avoiding plagiarism. All departments should include, in their handbooks or other literature given to students, advice on the appropriate methodology for the kind of work that students will be expected to undertake.

If plagiarism, as referred to above, is suspected, the Head of Department will arrange an informal meeting with the student, the student's tutor, and the lecturer concerned, to put their suspicions to the student and give the student the opportunity to respond.

If the Head of Department forms the view that plagiarism has taken place, he/she must notify the Senior Lecturer in writing of the facts of the case and suggested remedies, who will then advise the Junior Dean. The Junior Dean will interview the student if the facts of the case are in dispute. Whether or not the facts of the case are in dispute, the Junior Dean may implement the procedures set out in Conduct and College Regulations.

Students are referred to the relevant section in the University Calendar.

APPENDIX 9

ATTENDANCE AND COURSE WORK

Students are referred to the 'General Regulations and Information' within the University Calendar in relation to the above, and in particular to paragraphs 15, 16, 17, 18, 19 and 20 on page G4 which are given below.

- 15 All students should enter into residence in or near Dublin and must begin attendance at the College not later than the first day of teaching term, and may not go out of residence before the last day of teaching term, unless they have previously obtained permission from the Senior Lecturer through their tutor.
- 16 Students must attend College during the teaching term. They must take part fully in the academic work of their class throughout the period of their course. Lecture time-tables are published on College and departmental notice-boards before the beginning of Michaelmas lecture term. The onus lies on students to inform themselves of the dates, times and venues of their lectures and other forms of teaching by consulting these time-tables.
- 17 The requirements for attendance at lectures and tutorials vary between the different faculties, schools and departments. *Attendance is compulsory for Junior Freshman in all subjects.* The faculty, school or department, whichever is relevant, publishes its requirements for attendance at lectures and tutorials on notice-boards and/or in handbooks and elsewhere, as appropriate. For professional reasons lecture and tutorial attendance in all years is compulsory in the School of Clinical Speech and Language Studies, the School of Engineering, the School of Dental Science, the School of Pharmacy, for the Bachelor in Education, the higher Diploma in Education, and the Bachelor in Acting Studies. Attendance at practical classes is compulsory for students in all years of the moderatorship in drama and theatre studies and drama studies two-subject moderatorship. In the School of Mental and Moral Science, attendance is compulsory for the Freshman years, and for at least one course in each Sophister year.
- 18 In special circumstances exemption from attendance at lectures for one or more terms may be granted by the Senior Lecturer; application for such exemption must be made in advance through the tutor. Students granted exemptions from attendance at lectures are liable for the same annual fee as they would pay if attending lectures. Students thus exempted must perform such exercises as the Senior Lecturer may require. If these exercises are specially provided, an additional fee is usually charged.
- 19 Students who in any term have been unable, through illness or other unavoidable cause, to attend the prescribed lectures satisfactorily, may be granted credit for the term by the Senior Lecturer, but must perform such supplementary exercises as the Senior Lecturer may require. The onus for informing the Senior Lecturer of illness rests with individual students who should make themselves familiar with the general and more detailed departmental regulations regarding absence from lectures or examinations through illness.
- 20 Students who find themselves incapacitated by illness from attending lectures (or other forms of teaching) should immediately see their medical adviser and request a medical certificate for an appropriate period. Such medical certificates should be copied to the faculty, school or departmental office, as appropriate, by the student's tutor.

In relation to the Faculty of Health Sciences students are referred to paragraph 10 on page O3 which is given below.

- 10 Students should attend lectures regularly and are required to attend practical classes, clinics and demonstrations. When students are absent through illness, a medical certificate should be sent to the appropriate school office at the time of the illness, or immediately afterwards.

As far as the Department of Physiotherapy is concerned, attendance at lectures is expected and attendance at practical classes is a **requirement** in accordance with Faculty regulations. Students who are absent for any reason must inform the Department office on the morning of their absence together with the clinical department in which they have a clinical placement. Where possible an indication should be given of the likely duration of absence. Absences of three days or more must be supported by a medical certificate.

