Course Handbook 2015-2016
Discipline of Physiotherapy
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 this handbook.

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September 2015

Welcome from the Head of Discipline, Dr John Gormley

Dear Students,

On behalf of the staff in the Discipline of Physiotherapy I would like to welcome our new first year students to the course in Physiotherapy. To those of you returning as rising Senior Freshmen, Junior Sophister and Senior Sophister students, welcome back.

The staff of the Discipline are:

<table>
<thead>
<tr>
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<th>Position</th>
<th>E-mail</th>
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</thead>
<tbody>
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<td>Deputy Head Associate professor</td>
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<td>Assistant professor</td>
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</tr>
</tbody>
</table>

We recognise that the course and the commitment it requires may be challenging on occasion. If, at any time, you need particular help, please do not hesitate to contact me or any of course team.

We wish you the very best over the next academic year.
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1. The academic year in Trinity College Dublin
The academic year begins in Trinity in Michaelmas Term and the period during which instruction is given is called teaching term. Michalemas teaching term is made up of twelve weeks running from September to December. Hilary teaching term commences in January and also runs for twelve weeks until April. It is followed by Trinity Term. Trinity Term is when there is a revision period and the annual examinations are held. All of the key dates are to be found in the College Calendar.

2. Attendance at lectures in the Discipline of Physiotherapy
Part II of the College Calendar outlines the regulations on attendance. 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 timetables are published through my.tcd.ie and on the Discipline’s notice boards before the beginning of Michaelmas teaching term. The onus lies on you to inform yourselves of the dates, times and venues of their lectures and other forms of teaching by consulting these timetables. Attendance is compulsory for Junior Freshmen in all subjects in Trinity. For professional reasons, lecture and tutorial attendance in all years is compulsory in the School of Medicine where the Discipline of Physiotherapy is based. If you are unable to attend a lecture, laboratory or practical session or your clinical placement, you must notify the module leader or relevant practice educator by e-mail in a timely way. If you are going to be absent for a prolonged period due to illness or other circumstances, you should contact your tutor who will provide you with the support you need to obtain the relevant permissions for your absence.

3. Graduate attributes and entry-to-practice competencies
Physiotherapy is a profession course. It leads to the award of a BSc (Physio) and the course is accredited by the professional body of physiotherapists in Ireland – the Irish Society of Chartered Physiotherapists. The expected attributes of a graduate from our physiotherapy programme are listed in Table 1. The ISCP and the Health Services Executive require all physiotherapists who are entering practice to be able to demonstrate the competencies listed in Table 2. Hence your four years in Trinity
provide you with the teaching and learning experiences to ensure you attain those attributes and competencies. In Appendix 1 of this handbook you will see how the current modules map onto the achievement of each of the attributes and competencies.

**Table 1 Attributes of a graduate of the Discipline of Physiotherapy**

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>This section broadly describes the knowledge base expected of the graduates of the physiotherapy programme.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scientific Basis</strong></td>
<td>The award holder should be able to:</td>
</tr>
<tr>
<td>- Apply the biological, physical, behavioural, social and clinical sciences relevant to their profession and recognise how these factors can influence health and illness.</td>
<td></td>
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<tr>
<td>- Identify the role of physiotherapists in health education, prevention and health promotion.</td>
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<tr>
<td>- Appreciate the significance of professional and self-regulation.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Service and Organisational Issues</th>
<th>The award holder should be able to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Appreciate the changing and diverse context within which healthcare and physiotherapy is delivered.</td>
<td></td>
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<tr>
<td>- Assess the implications of different organisational settings and patterns of working.</td>
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<tr>
<td>- Work within quality assurance frameworks encompassing, for example, clinical guidelines, professional standards and audit.</td>
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<tr>
<td>- Align their physiotherapy practice with contemporary health and safety legislation.</td>
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<tr>
<td>- Monitor and respond to changes in health care practice and service delivery.</td>
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<tr>
<td>- Integrate knowledge of ethical, moral and legal issues in relation to physiotherapy.</td>
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</tr>
<tr>
<td>- Recognise the social and economic factors that impact on health and the delivery of care.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social and Political Issues</th>
<th>The award holder should be able to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Assess the impact of health and social care policies on physiotherapy practice.</td>
<td></td>
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<tr>
<td>- Recognise factors contributing to social differences, the problems of inequalities, and the needs of different social groups.</td>
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<tr>
<td>- Recognise the components of non-discriminatory practice.</td>
<td></td>
</tr>
</tbody>
</table>
### Skills

**Professional Relationships** The award holder should be able to:
- Communicate clearly, sensitively and effectively with patients/clients and significant other(s), and with colleagues from a variety of health and social care professions, at individual, group and community level with respect to the issues related to assessment, treatment planning, proposed interventions and possible outcomes.
- Communicate effectively with individuals regardless of their social, cultural or ethnic backgrounds, or their disabilities.
- Participate effectively in intra-professional and inter-professional approaches to health care delivery, and co-operate with other health care professionals in professional practice.
- Understand the roles of other professions, acknowledge cross-professional boundaries, and employ appropriate referral procedures.
- Initiate and maintain effective interactions with peers and relevant external agencies, including other health care professionals.

**Personal and Professional Skills** The award holder should be able to:
- Adhere to the practice standards of physiotherapy and relevant legislative requirements.
- Use physiotherapy specific skills safely and effectively.
- Make informed professional judgements confidently.
- Initiate and respond to change in a flexible manner.
- Operate with a suitable degree of self-protection.

**Treatment Planning and Intervention** The award holder will:
- Make the patient central to the delivery of care.
- Make decisions, set goals, construct and implement specific interventions applying a problem solving and clinical reasoning approach.
- Evaluate the outcome of treatment and modify as needed.
- Teach health education and health promotion in their physiotherapy practice.

**Evaluation and Research**
The award holder will:
- Provide evidence-based physiotherapy.
- Evaluate clinical effectiveness in their physiotherapy practice.
- Use clinical reasoning approaches in the selection, justification and review of appropriate treatments.
- Identify appropriate outcome measures and apply them correctly in order to evaluate the effectiveness of intervention.
- Be a critical consumer of research and should be able to implement the research process.

**Personal and Professional Development** The award holder should be able to:
- Construct and implement a personal development plan.
- Recognise personal and professional limits, and seek help when necessary.
- Reflect on professional practice and engage in realistic self-assessment and appropriate self-directed learning.
- Reflect and modify behaviour in the light of experience and advice.

**Generic and Enabling Skills** The award holder will be able to:
- Use numerical and IT skills to present, manage and analyse data appropriately.
- Manage uncertainty, change and stress.
- Manage time, and plan their workload efficiently and effectively.
- Work in teams, negotiate, conciliate and demonstrate leadership skills.
- Work effectively and efficiently with support staff.

**Attitudes**: Within physiotherapy, the entry-level practitioner will demonstrate, through their behaviour and actions, attitudes that are considered essential in a Trinity Health Sciences graduate.

The award holder will:
- Demonstrate client/patient-oriented practice.
- Practice in a manner that demonstrates an adherence to the moral and ethical responsibilities involved in providing care to individual patients and communities.
- Respect and adhere to the ethical, legal and professional issues that inform and shape physiotherapy practice.
- Recognise that responsibility and accountability accompany professional autonomy.
- Preserve patient dignity.
- Adhere to the basic tenets of ethical professional behaviour i.e. probity, beneficence, justice, consent, confidentiality and respect for autonomy.
- Acknowledge differing views about health, healthcare and illness.
- Respect the right of patients and, where appropriate, their significant other(s), to be fully involved in decisions about their care, including the right to refuse treatment or to refuse to take part in teaching or research.
- Respond to questions and ensure that patients have an opportunity to make informed decisions about their health and well-being.
- Recognise personal and professional limits, and be willing to ask for help when necessary.
- Respect patients regardless of their lifestyle, culture, beliefs, race, colour, gender, sexuality, disability, age, or social or economic status.
- Recognise their duty to protect patients and others by taking action if a colleague’s health, performance or conduct is putting patients at risk.
- Be committed to continuing personal and professional development.
- Contribute to the development of the profession of physiotherapy.
## Table 2 Entry-to-practice competencies

<table>
<thead>
<tr>
<th>Professional Practice</th>
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<tbody>
<tr>
<td>• Interpreting professional codes of conduct, standards of practice, professional</td>
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<tr>
<td>and organisational policies as well as legal and ethical standards and</td>
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<tr>
<td>incorporating them into practice.</td>
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<tr>
<td>• Recognising the role of the physiotherapist in the multidisciplinary team and</td>
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<tr>
<td>managing overlap of professional roles, seeking help where necessary.</td>
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<tr>
<td>• Demonstrating appropriate professional behaviours and attitudes.</td>
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<tr>
<td>• Recognising own limitations and liaising with senior staff and other team</td>
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<tr>
<td>members when appropriate.</td>
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<tr>
<td>• Maintaining patient confidentiality.</td>
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<tr>
<td>• Demonstrating adequate preparation for each clinical rotation.</td>
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<tr>
<td>• Demonstrating initiative and willingness to learn.</td>
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<table>
<thead>
<tr>
<th>Communication</th>
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<tbody>
<tr>
<td>• Managing communications in a professional manner.</td>
</tr>
<tr>
<td>• Communicating effectively with the patient and family/carer.</td>
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<tr>
<td>• Communicating effectively with colleagues (e.g. physiotherapy colleagues,</td>
</tr>
<tr>
<td>ward staff, health professionals, administration staff, porters etc.).</td>
</tr>
<tr>
<td>• Communicating oral and written information in a clear, structured and succinct</td>
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<tr>
<td>manner, free from unnecessary jargon.</td>
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<tr>
<td>• Demonstrating appropriate presentation skills.</td>
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<tr>
<td>• Caseload management.</td>
</tr>
<tr>
<td>• Prioritising and managing their caseload according to the needs of the service.</td>
</tr>
<tr>
<td>• Demonstrating effective team working as a component of efficient case</td>
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<td>management to ensure an optimum service is provided for all service users.</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Physiotherapy assessment</th>
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<tbody>
<tr>
<td>• Demonstrating appropriate background knowledge prior to commencing</td>
</tr>
<tr>
<td>assessment.</td>
</tr>
<tr>
<td>• Retrieving relevant information from available sources.</td>
</tr>
<tr>
<td>• Performing a subjective examination.</td>
</tr>
<tr>
<td>• Performing an objective examination.</td>
</tr>
<tr>
<td>• Demonstrating appropriate handling skills and performing assessment safely.</td>
</tr>
</tbody>
</table>
- Ensuring patient comfort and dignity during assessment.
- Interpreting and evaluating assessment findings.
- Using clinical reasoning skills to set appropriate goals.

**Physiotherapy intervention**

- Planning an appropriate treatment programme with realistic goals.
- Justifying the treatment programme using evidence-based practice.
- Implementing a treatment programme.
- Carrying out treatment tasks within a reasonable time period.
- Educating patient appropriately.
- Managing the end of the patient care episode.
- Demonstrating appropriate manual handling skills for self and patient during treatment.
- Implementing safe practice during treatment.

**Documentation**

- Accurately recording the assessment findings, showing evidence of clinical reasoning.
- Demonstrating evidence of clinical reasoning in documentation.
- Recording clear, concise, legible notes that have appropriate use of abbreviations.
- Adhering to legal requirements and local guidelines regarding documentation/signature.