If students require leave of absence for personal reasons this should be discussed with the Director (or in his or her absence with any member of staff).

APPENDIX 10

PROTOCOL FOR THE SUBMISSION OF WRITTEN WORK OTHER THAN EXAMINATION MATERIAL

Following a memorandum from the Senior Lecturer a protocol has been established for the submission of written course work.

Written work in the form of literature reviews, outcome measures assignment (Junior Sophister year) and projects (Senior Sophister year) must be handed in by the date specified in the Student Handbook.

Each student is responsible for the submission of his/ her own piece of work. The student must 'sign-in' the piece of work which will be 'signed for' by a member of staff on the date received. A register will be available for this procedure in the School office.

Failure to hand in the work by the specified date may result in non-marking of the work unless specific permission has been given for late receipt of work.

APPENDIX 11

PROFESSIONAL BEHAVIOUR

Student physiotherapists shall adhere at all times to personal and professional standards that reflect credit on the profession and on the School of Medicine.

Behaviour, approach and dress should not cause offence to the patient/client carer or colleagues.

On placement the student is expected to act in a professional and courteous manner and demonstrate a willingness to adhere to the requirements of the practice environment.

Conduct considered to be derogatory to the reputation of the profession includes dishonesty, racism, ageism, sexism, indecent or violent behaviour, abuse of alcohol or drugs. Additionally, conviction by a court of law may imply some risk to the public.

The above statement is deliberately general recognising that it is impossible to specify everything that could be considered to be professional misconduct.

Adverse findings by the University's Disciplinary Committee, Professional Procedures Committee or the School Committee may result in the student being deemed guilty of professional misconduct. Such a finding may result in requesting that a student be removed from the course.

GUIDELINES FOR STUDENTS AT EXAMINATIONS

Junior Freshman, Senior Freshman, Junior Sophister, 2010/2011

1. The onus lies on each student to establish the dates of examinations by consulting the notice boards. No timetable or reminder will be sent to individual students by any office¹.
*
2. You are expected to familiarise yourself with the location of every examination venue you have been assigned to.
3. Once you have entered a venue, complete SILENCE must be maintained at all times.
4. Each student must be in possession of their student ID card for each examination session. Students should place their student ID card on the right-hand side of their desk for all examinations.
5. You should check that you have received the correct examination paper; you should check the title and read carefully all instructions given.
6. Your attention is drawn to the 'NOTICE ON EXAMINATIONS' which appears on the back cover of every examination booklet and is reproduced overleaf.
7. You will not be admitted after the first half-hour and will not be allowed to leave during the last half-hour.
8. You are not allowed start your examination until instructed to do so by the invigilators. Please use any spare time at the start to fill in your answer book cover.
9. You will be advised of the time ten minutes before the end of the examination.
10. At the end of the examination you will be advised that:
 - it is your responsibility to hand in everything you wish to have marked;
 - you should ensure that all of your answer books are labelled correctly with your examination number, seat number and all other relevant information required and also, complete the section at the bottom right-hand corner as requested before sealing the flap on every booklet used; fasten securely with a treasury tag.
 - you must immediately stop writing and hand up your booklets when instructed to do so by an invigilator.
 - you must remain in your seat until all scripts have been collected.
 - you must not remove from the examination venue answer books, rough work, or other materials supplied.
11. If you wish to leave the examination venue at any stage during the examination you must be escorted by an Invigilator.

* While every effort will be made to give due notice of major changes, the College reserves the right to amend the examination timetable.
Examinations Office

12. If you wish to leave before the end of the examination you must hand your booklet(s) to an Invigilator.
13. If you feel unwell during your examination, please inform an Invigilator – you will be asked if you wish to go to Student Health and will be accompanied by an Invigilator.
14. If necessary you will be accompanied to a bathroom by an Invigilator.
15. No smoking breaks are allowed in examination venues.
16. No mobile phones are allowed in examination venues.