**Planning and maintaining a quality service**

- Understanding the role of their service area and their department within the larger organisation.
- Recognising requirements for service development within their service area.
- Communicating service development needs in collaboration with their senior.

**Demonstrating research and evidence-based practice**

- Demonstrating a good knowledge of current literature and applying same to practice.
- Reviewing and critically analysing available evidence-based information and literature and integrating into clinical practice.
- Monitoring and evaluating effectiveness of interventions through the use of
evidence-based practice and outcome measures, and modifying practice accordingly.

<table>
<thead>
<tr>
<th>Participating in education and development</th>
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<tbody>
<tr>
<td>• Identifying own learning needs.</td>
</tr>
<tr>
<td>• Setting appropriate learning outcomes.</td>
</tr>
<tr>
<td>• Demonstrating initiative and willingness to learn.</td>
</tr>
<tr>
<td>• Acting on and accepting guidance and/or feedback.</td>
</tr>
<tr>
<td>• Recognising the need to provide training within the department and multi-disciplinary team.</td>
</tr>
<tr>
<td>• Planning, delivering and evaluating education, training and health promotion activities within the department and multi-disciplinary team.</td>
</tr>
</tbody>
</table>

4. The mission and vision of Trinity College Dublin
The Mission Statement of Trinity College Dublin states that: *We provide a liberal environment where independence of thought is highly valued and where all are encouraged to achieve their potential*.

We commit to:

A. Encompassing an even more diverse student community, providing a distinctive education based on academic excellence and a transformative student experience.

B. Undertake research at the frontiers of disciplines, spurring on the development of new interdisciplinary fields and making a catalysing impact on local innovation and on addressing global challenges.

C. Fearlessly engage in actions that advance the cause of a pluralistic, just and sustainable society.

The overview of the strategic objectives of the most recent Strategic Plan 2014-19 place the continued value on, and promotion of, multidisciplinary excellence; diversity and inclusion; dialogue; civic action & global citizenship; responsible governance; and academic freedom.
Our vision is that as a university of consequence, we will be known for realizing student potential and for research and scholarship around the world.

**Trinity’s expectations of awardees of an honours degree**

Trinity expect students who are awarded an honours degree should be able to demonstrate a number of attributes and they are listed below as they apply to physiotherapy.

- **Comprehension**: a *comprehension* of theory, concepts, methods and processes pertaining to physiotherapy.

- **Specialist knowledge**: a *detailed knowledge* of one or more specialized areas of practice, some of it at the boundaries of *emerging practice*.

- **Application**: that they can *apply this knowledge and comprehension* in a manner that indicates a *thorough and informed approach to their practice of physiotherapy*, and have competencies typically demonstrated through devising arguments, and formulating and solving problems within the practice and profession of physiotherapy.

- **Complexity**: that they have a *mastery of a number of specialized skills and tools* which they can use to selectively to address complex problems or to conduct closely guided research.

- **Knowledge generation & translation**: that they have the ability to *devise data gathering experiments*, and to *gather and interpret relevant data* to inform *independent judgements in their practice*, and which include a reflection on the relevant social, ethical or scientific issues.

- **Interpersonal skills and self-awareness**: that they can act effectively, under the guidance of qualified practitioners, in a peer relationship within multiple, complex and heterogeneous groups.

- **Communication**: that they can communicate information, ideas, problems and solutions to both specialist and non-specialist audiences.
• **Scholarship**: that they have developed those learning skills that are necessary for them to continue to undertake further study with a high degree of autonomy.

5. **Values and commitment of the Discipline of Physiotherapy**

- Our programme will be **student-centred** and will promote the concept of the user’s voice being heard and listened to in service developments. We believe that by incorporating systematic quality assurance activities within our programme we can lead by example when it comes to taking a patient/client-centred approach to physiotherapy practice.

- We will continue to enrol high-performing students from diverse backgrounds and ensure they are supported through their studies. We will create an environment where all students feel supported both personally and academically through their four-year journey and will develop independent thinkers and learners who will also be prepared for independent and autonomous professional practice.

- We will promote **participation, and contribution** to Trinity and the wider community. We will continue to encourage the spirit of volunteering and participation in extra-curricular activities. We will promote to our students the concept of participation in the professional community.

- We will implement a Learning and Teaching Development Plan that ensures that we create the best learning environment for our students, consistent with evidence-informed adult learning strategies. Through this Plan, we will create a culture of collective ownership by the academic and practice staff as well as input from key stakeholders.

- We will continue to develop our research capacity and expertise and ensure that all aspects of the curriculum are informed by research evidence. We will encourage knowledge translation from theory and research to practice, yet nonetheless we will hold firm to the triad of inputs for evidence-based practice, and draw on both the voice and values of the patient/client and the clinical experience of the practitioner.
• We commit to developing physiotherapists who will be **life long learners**; 
active **advocates** for their patients, services and communities; **leaders** in 
outlook; and active members of the profession wherever they decide to 
practice physiotherapy.

6. The four-year degree course

In Appendix 1 there is a map that outlines the four-year degree programme. It 
explains the goals of each year and how they are linked to the development of the 
graduate attributes, the entry-to-practice competencies and the expectations of an 
honours degree holder in Trinity.

Table 3 below provides the modules covered in each year. Later sections in this 
handbook provide details of each of the module aims, learning objectives, course 
content, suggested learning resources, assessment and examination and where 
relevant marking guidelines.

**Table 3 module descriptions**

<table>
<thead>
<tr>
<th>Year</th>
<th>Module name (code in handbook)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>First year</td>
<td>Anatomy (1.1)</td>
<td>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. It is designed specifically for physiotherapy students.</td>
</tr>
<tr>
<td></td>
<td>Clinical anatomy (1.2)</td>
<td>The aim of this module is to give the student an understanding of the structure and function of the musculoskeletal system in a clinical context.</td>
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<tr>
<td></td>
<td>Physiology (1.3)</td>
<td>Because most disease states constitute disturbances of physiological processes, a knowledge base in normal and abnormal (patho) physiology is essential for all students of physiotherapy. Physiology is the science of how the body works. This involves understanding how cells operate; how they combine their functions in specific organs such as the digestive and respiratory tracts; and how these organ systems work together to maintain a stable environment inside the body. Although this module takes a systems approach, dealing with each body system in turn, it is emphasized to</td>
</tr>
</tbody>
</table>
students that it is important to remember that these systems do not work in isolation. It is therefore important that they become accustomed to thinking in terms of whole-body responses in order to be able to understand the issue involved in patient care. This sort of analysis is not always easily found in standard textbooks of physiology, which tend to deal with individual organ systems separately. The syllabus is designed to provide students with core knowledge of normal and abnormal body functions.

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
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<tbody>
<tr>
<td>Chemistry (1.4)</td>
<td>The aim of this course is to give the student an understanding of chemical concepts in relation to the human body.</td>
</tr>
<tr>
<td>Physics (1.5)</td>
<td>This module aims to provide the students with the opportunity to develop an understanding of mechanical principles and apply those principles to the human body as well as: understanding of the properties of matter and fluids; the laws relating to electromagnetic radiations and the laws of electricity; and the importance of electrical safety.</td>
</tr>
<tr>
<td>Second year Anatomy (2.1)</td>
<td>This module builds on modules 1.1 and 1.2. 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.</td>
</tr>
</tbody>
</table>
| Physiotherapy Theory & Practice (2.2)| 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 clinical skills which will be assessed prior to entering the clinical environment. It contains sub-sections as follows:  
  - Biomechanics  
  - Kinesiology  
  - Ergonomics 1  
  - Electrotherapy  
  - Exercise Therapy |
| Clinical Sciences in Physiotherapy (2.3)| 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 sub-sections of the module are:

- Pathology
- Pain
- Respiratory 1,
- Gerontology (Older people) 1
- Neurology 1
- Musculoskeletal (MSK) 1
- Orthopaedics 1
- Burns & plastics

<table>
<thead>
<tr>
<th>Professional Issues 1 (2.4)</th>
<th>This module is part of a theme – professionalism, advocacy, leadership and management – that runs through the course from second to fourth year. The overall aim of the theme is to prepare graduates with knowledge and understanding of the profession they will enter on graduation. In second year, students will focus on developing self-awareness, understanding continuous professional development and aspects of professional practice such as ethics, professional standards, communication and management of conflict.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practice Education 1 (2.5)</td>
<td>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.</td>
</tr>
<tr>
<td>Third year</td>
<td>Scientific Investigation 1 (3.1) 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.</td>
</tr>
<tr>
<td>Professional Issues 2 (3.2)</td>
<td>In the third year, the focus of this module shifts to management and evaluation of physiotherapy. The students are prepared for time and project management consistent with the needs at this stage of their education. In addition, the concept of outcome measurement is fully considered – choice, properties, evidence-based decision making. Finally quality assurance in the form of audit and clinical guidelines is</td>
</tr>
<tr>
<td>Course</td>
<td>Description</td>
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<td>--------------------------------------------</td>
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</tr>
<tr>
<td>Psychology (3.3)</td>
<td>The aim of this module is to introduce students to the discipline of health psychology and how it may be applied by physiotherapists within their practice.</td>
</tr>
</tbody>
</table>
| Prevention & management of chronic diseases (3.4) | This module builds on Clinical Sciences in Physiotherapy in second year. Common non-communicable diseases and their management including physiotherapy and rehabilitation are considered. 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. The clinical sciences studied are:  
- Respiratory 2  
- Cardiology  
- Rehabilitation of people with amputations  
- Oncology and haematology  
- Neurology 2  
- Mental health  
In addition, as part of this module students participate in inter-professional workshops. |
| Paediatrics & learning disability (3.5)     | This module enables the student to become familiar with the pathophysiology and clinical features of clinical conditions commonly encountered by the physiotherapist working with children and young adults. Specific sub-sections are:  
- Paediatric respiratory physiotherapy  
- Neurodevelopment/neurology  
- Paediatric and young adult orthopaedics and rheumatology  
- Oncology and haematology |
| Rehabilitation of bone & joint disease (3.6) | This module builds on Clinical Sciences in Physiotherapy in the Senior Freshman year. The clinical sciences that will be studied are:  
- MSK 2  
- Bone & joint rehabilitation  
In addition, physiotherapy in Women’s Health is included. |
| Practice Education 2                        | 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. Students 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.