STUDENTS MUST FOLLOW THE INSTRUCTIONS GIVEN BY THE INVIGILATORS AT ALL TIMES.

**UNIVERSITY OF DUBLIN
TRINITY COLLEGE**

NOTICE ON EXAMINATIONS

CANDIDATES FOR EXAMINATIONS ARE FORBIDDEN TO
BRING BOOKS OR NOTES WITH THEM INTO AN
EXAMINATION HALL, TO COPY FROM OR EXCHANGE
INFORMATION WITH OTHER CANDIDATES OR IN ANY WAY
MAKE USE OF INFORMATION IMPROPERLY OBTAINED.

SUCH ACTIONS ARE REGARDED AS SERIOUS OFFENCES
FOR WHICH STUDENTS MAY BE EXPELLED
FROM THE UNIVERSITY.

STUDENTS MUST NOT LEAVE THE HALL BEFORE THE TIME
SPECIFIED FOR THE EXAMINATION HAS ELAPSED,
EXCEPT BY LEAVE OF THE INVIGILATOR.

EXAMINATIONS OR OTHER EXERCISES WHICH ARE PART OF CONTINUOUS ASSESSMENT ARE SUBJECT
TO THE SAME
RULES AS OTHER COLLEGE EXAMINATIONS.

WHERE SUBMITTED WORK IS PART OF A PROCEDURE OF ASSESSMENT, PLAGIARISM IS SIMILARLY
REGARDED AS A
SERIOUS OFFENCE AND IS LIABLE TO SIMILAR PENALTIES.

Senior Lecturer

GUIDELINES ON MARKING

Guidelines on Awarding Grades for Exam Answers in the Freshman Years

Class	Mark Range	Criteria
I	70-100	Full understanding of concepts coupled with excellent knowledge of subject; may contain evidence of extra reading. A well structured answer. Minor lapses of content or presentation tolerated at lower end of range.
II-i	60-69	Good understanding of concepts supported by broad knowledge of subject. Well organised use of most major points. A lapse of content or some lapses of detail are tolerated at lower end of range.
II-ii	50-59	Understands basic concepts and has sound knowledge of subject. Sensible use of some major points. Suffers from more than one substantial omission, error or misunderstanding.
III	40-49	Signs of understanding and knowledge of subject. Answer often lacks structure and suffers from omissions, errors and misunderstandings. Overall, a poor but adequate answer, or marginally adequate at bottom end of range.
F-1	35-39	Basic understanding and knowledge of subject is very poor. While some items of sound material may be presented the answer is inadequate.
F-2	30-34	Lacks understanding of knowledge of subject. Answer contains few items related to question. Alternatively, an apparently genuine response to 'the wrong question' arising from a simple error of understand could be awarded a mark in this range.
F-3	0-29	Shows almost no knowledge of subject. Errors serious and absurd. Trivial response to the 'wrong' question arising from an error of understanding.