<table>
<thead>
<tr>
<th>Fourth year</th>
<th>Scientific Investigation 2 (4.1)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This module builds on Scientific Investigation 1. Its aim is to facilitate 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.</td>
</tr>
</tbody>
</table>

| Advances in Physiotherapy Practice (4.2) | This module aims to introduce students to emerging and/or advanced physiotherapy practice. In addition it explores changes within physiotherapy professional practice and regulation in a global context. Students hear from expert and advanced practitioners who share their personal professional experiences as well as how they have developed their services. They also hear from business and social entrepreneurs. They are advised on the development of a business plan. Thereafter, they devise a business plan for a new physiotherapy service. |

| Ergonomics 2 (4.3) | Ergonomics 2 builds on the sub-section on ergonomics in 2.2 above. Students develop the knowledge and skills to ensure they comply with health & safety legislation and how it may be integrated into physiotherapy practice. They learn to complete an environmental review (work practices and analysis, risk assessment) as well as developing their knowledge on work-related MSK disorders. They are enabled to assess the effectiveness of intervention in different healthcare settings and develop manual handling training programmes. |

<p>| Professional Issues 3 (4.4) | This module continues to build on Professional Issues 1 and 2. Students consider advocacy and leadership in physiotherapy. The intent is for them to understand the |</p>
<table>
<thead>
<tr>
<th>Sports &amp; exercise medicine (4.5)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>This module continues to build on previous sub-sections of 2.2, 2.3 and 3.6 as well as developing an understanding of musculoskeletal, cardiovascular and respiratory systems during exercise in healthy subjects and in subjects with pathology building on sub-sections in 2.3 and 3.4. In addition, knowledge and skills in physical activity and exercise testing and prescription are developed further. Building on issues about adherence to exercise are considered in the content of the module. Other key components of this module are an understanding of exercise within health promotion; the role of the sports physiotherapist; and the management of injury in sport.</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Practice Education 3 (4.6)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>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 caseload, 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.</strong></td>
</tr>
</tbody>
</table>
7. Module credits and examination weighting

The European Credit Transfer and Accumulation System (ECTS) is an academic credit system based on the estimated student workload required to achieve the objectives of a module or programme of study. It is designed to enable academic recognition for periods of study, to facilitate student mobility and credit accumulation and transfer. The ECTS is the recommended credit system for higher education in Ireland and across the European Higher Education Area. The ECTS weighting for a module is a measure of the student input or workload required for that module, based on factors such as the number of contact hours, the number and length of written or verbally presented assessment exercises, class preparation and private study time, laboratory classes, examinations, clinical attendance, professional training placements, and so on as appropriate. There is no intrinsic relationship between the credit volume of a module and its level of difficulty. The European norm for full-time study over one academic year is 60 credits. One credit represents 20-25 hours estimated student input, so a ten-credit module will be designed to require 200-250 hours of student input including class contact time, assessments and examinations.

Table 4 lists the modules for each of the four years of the physiotherapy programme and their credits. In addition, the table lists the relative weighting for each module as it contributes the end of year grade. Details of all the methods of assessment and examination are listed with individual modules later in the handbook.
<table>
<thead>
<tr>
<th>Year</th>
<th>Module name</th>
<th>ECTS</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior Freshman or first year (JF)</td>
<td>Anatomy</td>
<td>15</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td>Clinical Anatomy</td>
<td>10</td>
<td>16.67%</td>
</tr>
<tr>
<td></td>
<td>Physiology</td>
<td>25</td>
<td>41.67%</td>
</tr>
<tr>
<td></td>
<td>Chemistry</td>
<td>5</td>
<td>8.33%</td>
</tr>
<tr>
<td></td>
<td>Physics</td>
<td>5</td>
<td>8.33%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>60</td>
<td>100%</td>
</tr>
<tr>
<td>Senior Freshman or second year (SF)</td>
<td>Anatomy</td>
<td>5</td>
<td>8.33%</td>
</tr>
<tr>
<td></td>
<td>Physiotherapy Theory &amp; Practice</td>
<td>20</td>
<td>33.33%</td>
</tr>
<tr>
<td></td>
<td>Clinical Sciences in Physiotherapy</td>
<td>20</td>
<td>33.33%</td>
</tr>
<tr>
<td></td>
<td>Preparation for Clinical Practice &amp; Clinical Placement</td>
<td>10</td>
<td>16.67%</td>
</tr>
<tr>
<td></td>
<td>Professional Issues</td>
<td>5</td>
<td>8.33%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>60</td>
<td>100%</td>
</tr>
<tr>
<td>Junior Sophister or third year (JS)</td>
<td>Psychology</td>
<td>5</td>
<td>8.33%</td>
</tr>
<tr>
<td></td>
<td>Rehabilitation in Bone and Joint Disease</td>
<td>10</td>
<td>16.67%</td>
</tr>
<tr>
<td></td>
<td>Chronic Disease Management</td>
<td>10</td>
<td>16.67%</td>
</tr>
<tr>
<td></td>
<td>Paediatrics &amp; Learning Disability</td>
<td>5</td>
<td>8.33%</td>
</tr>
<tr>
<td></td>
<td>Scientific Investigation</td>
<td>15</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td>Professional Issues</td>
<td>5</td>
<td>8.33%</td>
</tr>
<tr>
<td></td>
<td>Clinical Placement</td>
<td>10</td>
<td>16.67%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>60</td>
<td>100%</td>
</tr>
<tr>
<td>Senior Sophister of fourth year (SS)</td>
<td>Scientific Investigation</td>
<td>20</td>
<td>33.33%</td>
</tr>
<tr>
<td></td>
<td>Advances in Physiotherapy Practice</td>
<td>5</td>
<td>8.33%</td>
</tr>
<tr>
<td></td>
<td>Sports &amp; Exercise Medicine</td>
<td>5</td>
<td>8.33%</td>
</tr>
<tr>
<td></td>
<td>Professional Issues</td>
<td>5</td>
<td>8.33%</td>
</tr>
<tr>
<td></td>
<td>Ergonomics</td>
<td>5</td>
<td>8.33%</td>
</tr>
<tr>
<td></td>
<td>Clinical Practice</td>
<td>20</td>
<td>33.33%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>60</td>
<td>100%</td>
</tr>
</tbody>
</table>
8. Assessment and examinations
Details of the methods of assessment and examination and the pass marks are listed with each individual module later in the handbook. Students are required to pass all assessments and examination before being permitted to rise to enter the following academic year. Supplemental examinations are held during Michaelmas Term and prior to the commencement of teaching term except in the case of supplemental examinations for practical assessments in the Senior Freshman year, which must be passed prior to commencing clinical placement.
Students who fail supplemental examinations in any year will not be permitted to proceed to the second year of the course but may, in certain circumstances, be permitted to repeat the year. Students who fail Practice Education I module (clinical placement 1 May/June) will be permitted to repeat the placement at the next suitable placement allocation. Students who fail any module, apart from the clinical practice module, in the final year may repeat assessments as specified by the court of examiners in the supplemental session. In relation to the clinical practice module students who have not satisfactorily completed the required one thousand 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.

The end of year examination results will be published following each 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%).

Details on examination re-checks and appeals can be found in the section of the College Calendar on General Regulations.

9. 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. Trinity 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:

1. Copying another student’s work.
2. Enlisting another person or persons to complete an assignment on the student’s behalf.
3. Quoting directly, without acknowledgement, from books, articles or other sources, either in printed, recorded or electronic format.
4. Paraphrasing, without acknowledgement, the writings of other authors.

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

(i) Fail to distinguish between their own ideas and those of others.
(ii) Fail to take proper notes during preliminary research and therefore lose track of the sources from which the notes were drawn.
(iii) 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.
(iv) 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 product of collusion with other students may be considered to be plagiarism. 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 or module co-ordinators.

If plagiarism as referred to above is suspected, in the first instance, the Head of School, or designate, will write to the student, and the student’s tutor advising them of the concerns raised and inviting them to attend an informal meeting with the Head of School, or designate. The Director of Teaching and Learning (undergraduate) may
also attend the meeting as appropriate. As an alternative to their tutor, students may
nominate a representative from the Students’ Union to accompany them to the
meeting) and the lecturer concerned, in order to put their suspicions to the student
and give the student the opportunity to respond. The student will be requested to
respond in writing stating his/her agreement to attend such a meeting and confirming
on which of the suggested dates and times it will be possible for the student to
attend. If the student does not in this manner agree to attend such a meeting, the
head of school, or designate, may refer the case directly to the Junior Dean, who will
interview the student and may implement the procedures as referred to under
Conduct and College Regulations.

Should the Head of School, or designate, forms the view that plagiarism has taken
place, he/she must decide if the offence can be dealt with under the summary
procedure set out below. In order for this summary procedure to be followed, all
parties attending the informal meeting as noted above must state their agreement in
writing to the head of school, or designate. If the facts of the case are in dispute, or if
the Head of School, or designate, feels that the penalties provided for under the
summary procedure below are inappropriate given the circumstances of the case,
he/she will refer the case directly to the Junior Dean, who will interview the student
and may implement the procedures as referred to under Conduct and College
Regulations.

If the offence can be dealt with under the summary procedure, the Head of School, or
designate, will recommend to the Senior Lecturer one of the following penalties:
(a) that the piece of work in question receives a reduced mark, or a mark of zero; or
(b) if satisfactory completion of the piece of work is deemed essential for the student
to rise with his/her year or to proceed to the award of a degree, the student may be
required to re-submit the work. However the student may not receive more than the
minimum pass mark applicable to the piece of work on satisfactory re-submission.
Provided that the appropriate procedure has been followed and all parties described
above are in agreement with the proposed penalty, the Senior Lecturer may approve
the penalty and notify the Junior Dean accordingly. The Junior Dean may
nevertheless implement the procedures as referred to under Conduct and College
Regulations.
10. 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.
11. Junior Freshman year

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 1: Anatomy of the limbs, back and thorax

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. It is intended for students of JF Physiotherapy, for whom it is mandatory.

Module Co-ordinators 2015-16: Ms Aisling O’Malley Aiomalle@tcd.ie & Dr Nicholas Mahony NJmahony@tcd.ie

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

1.1.1 Recognise, describe and classify bones and joints of the limbs and back.
1.1.2 Recognise and describe the radiologic features of the limbs and back.
1.1.3 Recognise and describe the gross structure and functions of nerves and muscles.
1.1.4 Recognise and describe the blood supply and lymphatic drainage of the limbs.
1.1.5 Apply anatomical knowledge to explain the pathogenesis and
natural history of common clinical disorders of the musculoskeletal system.

1.1.6 Recognise and describe the bones and joints of the thorax.

1.1.7 Recognise and describe the radiologic features of the thorax and its organs.

1.1.8 Recognise and describe the respiratory muscles and their associated nerves.

1.1.9 Recognise and describe the gross and microscopic structure and function of the heart, lungs.

1.1.10 Recognise, describe and classify bones and joints of the limbs and back.

1.1.11 Recognise and describe the radiologic features of the limbs and back.

1.1.12 Apply anatomical knowledge to explain the pathogenesis and natural history of common clinical disorders of the thorax.

1.1.13 Recognise and describe the respiratory muscles and their associated nerves.

1.1.14 Recognise and describe the gross and microscopic structure and function of the heart, lungs and oesophagus.

Module 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

Examples of learning resources

1. **Textbooks:** A main textbook is no longer required as a comprehensive set of notes is provided on Blackboard, and anatomy atlases are available for use in the dissection theatre.

   For reference or extra reading in the library we would recommend the following:
   - *Clinically Oriented Anatomy:* Moore and Dalley (Lippincott, Williams & Wilkins)
   - *Anatomy and Human Movement:* Palastanga Field Soames (Elsevier)
   - Reference: *Last’s Anatomy: Sinnatamby: Churchill Livingstone*

2. **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

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1 Please 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.
information about anatomy. It does have some CT and MR datasets under the anatomical regions. [http://www.anatomy.tv.elib.tcd.ie/newhome.aspx](http://www.anatomy.tv.elib.tcd.ie/newhome.aspx)

**Methods of teaching and learning**
Teaching delivery is primarily through lectures and practical classes, in which all students are required to actively participate. **Attendance is compulsory for all classes.**

**Module assessment**
Assessment is by in-course assessment in Michaelmas and Hilary Terms (Station Based Practical [SBP] Examination), and annual examinations in Trinity Term (examination 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 examination paper consists of multiple-choice questions and SAQ sections, with a total time of two hours. The end of year SBP is a five-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.

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 co-ordinator’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.
Module 2: Clinical Anatomy

Aim: The aim of this module is to give the student an understanding of the structure and function of the musculoskeletal system in a clinical context

Module Co-ordinator 2015-16: Dr. Marese Cooney mcooney@tcd.ie

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

1.2.1 Demonstrate an understanding of anatomical structure and clinical function.
1.2.2 Demonstrate an understanding of the ranges and types of movement available at joints.
1.2.3 Demonstrate an understanding of the relationship between the nervous system and the musculoskeletal structures (role of innervation).
1.2.4 Demonstrate the practical skills of observation and testing of movement.
1.2.5 Demonstrate the ability to analyse human movement from a functional perspective and link it to anatomical knowledge.

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

- Use universally recognised anatomical and movement descriptive terminology.
- Identify bony landmarks and joint lines.
- Conduct basic a neurological examination.
- Demonstrate normal range of movement, resisted movement and passive movement at peripheral and vertebral joints.
- Identify and palpate individual muscles and muscles group for functional ability.
- Identify and palpate as required, the course of the major peripheral nerve
in the limbs.

- Assess individual muscles and muscles group for functional ability. Assess individual muscles and muscles group in positions where gravity is counterbalanced.

- Identify and palpate bony landmarks 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.

- Identify and palpate individual muscles and muscles group for functional ability.

- Analyse functional human activities of daily living such as the following ADLS: 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.

**Module content:**


- **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 (AC) 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 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.

• 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 fifth 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.

• Testing individual muscles and muscle groups using the Oxford scale and position patients to test muscles that are unable to move against gravity and their own weight.

• Analysis of functional activities.

• Student will be expected to define the movements taking place at selected joints and describe the muscles groups working, the type of muscle work and range that the muscle group(s) is working in.

**Examples of learning 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 has some CT and MR datasets under the anatomical regions. [http://www.anatomy.tv.elib.tcd.ie/newhome.aspx](http://www.anatomy.tv.elib.tcd.ie/newhome.aspx)

**Methods of Teaching and Learning**

Clinical Anatomy is a practical module. As with all first year modules in Trinity College, attendance is mandatory. Teaching delivery is primarily practical classes, in which all students are required to actively participate. Student participation takes the form of learning with fellow students as models. Students are required to be appropriately dressed for this purpose. This is usually in the form of t-shirt and shorts as required.
Module assessment
Two practical examinations in Clinical Anatomy are held during the year: at end of Michaelmas and Hilary term. Each mark is worth 50% of the module. An overall pass mark of 50% is required to complete the module

Marking guideline
Below is an example of a marking guideline used for this module

<table>
<thead>
<tr>
<th>Clinical anatomy practical examination</th>
<th>Semester 2</th>
<th>Date</th>
<th>Candidate’s name</th>
<th>Total mark /50</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Demonstrate (i) the actions and (ii) state a function of ONE muscle in the upper limb/trunk</td>
<td></td>
<td></td>
<td></td>
<td>/4</td>
</tr>
<tr>
<td>2. Demonstrate (i) the actions and (ii) State a function of TWO muscles in the lower limb/trunk</td>
<td></td>
<td></td>
<td></td>
<td>/4</td>
</tr>
<tr>
<td>3. Position the following ONE upper limb/trunk muscles so that it is tested (i) with gravity counterbalanced and (ii) against gravity</td>
<td></td>
<td></td>
<td></td>
<td>/5</td>
</tr>
<tr>
<td>4. Position the following ONE lower limb/trunk muscles so that it is tested (i) with gravity counterbalanced and (ii) against gravity</td>
<td></td>
<td></td>
<td></td>
<td>/5</td>
</tr>
<tr>
<td>5. Analyse an upper limb activity/or head neck or trunk activity</td>
<td></td>
<td></td>
<td></td>
<td>/15</td>
</tr>
<tr>
<td>6. Analyse a lower limb activity/or head neck or trunk activity</td>
<td></td>
<td></td>
<td></td>
<td>/15</td>
</tr>
<tr>
<td>7. Overall handling / instruction of model</td>
<td></td>
<td></td>
<td></td>
<td>/2</td>
</tr>
</tbody>
</table>

Examiner:
### Supplemental clinical anatomy practical examination

<table>
<thead>
<tr>
<th>Candidate’s name</th>
<th>Total mark /100</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.</strong> Identify two bony points/joint line</td>
<td>/3</td>
</tr>
</tbody>
</table>
| **2.** You will be asked to demonstrate three 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  
   a. an upper limb joint/head neck trunk  
   b. a lower limb joint/head neck trunk | **Upper limb /9**  
**Lower limb /9** |
| **3.** Test the stability/integrity of the _____ joint.  
You will be marked on patient position, position of hands, accuracy in execution of task | /5 |
| **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  
a. with gravity counter balanced and  
b. against gravity | **With gravity /4**  
**Against gravity /4** |
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>
| 11. Demonstrate the accessory movements in: a. an upper limb joint b. a lower limb joint | UL /5  
LL /5 |
| 12. Analyse an upper limb / lower limb / neck/trunk activity | /25 |

Examiner:

Signature:
Module 3: Physiology

**Aim:** Physiology is the science of how the body works. This involves understanding how cells operate, how they combine their functions in specific organs such as the digestive and respiratory tracts, and how these organ systems work together to maintain a stable environment inside the body. Physiology is the functional basis of medicine, because most disease states constitute disturbances of physiological processes. A knowledge base in normal and abnormal (patho) physiology is therefore essential for all students who will pursue careers in clinical health care. Although this course takes a systems approach, dealing with each body system in turn, it is important to remember that these systems do not work in isolation; a change in one system may lead to changes in other systems. It is therefore important that you become accustomed to thinking in terms of whole-body responses in order to be able to understand the issue involved in patient care. This sort of analysis is not always easily found in standard textbooks of physiology, which tend to deal with individual organ systems separately. The syllabus is designed to provide you with a core of knowledge of normal and abnormal body function.

**Departmental staff involved in this module in 2015-16 are:**

- Prof Veronica Campbell (module co-ordinator) - vacmpbl@tcd.ie
- Dr Áine Kelly - aikelly@tcd.ie
- Prof Marina Lynch – lynchma@tcd.ie
- Prof Kumlesh Dev - devk@tcd.ie
- Dr Mikel Egāna - megana@tcd.ie
- Dr Daniel Ulrich – ulrichd@tcd.ie
- Dr Alice Witney - awitney@tcd.ie

For help or advice about specific lecture topics, talk to the lecturer involved. For general advice about the course talk to Professor Campbell. For advice about laboratory classes contact Dr Noreen Boyle (boylen2@tcd.ie)

**Learning objectives:** On successful completion of this module the student should be able to:
1.3.1 Recognize the structural characteristics of the basic mammalian cell types.

1.3.2 Be able to recall the functional roles of these cell types and how they interact in the various organ systems.

1.3.3 Be able to recall the mechanisms by which the different organ systems are controlled in the normal human body.

1.3.4 Be able to recall the functional interrelationships that normally exist between the organ systems during daily life.

1.3.5 Know typical normal values for those physiological variables that are used commonly in clinical practice

Module content:

- Block 1: Organisation of the body
- Block 2: Neuromusculoskeletal systems
- Block 3: Endocrine control
- Block 4: Respiration
- Block 5 Cardiovascular system
- Block 6: Metabolism & digestion
- Block 7: Genitourinary system

A more detailed week-by-week breakdown of the content covered in each lecture and laboratory session is provided by the Dept. of Physiology at the start of the academic year.

Examples of learning resources


The Department of Physiology website: [http://www.medicine.tcd.ie/physiology/undergraduate/human_form_function/](http://www.medicine.tcd.ie/physiology/undergraduate/human_form_function/) will provide lecture notes, a list of weekly learning objectives and revision questions.

- Department of Physiology handbook.
Module assessment

There are three components of assessment. 10% of the total mark is based on a multiple choice question (MCQ) paper (30 questions), held in Week 12 of Michaelmas Term.

75% of the total mark is allocated to a three-hour examination paper held during the annual examination period in Trinity Term that covers the entire year's work.

The remaining 15% of the total mark is allocated to the week-by-week assessments related to the laboratory classes.

The format of the Michaelmas Term examination paper is as follows:

- a multiple choice section consisting of 30 compulsory MCQs. This is a one-hour examination.

The format of the annual examination paper is as follows:

- A written section of ten compulsory short-answer questions. This section is allocated two-thirds of time and is worth two-thirds of the marks.
- A MCQ section consisting of 30 compulsory MCQs. This section is allocated one-third of time and is worth one-third of the marks.
- This is a three-hour examination.
Module 4: Chemistry

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

Module Co-ordinator 2015-16: Noelle Scully, Co-ordinator of Freshman Teaching, pnscully@tcd.ie

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

1.4.1 The student will be able to demonstrate an understanding of basic chemical concepts in relation to the physiology of the body.

Module 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 learning resource


Module evaluation

One three-hour paper in the annual examination period in Trinity Term. There are two sections on the paper: section A concerns general physical and inorganic chemistry, and section B relates to organic chemistry. There are ten questions in total, with five questions in Section A and five questions in Section B. Students must answer five questions, at least two from each section. The pass mark for Chemistry and Physics is 40%.
Module 5: Physics

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

Module Co-ordinator 2015-16: Shaun Bloomfield, bloomfis@tcd.ie

Overall learning objectives: On successful completion of this module the student should be able to demonstrate:

1.5.1 An understanding of mechanical principles and apply those principles to the human body.

1.5.2 An understanding of the properties of matter and fluids.

1.5.3 An understanding of the laws relating to electromagnetic radiations.

1.5.4 An understanding of the laws of electricity and the importance of electrical safety.

Module content
For the purpose of timetabling, these are listed as two modules but are assessed as one module in one exam covering the work covered in both terms.

Michaelmas Term (September-December)
Biomechanics

- Units, scalars, vectors, rectangular components, addition of vectors
- Equations of linear motion, acceleration, Newton’s Laws
- Moments (torque), conditions for equilibrium
- Application to the human body
- Simple machines (levers, pulleys)

Hilary Term (January-April)
Properties of Solids & Fluids

- Solids: stress, strain, Hooke’s Law, Young’s Modulus
- Application to human bone
- Fluids: density, pressure,
• Pascal’s Law, Archimedes Principle
• Measurement and calculation of blood pressure
• Bernoulli’s Principle
• Venturi Tube
• Viscosity,
• Poiseuille’s Law
• Application to blood flow
• Surface tension,
• Laplace Law, lungs and breathing

Optics
• Reflection, refraction, lenses, total internal reflection, optical fibres
• Structure of the eye, defects of the eye, correction of defects
• Optical instruments
• Electromagnetic waves, UV, IR
• Illumination, Inverse Square Law

Electricity
• Electrostatics, Coulomb’s Law
• Electric field, potential difference, capacitance, resistors
• Ohm’s Law,
• Kirchoff’s Laws, simple circuits
• Electric shock hazards, safety procedures
• Electric currents in the human body
• Defibrillators, pacemakers

Recommended learning resources
• 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
Module assessment

At the annual examination time in Trinity Term, there is one three-hour paper. There are two sections to this paper, each consisting of five questions. Three questions are to be answered from each section.

The pass mark for Chemistry and Physics is 40%.
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. 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.

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 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 ten-minute viva voce examination with a member of staff from the Department of Anatomy.

The Question Paper and Practical Examination are each worth 50%. Overall Weighting of Supplemental exam will be: Practical Examination 50% and Question Paper 50%.