GUIDELINES FOR EXAM ANSWERS IN THE SOPHISTER YEARS

Guidelines on Awarding grades for Exam Answers in the Sophister Years

Class	Mark Range	Criteria
I	90-100	IDEAL ANSWER: showing insight and originality and wide knowledge. Logical, accurate, concise and structured presentation. Evidence of reading and thought beyond course content. Contains particularly apt examples. Links materials from lectures, practicals and seminars where appropriate.
	80-89	OUTSTANDING ANSWER: falls short of the 'ideal' answer either on aspects of presentation or on evidence of reading and thought beyond the course. Examples, layout and details are all sound.
	70-79	MAINLY OUTSTANDING ANSWER: falls short on presentation and reading or thought beyond the course, but retains insight and originality typical of first class work.
II-1	65-69	VERY COMPREHENSIVE ANSWER: good understanding of concepts supported by broad knowledge of subject. Notable for synthesis of information rather than originality. Sometimes with evidence of outside reading. A well organised answer. Mostly accurate and logical with appropriate examples. Occasionally a lapse in detail.
	60-64	COMPREHENSIVE ANSWER: mostly confined to good recall of coursework. Accurate, logical and organised answer. Some synthesis of information or ideas. Some lapses in detail.
II-2	55-59	LESS COMPREHENSIVE ANSWER: based on coursework alone. Usually lacks synthesis of information or ideas. Sensible use of major points. Mainly logical and accurate within its limited scope. Lapses in detail.
	50-54	INCOMPLETE ANSWER: understanding of main concepts and showing sound knowledge, Sensible use of some major points, but contains several lapses in detail.
III	45-49	WEAK ANSWER: Signs of understanding and knowledge of subject. Contains omissions, errors and misunderstandings, so that answer is no more than adequate.

	40-44	VERY WEAK ANSWER: limited understanding and knowledge of subject. A poor answer, but giving some relevant information indicating a marginally adequate understanding.
F-1	35-39	MARGINAL FAIL: inadequate answer lacking substance, but with a vague knowledge relevant to the question.
F-2	30-34	CLEAR FAILURE: some attempt to write something relevant to the question. Errors serious but not absurd. Could be sound answer to the 'wrong' question.
F-3	0-29	UTTER FAILURE: with no hint of knowledge. Errors serious and absurd. Could be trivial response to the 'wrong' question.

GUIDELINES FOR THE APPRAISAL & MARKING OF THE CRITICAL REVIEW

ESSAY IN THE SENIOR SOPHISTER YEAR

Grade 1 70% +	Maximum use of information and excellent level of critical appraisal. Clear presentation and organisation of material. Correct use of the following – English, proof reading, word count, referencing, line spacing and pagination. Excellent understanding of the implications for practice. Excellent summary.
Grade 2.1 60 – 69%	Interpretation good, includes most of the implications of the review for physiotherapy practice. Demonstrates a clear grasp of major themes with good critical appraisal. Good presentation and organisation of most major points. Correct use of the following – English, proof reading, word count, referencing, line spacing and pagination.
Grade 2.2 50 – 59%	General understanding of the material under review but critical appraisal may be weak leading to descriptive form of review. Some lack of integration leading to a limited view of the implications for physiotherapy practice. Moderate identification of major themes. Adequate use of the following – English, proof reading, word count, referencing, line spacing and pagination.
Grade 3 40 – 49%	A basic understanding of the material under review. Little critical appraisal leading to a descriptive form of review. Presents a limited view of the implications for physiotherapy practice. Poor use of the following – use of English, proof reading, word count, referencing, line spacing and pagination.
Fail	

39% or below	Presentation of information is poor and/or illogical. No evidence of interpretation and/or appraisal. Poor use of the following – English, proof reading, word count, referencing, line spacing and pagination.
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Appendix 14

USEFUL CONTACT NUMBERS

General Information, Advice and Services:

Undergraduate Students Tutorial Service House 27, College	www.tcd.ie/Senior_Tutor/ Ph: 896 2551 Email: stosec@tcd.ie
Student Disability Services Room 2054, Arts Building, College	www.tcd.ie/disability/ Ph: 896 3113 Email: disab@tcd.ie
Student Counselling Service 199 – 200 Pearse Street	www.tcd.ie/Student_Counselling/ Ph: 896 1407 Email: student-counselling@tcd.ie
Careers Advisory Service 2 nd floor, East Chapel	www.tcd.ie/careers Ph: 896 1721/ 896 1705 Email: careers@tcd.ie
College Health Service House 47, College	www.tcd.ie/College_Health Ph: 896 1556/ 896 1591
Chaplaincy House 27, College	www.tcd.ie/Chaplaincy/ Ph: 896 1402/ 896 1901/ 896 1260
Mature Student Office	Ph: 896 1386 Email: mature.student.officer@tcd.ie
Accommodations Services West Chapel, Front Square	www.tcd.ie/Accommodation Ph: 896 1177 Email: Residences@tcd.ie
The Students Union House 6, College	www.tcdsu.org Ph: 896 8431

APPENDIX 15

GENERAL PROCEDURES

General Queries:

All general queries not address below should be directed to the Executive Officer for the Discipline of Physiotherapy, Ms Sarah McLoughlin.