As in the Annual Examination, borderline students achieving an aggregate mark of <50% in the supplemental assessment, and at the module co-ordinator'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 with 100% of marks being allocated to this paper.
• *Physiology Viva*: Candidates may be required to attend a Viva Voce examination if their marks fall into a borderline pass/fail category.

**Clinical Anatomy**
An amalgamation of the practical exams in is the format for any supplemental examination. This is held in the Supplemental Period.
12. Senior Freshman year

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

The modules in the second year are:

- Anatomy (5 ECTS)
- Clinical Sciences in Physiotherapy which includes Pathology, Orthopaedics, Musculoskeletal I and Respiratory I, Gerontology, Pain, Burns and Plastics (20 ECTS)
- Physiotherapy Theory and Practice which includes Electrotherapy, Ergonomics I, Exercise Therapy, Biomechanics and Kinesiology (20 ECTS);
- Professional Issues I (5 ECTS)
- Practice Education I: (10 ECTS)

Module 1: Anatomy of the head, neck and thorax

Aim: 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.

Module Co-ordinators 2015-16: Dr Paul Tierney, ptierney@tcd.ie

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

Head and Neck

2.1.1 Recognise, describe and classify bones and joints of the head and neck.
2.1.2 Recognise and describe the gross structure and functions of its muscles and nerves of the region.
2.1.3 Recognise and describe its visceral and endocrine structures.
2.1.4 Recognise and describe the organs of the special senses.
2.1.5 Recognise and describe its blood supply and lymphatic drainage.
2.1.6 Recognise and describe the radiologic features of the head and neck.
2.1.7 Describe the development of the head and neck and related congenital abnormalities.

2.1.8 Apply anatomical knowledge to explain the pathogenesis and natural history of common clinical disorders of the region.

**Neuroanatomy**

2.1.9 Recognise and describe the major subdivisions of the central nervous system (CNS).

2.1.10 Recognise and describe the ventricular system and the production, circulation, absorption and role of cerebrospinal fluid.

2.1.11 Recognise and describe the structures associated with sensory and motor systems and their connections.

2.1.12 Recognise and describe the structures associated with language and their connections.

2.1.13 Recognise and describe the limbic system and its connections.

2.1.14 Recognise and classify cranial and spinal nerves and their connections.

2.1.15 Recognise and describe the blood supply of the CNS.

2.1.16 Describe the development of the CNS and related congenital abnormalities.

2.1.17 Apply anatomical knowledge to explain the normal function of the CNS.

2.1.18 Apply anatomical knowledge to explain the pathogenesis and natural history of common clinical disorders of the CNS.

**Learning resources**

**Key texts:** a main textbook, neuroanatomy textbook, anatomy atlas and embryology textbook from the following:

**Main textbooks**

- *Gray’s Anatomy for Students:* Drake, Vogl and Mitchell: Elsevier
- *Clinical Anatomy:* Monkhouse: Churchill Livinstone
- *Last’s Anatomy:* Sinnatamby: Churchill Livingstone
Neuroanatomy Textbooks


Atlases


Embryology

- *Langman’s Medical Embryology*: Sadler: Williams & Wilkins

Reference texts

- *Gray’s Anatomy*: Williams et al: Longman
- *Essentials of Human Embryology*: Larsen

Radiographic Images

- *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
- Blackboard Learn is used as a teaching resource. Among other useful features it contains the detailed content of each lecture and practical class.

Module assessment

Assessment is by in-course assessment - station based practical format [SBP] during Michaelmas Term and Hilary; and by **end of module annual examinations** in Trinity Term - examination paper and 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 examination paper will consist of multiple choice question and short answer question sections, with a total time of two hours.
The end of module SBP is a five-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

<table>
<thead>
<tr>
<th>SBP Examination 1</th>
<th>Head and Neck</th>
<th>Michaelmas</th>
<th>10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBP Examination 2</td>
<td>Neuroanatomy</td>
<td>Hilary</td>
<td>10%</td>
</tr>
<tr>
<td>Question Paper</td>
<td>All</td>
<td>Trinity</td>
<td>40%</td>
</tr>
<tr>
<td>SBP Examination</td>
<td>All</td>
<td>Trinity</td>
<td>40%</td>
</tr>
</tbody>
</table>

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 co-ordinator’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 one and Year two of ≥ 75% in anatomy, and at the Module Co-ordinator’s discretion, will be awarded a Distinction in Anatomy.
Module 2: Physiotherapy Theory & Practice

**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.

**Module Co-ordinators 2015-16:** Cillin Condon, cillin.condon@tcd.ie

**Overall learning objectives:** On successful completion of this module the student should be able to:

2.2.1 Describe the principles of biomechanics as they apply to the human body.
2.2.2 Explain how the different tissues of the body respond to biomechanical stress and loads.
2.2.3 Integrate their knowledge of forces on body segments to describe the role of muscle and anatomical factors in normal and abnormal movement.
2.2.4 Demonstrate an understanding of the assessment of muscle strength and strength training programmes.
2.2.5 Demonstrate how to assess factors that affect posture and gait and other human movement patterns.
2.2.6 Undertake a risk assessment of patient handling activities according to the best available evidence.
2.2.7 Undertake a risk assessment of manual handling activities according to the best available evidence.
2.2.8 Demonstrate sound ergonomic manual handling and patient handling activities.
2.2.9 Describe the physiological & therapeutic uses and indications / contra-indications of electrotherapeutic modalities.
2.2.10 Demonstrate an ability to select and apply appropriate modality/ies safely and effectively.
2.2.11 Understand the principles in prescribing exercise therapy.
2.2.12 Demonstrate an understanding of the cardiovascular risk factors associated with inactivity.
2.2.13 Demonstrate an understanding of the health consequences of inactivity.
Specific learning outcomes: On successful completion of this module the student should be able to:

**Biomechanics**
2.2.14.1 Demonstrate an understanding of biomechanics terminology.
2.2.14.2 Describe how body tissues react to stress and strain.
2.2.14.3 Describe theories of motor control and motor learning as related to development of learned movement.
2.2.14.4 Understand the biomechanics of muscle, tendon and ligaments (connective tissue) and neural tissue.
2.2.14.5 Understand the biomechanics of the spine.
2.2.14.6 Understand measurement in biomechanics.

**Kinesiology**
2.2.15.1 Understand methods of analysing functional human movement.
2.2.15.2 Understand movement and rehabilitation techniques (passive, accessory, active and active assisted movements).
2.2.15.3 Demonstrate how to assess balance & proprioception and other sensory inputs required for maintaining body control and movement.
2.2.15.4 Demonstrate an understanding of the changes in posture throughout life stages.
2.2.15.5 Demonstrate an understanding of the changes in posture throughout life stages.
2.2.15.6 Demonstrate the ability to carry out the assessment of posture.
2.2.15.7 Demonstrate the principles of gait assessment.
2.2.15.8 Demonstrate the prescription of the safe use of Mobility Aids (crutches, frames, wheel-chairs, sticks).
Ergonomics I
2.2.16.1. Demonstrate an understanding of the importance of back care and prevention of back injury.
2.2.16.2. Demonstrate an understanding of current relevant health and safety legislation.
2.2.16.3. Demonstrate an understanding of risk assessment.
2.2.16.4. Demonstrate the ability to undertake a risk assessment.
2.2.16.5. Demonstrate knowledge of spinal anatomy and biomechanics.
2.2.16.6. Demonstrate an understanding of the general principles of lifting and moving and handling of patients.
2.2.16.7. Demonstrate manual handling and moving and handling techniques.
2.2.16.8. Demonstrate the use of moving and handling aids and devices.

Electrotherapy
2.2.17.1 Demonstrate an understanding of the mechanism of production of the various electrotherapeutic modalities.
2.2.17.2 Describe the physiological benefits of the various modalities.
2.2.17.3 Demonstrate knowledge and justify the contraindications to the various modalities.
2.2.17.4 Demonstrate an awareness of the requirements in relation to patient understanding, patient consent and documentation.
2.2.17.5 Justify the therapeutic uses of the various modalities.
2.2.17.6 Demonstrate competence in the safe selection, administration and progression of treatment.

Exercise Therapy
2.2.18.1 Adaptations to exercise – cardiovascular responses, respiratory system responses, musculoskeletal response.
2.2.18.2 Measurement of energy expenditure and fatigue, monitoring intensity of exercise.
2.2.18.3 Assessment of fitness including body composition, flexibility, cardiovascular endurance, muscle strength, balance and proprioception.
2.2.18.4 ACSM recommendations and components of fitness.
2.2.18.5 Exercise prescription - *FITT principles, role of warm up/ cool down, group teaching & safety. Mode, frequency, duration, intensity.*

2.2.18.6 Exercise training.

2.2.18.7 Principles of training- *individuality, specificity, reversibility, overload, periodisation.*

2.2.18.8 Anaerobic and power training – *interval training, continuous training, circuit.*

2.2.18.9 Adaptations to resistance training.

2.2.18.10 Adaptations to anaerobic and aerobic training.

2.2.18.11 Demonstrate an understanding of the factors affecting muscle strength.

2.2.18.12 Demonstrate an understanding of the assessment of muscle strength.

2.2.18.13 Demonstrate an understanding of the principles of strength training programs.

2.2.18.14 Demonstrate the ability to assess muscle strength.

2.2.18.15 Physical activity and cardiovascular disease.

2.2.18.16 Prevention of obesity, diabetes and cardiovascular disease.

2.2.18.17 Primary and secondary prevention of cardiovascular disease.

**Module learning resources**

All resources for Ergonomics 1 and Exercise Therapy (2.2.18.11 - 2.2.18.14) are provided during the course and are available on Blackboard. All equipment for coursework and self-directed learning/practice is also available.

**Suggested texts**

**Biomechanics & kinesiology**


Ergonomics I


- 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.hsa.ie)

- [http://www.hse.gov.uk](http://www.hse.gov.uk)

Electrotherapy


- *Electrotherapy on the web*.


Exercise Therapy


Module evaluation and marking guidelines

The module will be assessed via two methods.

- A practical examination at the end of the module. There are four stations or objective structured clinical examination stations. The student will be assessed
in the practical element of ergonomics, muscle strength testing, electrotherapy, and biomechanics & kinesiology. The students must demonstrate that they are capable of successfully carrying out the required skills. In the case of ergonomics they must also demonstrate a satisfactory level of safety.

- All stations must be passed before starting clinical placement.
- An end of the year a written examination is held in the annual examination period in Trinity Term. It contains six questions, five of which 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 and Ergonomics I.

Practical exams account for 40% of the year-end mark, and the written examination accounts for the remaining 60%. The pass mark for practical examinations is 50% and the pass mark for written examinations is 40%.

**Sample of SF OSCE Practical Examinations for the Physiotherapy Theory & Practice module**

<table>
<thead>
<tr>
<th>Sample station: Muscle strengthening</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using the model, show three progressive strengthening exercises for the following:</td>
</tr>
<tr>
<td>(a) Deltoid</td>
</tr>
<tr>
<td>(b) Quadriceps</td>
</tr>
<tr>
<td>Scoring guideline</td>
</tr>
<tr>
<td>Explanation to the patient (model)</td>
</tr>
<tr>
<td>Position of the patient</td>
</tr>
<tr>
<td>Location of resistance</td>
</tr>
<tr>
<td>Handling skills of student PT</td>
</tr>
<tr>
<td>Instruction to the patient</td>
</tr>
</tbody>
</table>
Sample station: Crutch walking

Instruction: Demonstrate how you would teach/explain to this patient how to walk up the stairs using crutches.

<table>
<thead>
<tr>
<th>Patient safety and comfort</th>
<th>/2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Able to carry out task</td>
<td>/5</td>
</tr>
<tr>
<td>Demonstrates or explains the rationale or other factors that are relevant to task</td>
<td>/3</td>
</tr>
<tr>
<td><strong>Total score</strong> /10</td>
<td></td>
</tr>
</tbody>
</table>

Guidelines on Awarding Grades for Exam Answers in the Freshman Years

<table>
<thead>
<tr>
<th>Class</th>
<th>Mark Range</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>70-100</td>
<td>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.</td>
</tr>
<tr>
<td>II-i</td>
<td>60-69</td>
<td>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.</td>
</tr>
<tr>
<td>II-ii</td>
<td>50-59</td>
<td>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.</td>
</tr>
<tr>
<td>III</td>
<td>40-49</td>
<td>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.</td>
</tr>
<tr>
<td>F-1</td>
<td>35-39</td>
<td>Basic understanding and knowledge of subject is very poor. While some items of sound material may be presented the answer is inadequate.</td>
</tr>
<tr>
<td>F-2</td>
<td>30-34</td>
<td>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.</td>
</tr>
<tr>
<td>F-3</td>
<td>0-29</td>
<td>Shows almost no knowledge of subject. Errors are serious and absurd. Trivial response to the ‘wrong’ question arising from an error of understanding.</td>
</tr>
</tbody>
</table>
Module 3: Clinical Sciences in Physiotherapy

Aim: The aim of this module is to introduce the student to the clinical conditions managed by physiotherapists. 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:

- Pathology
- Respiratory I
- Gerontology
- Neurology I
- Musculoskeletal I
- Orthopaedics
- Pain
- Burns & plastics

Module Co-ordinator 2015-16: Sara Dockrell, sara.dockrell@tcd.ie

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

2.3.1 Describe the pathophysiology and clinical features of conditions commonly encountered by physiotherapists.
2.3.2 Perform an appropriate assessment and design a management programme as part of the clinical reasoning process for all conditions.
2.3.3 Justify selection of treatment as a reflection of current evidence.
2.3.4 Prescribe exercise in the management of conditions commonly encountered by physiotherapists.
2.3.5 Describe the pathophysiology and clinical features of conditions commonly encountered by physiotherapists.
2.3.6 Perform an appropriate assessment and design a management programme as part of the clinical reasoning process for all conditions.
2.3.7 Demonstrate a problem solving approach in assessment and management of conditions and populations.

2.3.8 Demonstrate an understanding of the specific needs of different populations and conditions and be able to apply condition-specific physiotherapeutic assessment utilising standardised outcome measures.

2.3.9 Demonstrate a critical understanding of the concepts, methods and skills used in physiotherapeutic management of conditions and populations.

2.3.3 Justify selection of treatment as a reflection of current evidence.

2.3.10 Prescribe exercise in the management of conditions commonly encountered by physiotherapists.

2.3.11 Demonstrate an awareness of the role of the physiotherapist and the role of other health professionals in the management of conditions and populations.

**Specific learning objectives: On successful completion of this module the student should be able to:**

**2.3.6 Pathology**

2.3.6.1 Define terms used in pathology.

2.3.6.2 Demonstrate an awareness of pathogenic and non-pathogenic organisms.

2.3.6.3 Demonstrate an understanding of immune mechanisms.

2.3.6.4 Describe the process of inflammation, healing and repair.

2.3.6.5 Discuss factors which affect healing and repair.

2.3.6.6 Discuss the causes, pathological process and effects of circulatory disorders.

2.3.6.7 Describe the classification of tumours and differences between benign and malignant tumours.

2.3.6.8 Describe the causes and processes of atrophy, hypertrophy and hyperplasia.

**2.3.6 Gerontology**

2.3.6.1 Explain the factors that influence the attitudes of the individual and society to ageing and growing older.

2.3.6.2 Understand what is meant by ageism, its prevalence, how it may influence decision-making about older people.

2.3.6.3 Be familiar with changing global demographic trends in ageing.

2.3.6.4 Understand how body systems change with age and how this may impact on
physiotherapy assessment and intervention.
2.3.6.5 Be familiar with evidence-based exercise interventions, with a particular focus on balance and mobility disorders in later life.

2.3.7 Musculoskeletal I
2.3.7.1 Describe and discuss the aetiology, pathophysiology and clinical features of common musculoskeletal conditions.
2.3.7.2 Perform an appropriate subjective examination of the peripheral joints.
2.3.7.3 Demonstrate the basis of clinical reasoning in respect of a subjective examination.
2.3.7.4 Perform an appropriate physical examination of the peripheral joints.
2.3.7.5 Demonstrate the basis of clinical reasoning in respect of an objective assessment.
2.3.7.6 Justify the selection of physiotherapeutic techniques using sound clinical reasoning processes.
2.3.7.7 Implement a management programme of a patient with peripheral joint dysfunction.
2.3.7.8 Describe and discuss the multidisciplinary and physiotherapeutic management of common musculoskeletal conditions.
2.3.7.9 Prescribe exercise in the management of peripheral musculoskeletal conditions.

2.3.8 Burn Injury and Rehabilitation
2.3.8.1 Describe the anatomy and physiology of the skin and alterations associated with different depths of burn injury.
2.3.8.2 Describe pathology, physiology and sequelae of burn injury.
2.3.8.3 Describe the physiotherapeutic assessment of a patient with burn injury.
2.3.8.4 Explain the treatment for a patient with various depths and extent of burn injury in relation to medical surgical and rehabilitation management.
2.3.8.5 Describe the consequences and physiotherapeutic management of respiratory involvement in patients with burn injury.
2.3.8.6 Describe the consequences of contracture and the treatment of this condition.
2.3.8.7 List the guidelines for the management of hypertrophic scars.
2.3.8.8 Be able to advise the patient on the type of care necessary after burn healing.
2.3.8.9 Analyse and interpret data, formulate realistic goals and outcomes, develop a plan of care when presented with a clinical case study.

2.3.9 Pain
2.3.9.1 Differentiate between acute and chronic pain and understand the principles of treatment of each.
2.3.9.2 Have an understanding of pain theory and how it has evolved to current understanding.
2.3.9.3 Have insight into the biological psychological and social aspects of pain experience.
2.3.9.4 Understand unique features of pain at different life stages.
2.3.9.5 Describe some methods of pain assessment and measurement. Describe the types of pain evaluation commonly used.
2.3.9.6 Understand potential role for electro-physical agents and manual therapy in pain management.
2.3.9.7 Be aware of intervention strategies that will promote active client involvement in pain management programme.
2.3.9.8 Have an understanding of the sources and causes of pain associated with cancer.
2.3.9.9 Be able to identify different classes of analgesic drugs and understand possible side effects.
2.3.9.10 Understand definitions of placebo and placebo effects.
2.3.9.11 Understand the interrelationship between the motor system and the nociceptive system.

2.3.10 Respiratory I
2.3.10. Understand the signs and symptoms of respiratory disease.
2.3.10. Describe the pathophysiology of and management of commonly encountered chronic obstructive and restrictive respiratory diseases.
2.3.10. Be able to undertake a subjective and objective respiratory assessment.
2.3.10. Be able to demonstrate and apply mucociliary clearance techniques.
2.3.10. Be able to demonstrate and apply relevant respiratory manual techniques and the active cycle of breathing technique.
2.3.10. Understand the effect of general surgery on the pulmonary system.
2.3.10. Demonstrate a broad understanding of pain relief in respiratory medicine.

2.3.11 Neurology
2.3.11.1 Discuss the aetiology, pathophysiology and clinical features of commonly encountered neurological conditions.
2.3.11.2 Discuss the medical management of the commonly encountered neurological conditions.
2.3.11.3 Discuss the principles of neuroplasticity and demonstrate an understanding of the elements influencing this process.
2.3.11.4 Discuss the different theoretical approaches to neurological rehabilitation with reference to the best available evidence.
2.3.11.4 Justify the principles of rehabilitation of neurological diseases by the physiotherapist.

2.3.12 Orthopaedics
2.3.12.1 Demonstrate an understanding of the properties, structure and healing of bone.
2.3.12.2 Have an understanding of the management commonly encountered traumatic orthopaedic conditions, including appropriate rehabilitation.
2.3.12.3 Have an understanding of elective orthopaedic procedures and their rehabilitation requirements.
2.3.12.4 Discuss the possible complications associated with both traumatic and elective orthopaedic conditions.
2.3.12.5 Describe and discuss the aetiology, pathophysiology and clinical features of common congenital or developmental orthopaedic conditions and their management.
2.3.12.6 Set goals and prescribe exercise in the management of orthopaedic conditions.

Module Learning resources

All module learning resources will be provided by the lecturers teaching on the module.
Module evaluation and marking guideline
Assessment is in written examination format in the annual examination period in Trinity Term (80%), and practical assessments held prior to students going on their first clinical placement (20%). The **pass mark** for the practical examinations is **50%**. The marking guideline is provided in the Physiotherapy Theory and Practice module.

The practical assessments will be in the areas of musculoskeletal and respiratory physiotherapy and will be held at the end of Michaelmas Term. An example of the musculoskeletal assessment is outlined below. The musculoskeletal assessment is a short five-to-ten minute case-based assessment. Students select a card with a problem describe and are expected to answer the problem using a model (another student). The case-based problems are designed to elicit the practical application of common physiotherapy assessment techniques or treatment and student are expected to describe or explain their actions as well.

**Sample question:** A 40 year old competitive sailor slipped on a wet dock and sustained an avulsion fracture of his fifth metatarsal bone 12 weeks ago. He is now walking full weight bearing with a limp.

- Demonstrate how you would evaluate the mobility of the affected area and any other relevant structures.
- For examiner suggested question:
  Can you suggest any exercises/intervention that might suitable at this stage?

<table>
<thead>
<tr>
<th>Marking guideline</th>
<th>Pass or Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety &amp; comfort of the patient</td>
<td></td>
</tr>
<tr>
<td>Correct application of skill / handling technique/assessment</td>
<td>/4</td>
</tr>
<tr>
<td>Ability to explain the rationale behind technique/assessment</td>
<td>/3</td>
</tr>
<tr>
<td>Answers ancillary question adequately i.e. provides appropriate exercise or advice</td>
<td>/3</td>
</tr>
<tr>
<td>Total score</td>
<td>P/F /10</td>
</tr>
</tbody>
</table>
In the written paper the pathology component is in the form of short answers and multiple choice questions, and the remainder of the paper is in long questions. There are four questions in the areas of: orthopaedics, respiratory, musculoskeletal, gerontology, pain, neurology, plastics and burns. Students are required to answer three questions. One third of the paper is allocated to pathology and two thirds to the remainder of the course material.
Module 4: Professional Issues I

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.