Student office hours are from 1pm – 2pm, Monday to Friday. Outside of these times please submit your query by e-mail to Physio@tcd.ie

Matters relating to the class as a whole should be submitted through the elected class representative.

Letter Requests:

The policy for letter requests by students is to submit a request by e-mail to Physio@tcd.ie including all pertinent information e.g. In the case of a letter required to support a grant application: the reference number and the name and address of the person within the grant authority to whom the letter is to be addressed and sent. Letters are processed on Fridays. It is the student's responsibility to ensure that they allow sufficient time for the request to be processed.

Timetable:

The timetable is only available online through the portal system. This is accessible through the TCD student homepage. It is the student's responsibility to access this information.

Please contact the Executive Officer if a specific query or problem arises. All such communication should be through the class representative. Class representatives are welcome to call into the office in person during student office hours: 1pm – 2pm, Monday to Friday or to submit the query via e-mail to Physio@tcd.ie

Exam Dates, Times & Results:

Information relating to the dates, times and results of Annual, Supplemental or Scholarship exams is available directly from the Exams Office. A link to this office is available through the TCD student homepage. No information on the above is available from the Discipline Office.

Breakdown of Annual Exam results:

Students will be offered a breakdown of their Annual exam results after their return to College during Michaelmas Semester. Each class will be contacted via e-mail and informed of the date when results will be available.

Should a breakdown of results be required before then for an official purpose, please e-mail the letter request to Physio@tcd.ie with the details as described above. Please note that such a letter will be sent directly to the Official or Department concerned.

APPENDIX 16

TR053 – Physiotherapy

Web page for prospective students: <http://www.tcd.ie/Admissions>

JF	SF	JS	SS
<u>Anatomy</u> <u>Clinical Anatomy</u> <u>Physiology</u> <u>Chemistry</u> <u>Physics</u>	<u>Anatomy</u> <u>Physiotherapy Theory and Practice</u> Biomechanics & Movement Electrotherapy Exercise Therapy <u>Clinical Sciences I:</u> Pathology Respiratory I Gerontology I Musculoskeletal I Orthopaedics Burns/ Plastic <u>Professional Issues 1</u> <u>Preparation for Clinical Practice</u> Clinical Placement	<u>Scientific Investigation</u> Research Methods Statistics Literature Review <u>Professional Issues 11</u> <u>Psychology</u> <u>Bone and Joint Rehabilitation</u> Musculoskeletal II Rheumatology Joint Rehabilitation Women’s Health <u>Prevention and Management of Chronic Disease</u> Respiratory II Cardiovascular Oncology/ Haematology Mental Health Neurology <u>Paediatrics and Learning Disability</u> <u>Clinical Placements</u>	<u>Scientific Investigation</u> <u>Option- Advances in Physiotherapy</u> <u>Sports and Exercise Medicine</u> <u>Professional Issues 111</u> <u>Ergonomics</u> <u>Clinical Placements</u>

Study Lectures Practical Classes Independent Study	Lectures Practical Class Independent study 4 weeks Clinical Practice Independent Study	Lectures Clinical Practice – Practical Classes Independent Study	Lectures Clinical Practice – Independent Study
Assessment Clinical Anatomy examined during each term. End of year papers	Anatomy Practical examinations End of year papers Course assignment in Professional Issues 1	2 Literature Reviews End of year papers Course assignments in Psychology, Statistics, Professional Issues 11	Clinical Assessments Research Assignments End of year papers