Module Co-ordinators 2015-16: Marese Cooney, mcooney@tcd.ie

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

2.4.1 Understand his/her own learning style preference and how to use this information to optimise learning experiences and opportunities.
2.4.2 Recognise how different learning style preferences can influence learning in various circumstances.
2.4.3 Understand Belbin Team Roles and how various roles may impact on how teams work.
2.4.4 Understand his/her own Myers Briggs type.
2.4.5 Be familiar with advantages and challenges of working in teams.
2.4.6 Be familiar with the various types of units/teams and organisations in which physiotherapists work in Ireland.
2.4.7 Develop a basic understanding of motivation within the work setting.
2.4.8 Discuss the concept of professionalism and the student’s role in the clinical environment.
2.4.9 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.
2.4.10 Recognise/demonstrate a knowledge and understanding of the practice standards and code of ethics of their profession and relevant legislative requirements.
2.4.11 Recognise that responsibility and accountability accompany professional autonomy.
2.4.12 Describe the factors that influence effective communication; demonstrate professional behaviours such as clear communication; and operate with a suitable degree of self-protection.

2.4.13 Recognise that responsibility and accountability accompany professional autonomy.

2.4.14 Understand the communication principles that inform subjective history-taking from a patient/client.

2.4.15 Demonstrate a working knowledge of Standard 14 which relates to documentation practice.

2.4.16 Engage in reflective practice of both planned and unplanned incidents and understand what is involved in CPD.

2.4.17 Define conflict and contrast the functional with the dysfunctional role of conflict in a therapeutic relationship.

2.4.18 Recognise/demonstrate a knowledge of behavioural responses used to resolve conflict.

Module learning resources
All required reading and resources will be provided during the module. Websites that can be referred to are:

- Irish Society of Chartered Physiotherapists
- World Confederation for Physical Therapy
- Honey & Mumford Learning Styles Questionnaire
- Belbin Team Roles
- Myers Briggs Type Indicator

Methods of teaching and learning
This module employs a mix of traditional lectures, workshops, group work and presentations and individual reflective writing. Students are assigned into groups in Michaelmas Term and work in that group for the term.

Module assessment
This module is assessed by continuous in-course assessment. Group presentations account for 30% of the mark, with individual reflective writing in Michaelmas Term making up 30%, and in Hilary Term 40%.
Marking guidelines

Examples of marking guidelines for reflective writing and presentations are provided below

<table>
<thead>
<tr>
<th>Reflective writing: MBTI</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID number</td>
</tr>
<tr>
<td><strong>Content: did the essay answer the five themes posed? 20%</strong></td>
</tr>
<tr>
<td>1. What have I learned about MBTI and what has it explained about my behaviours and interactions with others.</td>
</tr>
<tr>
<td>2. Provide specific examples rather than high-level overviews, and include each aspect of Myers-Briggs as well as your type.</td>
</tr>
<tr>
<td>3. Consider how you will apply your knowledge of your MBTI with those in your current team, in other relationships, and how it will help you work better.</td>
</tr>
<tr>
<td>4. What your challenges might be - and how you will deal with them.</td>
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</tbody>
</table>

**Reflection: the extent to which the submitted essay demonstrates an understanding of the topic, individual reflection with relevant personal examples and a clear consideration of how the information will inform learning and development as a student and later as a physiotherapist – 70%**

Maximum use of information and excellent level of reflection including relevant examples – demonstrating an excellent understanding of the implications for learning and development as an undergraduate and later. 70%+

Provision of information for reader is good and includes most of the implications of the material for personal learning and development. Demonstrates a clear understanding of the material supported by good personal examples. 60 – 69%

General understanding of the material on MBTI but interpretation is weak leading to descriptive narrative, with limited or inappropriate personal examples. Moderate reflection on how the new knowledge will inform learning as a student and later as a physiotherapist. 50 – 59%

A basic understanding of the material on MBTI. Little reflection on how this will inform learning & development as a student and later as a physiotherapist. Limited or no examples provided or inappropriate examples provided. Presents a limited amount of information about the implications of new knowledge about adult learning and LS’s. 40 – 49%

The student has not demonstrated a familiarity and understanding with MBTI – perhaps because of non-attendance at lectures or review of material after the
lecture. There are no examples provided and/or limited or no personal reflection on the material. <40%

**Format:** is the format as requested? Font Arial, size 11, 1.5 spacing, 2-3 pages.
Presentation: proof read, appropriate grammar **10%**

**Total mark:** **Content (20%) + Reflection (70%) + Format/Presentation (10%)**

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**Evaluation guideline**

For this module, you will make three presentations (P1, 2 & 3).
P1 does not contribute to your overall mark but will be scored to give you an idea of the marking system. P2 and P3 will account for 30% of the module.

Your group presentation in this week has two purposes as follows:

1. Demonstrate your skills in designing and delivering a short and informative presentation.
2. Present your knowledge of MBTI for each team member and what this tells you about your collective strengths and challenges when working as a team together.

<table>
<thead>
<tr>
<th>Presentation content</th>
<th>Weight 60% Mark</th>
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</thead>
<tbody>
<tr>
<td><strong>Weight 60%</strong></td>
<td><strong>Mark</strong></td>
</tr>
<tr>
<td>Does the presentation address the objectives outlined above?</td>
<td></td>
</tr>
<tr>
<td>Is there evidence of reflection on the individual MBTI and how they will contribute to future team work?</td>
<td></td>
</tr>
<tr>
<td>Have any possible challenges been considered?</td>
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<tr>
<td>Does the presentation content indicate an understanding of Myers Briggs types?</td>
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<tr>
<td>Is the content original or creative in some way?</td>
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</table>

<table>
<thead>
<tr>
<th>Presentation style</th>
<th></th>
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<tbody>
<tr>
<td><strong>Do the presenters engage the audience?</strong> Do they make and maintain eye content?</td>
<td></td>
</tr>
<tr>
<td>Have the presenters adequately prepared so that their delivery is smooth, and if notes are required, are they used appropriately?</td>
<td></td>
</tr>
<tr>
<td>Are the slides advanced smoothly?</td>
<td></td>
</tr>
<tr>
<td>Do the presenters speak clearly and audibly?</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Use of AV aids or other material</th>
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</thead>
<tbody>
<tr>
<td>Are any of the AV aids such as slides prepared appropriately?</td>
<td></td>
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<tr>
<td>o Font size</td>
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<tr>
<td>o Use of text</td>
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<tr>
<td>Weight 40% Mark</td>
<td>Total mark</td>
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<td>----------------</td>
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</tr>
<tr>
<td>Images</td>
<td></td>
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<tr>
<td>Videos</td>
<td></td>
</tr>
<tr>
<td>• If a handout is provided, is it clear and does it contain relevant information?</td>
<td></td>
</tr>
<tr>
<td>• Is the oral presentation supported by appropriate AV aids or other material?</td>
<td></td>
</tr>
<tr>
<td>• Are the AV supports and/or the presentation delivery original or creative in some way?</td>
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</tbody>
</table>

Total mark
Module 5: Practice Education I

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.

Module Co-ordinator 2015-16: Lucy Alpine, lucy.alpine@tcd.ie

Learning objectives: This module, Practice Education I, will offer the student the opportunity to develop and demonstrate:

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

Module 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 Subjective, Objective, Assessment and Plan (SOAP) 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.

Module Learning Resources

- *Discipline of Physiotherapy Practice Education Handbook.*
- *Guidelines for Good practice in Practice Education* (2008) HSE.
Methods of teaching and learning

Clinical placements are undertaken in a variety of settings reflecting the diversity of work settings available to qualified physiotherapist. Core placement areas of musculoskeletal, respiratory, neurology and/or care of the elderly and paediatrics are provided to all students. 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. Students are assigned to recognised hospitals, which are listed in the Practice Education handbook. Students may be assigned to placements outside the Dublin area. Please refer to the Practice Education Handbook for all regulations and details relating to clinical placement.

Module Assessment

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

Subjects of study
Students who have successfully completed the second year of the course may enter the third year. The modules of the third year include:

- Scientific Investigation (15 ECTS) which includes research methods, statistics, literature reviews.
- Psychology (5 ECTS).
- Rehabilitation in Bone and Joint Disease (10 ECTS) which includes Women’s Health, Bone and Joint Rehabilitation, Musculoskeletal II, Rheumatology.
- Prevention and Management of Chronic Disease (10 ECTS) which includes Respiratory II, Cardiovascular Sciences, Neurology II, 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 six-week duration. A preparation week is scheduled between the placement blocks (10 ECTS).

Module 1: Scientific Investigation

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.

Module co-ordinator 2015-16: John Gormley, jgormley@tcd.ie

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

3.1.1 Demonstrate an understanding of statistical principles.
3.1.2 Demonstrate an understanding of the basic principles of scientific research.
3.1.3 Demonstrate an ability to carry out statistical tests.
3.1.4 Select and apply statistical tests correctly.
3.1.5 Interpret data obtained from research studies.
3.1.6 Evaluate critically the statistical analysis in published research studies.
3.1.7 Demonstrate a clear knowledge of the concepts of validity and reliability.
3.1.8 Demonstrate the ability to choose an appropriate standardised outcome
3.1.9 Summarise an article.
3.1.10 Critically appraise an article.
3.1.11 Combine summary and critique into an article review.
3.1.12 Combine article reviews into a literature review.
3.1.13 Present a literature review on selected articles.

**Module learning resources**

All required reading and resources will be provided during the module. The following texts may also be useful resources:


**Module evaluation**

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. There will also be an assessment in Statistics during 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 and a marking guideline.
Module 2: Professional Issues

**Aim:** The focus of this module shifts to management and evaluation of physiotherapy. Students are prepared for time and project management consistent with the needs at this stage of their education. In addition, the concept of outcome measurement is fully considered – choice, properties, evidence-based decision making. Finally quality assurance in the form of audit and clinical guidelines is introduced.

**Module co-ordinator 2015-16:** Emma Stokes, estokes@tcd.ie

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

3.2.1 Outline with key management issues in physiotherapy practice.
3.2.2 Understand the extent to which standardised outcome measures are used in physiotherapy practice.
3.2.3 Understand the measurement properties of common outcome measures used in physiotherapy practice and how they can inform decision-making.
3.2.4 Be able to describe the ICF and how it may be used in clinical practice.
3.2.5 Understand how to choose an appropriate outcome measurement including an analysis of the measurement properties
3.2.6 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.
3.2.7 Demonstrate a knowledge of quality assurance frameworks encompassing, for example, audit, clinical governance, clinical guidelines, and professional standards.

**Module learning resources**

All required reading and resources will be provided during the module. The module textbook is:


In addition, these websites are informativ:

- [www.iscp.ie](http://www.iscp.ie)
- [www.wcpt.org](http://www.wcpt.org)
Methods of teaching & learning
Building on Professional Issues I, there continues to be group work in this module with group presentations. You will have the opportunity to analyse in detail an outcome measure that you will use on clinical placement and develop a peer-learning resource. You will have an opportunity to reflect on the theory in this module while on clinical placement and then submit a reflective essay.

Module assessment
Group work accounts for 50% of this module mark and your reflective essay accounts for 50%. Marking guidelines for the presentations are similar to those provided for the SF year (Module 4). The marking scheme for the reflective essay is provided below and is adapted to the specific questions you will be asked to address in the essay.

<table>
<thead>
<tr>
<th>Marking guideline for Grade 2.1</th>
<th>60 – 69%</th>
</tr>
</thead>
<tbody>
<tr>
<td>The student has considered all of the questions asked and has made use of information from both clinical placements, there is evidence of self-reflection and appraisal. The interpretation of the theory of the module is good, includes most of the implications for physiotherapy practice. The student demonstrates a clear grasp of major themes – some assimilation or interpretation may be superficial or simply descriptive. Good presentation and organisation of most major points. Correct use of the following – English, proof reading,</td>
<td></td>
</tr>
</tbody>
</table>

- [http://www.strokengine.ca](http://www.strokengine.ca)
- [http://www.rehabmeasures.org/default.aspx](http://www.rehabmeasures.org/default.aspx)
| Grade 2.2 | 50 – 59% | The essay reflects a general understanding of the material from the module. Reflection through the experience of the clinical placements may be superficial or the may be weak leading to descriptive form of review of experiences. 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% | There is a basic understanding of the material under review. Little reflection on the clinical placement and limited review of the module theory in the context of the student's experience leading to a descriptive form of review. Presents a limited view of the implications for physiotherapy practice. Poor use of the following – 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 reflection. Poor use of the following – English, proof reading, word count, referencing, line spacing and pagination. |
Module 3: Psychology

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

Module co-ordinator 2015-16 to be confirmed

Learning objectives: At the end of this module the student will have:
3.3.1 A basic knowledge of the main theoretical positions and the empirical evidence base of health psychology.
3.3.2 An understanding of the potential contribution of psychology to physiotherapy practice.
3.3.3 The ability to evaluate how psychology and sociology can inform an understanding of health, illness and healthcare.

Module learning resources
Learning resources will be provided at the time of the module. The following papers are recent physiotherapy publications.


Module assessment
The module will be assessed by a written submission of an essay. A marking guideline will be circulated at the time of the module.
Module 4: Prevention and management of chronic disease

**Aim:** This module builds on Clinical Sciences in Physiotherapy in second year. Common non-communicable diseases and their management including physiotherapy and rehabilitation are considered. 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.

The clinical sciences studied are:

- Respiratory 2
- Cardiology
- Rehabilitation of people with amputations
- Oncology and haematology
- Neurology 2
- Mental health

In addition, as part of this module students participate in inter-professional workshops.

**Module co-ordinator 2015-16** Emer Barrett, [barrete@tcd.ie](mailto:barrete@tcd.ie)

**Overall learning objectives:** On successful completion of this module the student will be able to:

3.4.1 Evaluate the evidence for the main modifiable risk factors for the common non-communicable disease.

3.4.2 Justify the role of the physiotherapist in health promotion and primary prevention of chronic diseases.

3.4.3 Describe the pathophysiology and clinical features of clinical conditions commonly encountered by the physiotherapist.

3.4.4 Undertake appropriate assessment and treatment of the patient with the clinical conditions covered by this module.

3.4.5 Justify the selection of physiotherapeutic techniques using sound clinical reasoning processes.
3.4.6 Discuss the differing approaches to physiotherapy treatment of clinical conditions supported by the relevant literature.

3.4.7 Describe the multidisciplinary management of both the acutely ill patient and the patient with chronic disease.

3.4.8 Demonstrate proficiency with methods of physiotherapy treatment in the clinical conditions covered, and an understanding of indications and contraindications of these.

3.4.9 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.

**Specific learning objectives: At the end of the course the student will be able to:**

3.4.10 **Amputees**

3.4.10.1 Describe the physiologic responses to exercise in peripheral vascular disease.

3.4.10.2 Identify and explain the various causes of amputation.

3.4.10.3 Demonstrate an understanding of the production of prostheses.

3.4.10.4 Describe and justify the rehabilitation of an individual with a below knee amputation.

3.4.10.5 Describe and justify the rehabilitation of an individual with an above knee amputation.

3.4.10.6 Describe the specific challenges of a bilateral amputation.

3.4.10.7 Explain and support the benefits of physical activity for health and the prevention of disease.

3.4.10.8 Identify the safety, risk, and efficacy issues relating to rehabilitation of individuals with amputation.

3.4.11 **Neurology II**

3.4.11.1 Demonstrate knowledge and understanding of the neurological assessment.

3.4.11.2 Complete a comprehensive neurological assessment.

3.4.11.3 Apply the principles of clinical reasoning to the assessment findings, in order to formulate a problem list.
3.4.11.4 Successfully formulate treatment goals and a treatment plan based on the problem list.
3.4.11.5 Plan and demonstrate comprehensive evidence-based rehabilitation programmes based on patients' needs.
3.4.11.6 Demonstrate practical handling and rehabilitation skills suitable for use with neurological populations.

**3.4.12 Respiratory II**

3.4.12.1 Demonstrate an awareness of modes of ventilation.
3.4.12.2 Demonstrate an understanding of non-invasive ventilation.
3.4.12.3 Demonstrate understanding and proficiency in the intensive care unit (ITU) techniques including suctioning and manual hyperinflation.
3.4.12.4 Describe the role of early mobilisation in ITU.
3.4.12.5 Demonstrate an ability to prescribe and progress exercise in the ITU setting.
3.4.12.6 Demonstrate an awareness of monitoring in ITU.
3.4.12.7 Describe the overall effects of surgery on the respiratory system.
3.4.12.8 Describe the specific effect of thoracic surgery, cardiac surgery and upper abdominal surgery on the respiratory system.
3.4.12.9 Demonstrate an understanding of the effect of acute trauma - including head injuries and spinal injuries - on the respiratory system.
3.4.12.11 Justify the role of the physiotherapist in the acute respiratory setting.

**3.4.12 Cardiology**

3.4.13.1 Demonstrate an understanding of peripheral vascular disease, obesity, and diabetes.
3.4.13.2 Demonstrate an understanding of cardiovascular disorders including heart failure, hypertension, acquired valve disorders and cardiovascular risk factors.
3.4.13.3 Demonstrate an understanding of cardiac investigations, surgeries and devices.
3.4.13.4 Demonstrate knowledge and understanding of cardiac rehabilitation and the role of physiotherapy in pre-operative and post-operative cardiac settings.
3.4.13.5 Understand fitness testing in the clinical setting and its application to exercise prescription in cardiac populations.
3.4.13.6 Demonstrate an ability to prescribe and progress aerobic and resistance exercise in cardiac populations including heart failure and heart transplant.

3.4.14 Oncology and Haematology
3.4.14.1 Demonstrate an understanding of risk factors for cancer, cancer screening programmes and diagnostics.
3.4.14.2 Demonstrate an awareness of the most common cancers including lung cancer, breast cancer; and disease management including chemotherapy and radiotherapy.
3.4.14.3 Demonstrate an understanding of the physical side effects of cancer, such as cancer-related fatigue and their management.
3.4.14.4 Demonstrate an understanding of spinal cord compression, bone metastasis and bone marrow transplant.
3.4.14.5 Understand role of exercise in cancer and be able to prescribe exercise in oncology populations.
3.4.14.6 Justify the role of the physiotherapist throughout the cancer trajectory.
3.4.14.7 Demonstrate an understanding of haemophilia and its physiotherapy management.
3.4.14.8 Demonstrate an understating of HIV/AIDS and its physiotherapy management.

3.4.15 Inter-professional Learning Workshops
3.4.15.1 Justify the team members required to effectively manage a series of patient case studies.
3.4.15.2 Explain the role of members of the interdisciplinary team in the management of selected patient conditions.
3.4.15.3 Demonstrate effective communication when discussing patient cases with an interdisciplinary student group.
3.4.15.4 Justify how effective teamwork and communication can impact on patient care.

3.4.16 Mental Health
3.4.16.1 Demonstrate an understanding of organic brain diseases: Alzheimer’s disease, multi-infarct dementia, acute confusional state.
3.4.16.2 Demonstrate an understanding of anxiety states, such as neuroses, phobias, depression.
3.4.16.3 Demonstrate an understanding of major mental illness including major depression, schizophrenia and bipolar disorder.
3.4.16.4 Understand the role of exercise and be able to prescribe exercise in mental health conditions.
3.4.16.5 Justify the role of the physiotherapist in mental health settings.

Module learning resources

Amputees


Neurology

Essential texts


Recommended


Useful websites

• http://www.irishheart.ie/iopen24/pub/strokereports/strokeguidelines.pdf
• http://www.cochrane.org
• http://www.ms-society.ie

Respiratory II

Texts and journal papers


Useful websites

• www.ers.com
• www.its.ie

Cardiology

• **Association of Chartered Physiotherapists in Cardiac Rehabilitation, Cardiac Core Competences for the Physical Activity and Exercise Component of Cardiovascular Rehabilitation Services** [http://www.acpicr.com/](http://www.acpicr.com/)

**Useful websites**

- [www.sign.ac.uk](http://www.sign.ac.uk)
- [www.aacvpr.org](http://www.aacvpr.org)
- [www.iacr.ie](http://www.iacr.ie)
- [www.acpicr.com](http://www.acpicr.com)

**Oncology and Haematology**


**Mental Health**

- Useful website: [http://www.nationalelfservice.net/treatment/exercise/](http://www.nationalelfservice.net/treatment/exercise/)

**Module assessment**

There are written examinations in this module at the end of Trinity Term. This is a three-hour examination. The paper has six questions of which five must be answered.
Guidelines on awarding grades for Exam Answers in the Sophister Years

<table>
<thead>
<tr>
<th>Class</th>
<th>Mark Range</th>
<th>Criteria</th>
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<tbody>
<tr>
<td>I</td>
<td>90-100</td>
<td><strong>Ideal answer:</strong> shows 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.</td>
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<tr>
<td></td>
<td>80-89</td>
<td><strong>Outstanding answer:</strong> 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.</td>
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<tr>
<td></td>
<td>70-79</td>
<td><strong>Mainly outstanding answer:</strong> falls short on presentation and reading or thought beyond the course, but retains insight and originality typical of first class work.</td>
</tr>
<tr>
<td>II-1</td>
<td>65-69</td>
<td><strong>Very comprehensive answer:</strong> 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.</td>
</tr>
<tr>
<td></td>
<td>60-64</td>
<td><strong>Comprehensive answer:</strong> mostly confined to good recall of coursework. Accurate, logical and organised answer. Some synthesis of information or ideas. Some lapses in detail.</td>
</tr>
<tr>
<td>II-2</td>
<td>55-59</td>
<td><strong>Less comprehensive answer:</strong> 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.</td>
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<tr>
<td></td>
<td>50-54</td>
<td><strong>Incomplete answer:</strong> understanding of main concepts and showing sound knowledge. Sensible use of some major points, but contains several lapses in detail.</td>
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<tr>
<td>III</td>
<td>45-49</td>
<td><strong>Weak answer:</strong> Signs of understanding and knowledge of subject. Contains omissions, errors and misunderstandings, so that answer is no more than adequate.</td>
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<tr>
<td></td>
<td>40-44</td>
<td><strong>Very weak answer:</strong> limited understanding and knowledge of subject. A poor answer, but giving some relevant information indicating a marginally adequate understanding.</td>
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<tr>
<td>F-1</td>
<td>35-39</td>
<td><strong>Marginal fail</strong>: inadequate answer lacking substance, but with a vague knowledge relevant to the question.</td>
</tr>
<tr>
<td>F-2</td>
<td>30-34</td>
<td><strong>Clear failure</strong>: some attempt to write something relevant to the question. Errors serious but not absurd. Could be sound answer to the ‘wrong’ question.</td>
</tr>
<tr>
<td>F-3</td>
<td>0-29</td>
<td><strong>Complete failure</strong>: with no hint of knowledge. Errors serious and absurd. Could be trivial response to the ‘wrong’ question.</td>
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</table>
Module 5: Paediatrics and learning disability

Aim: This module enables the student to become familiar with the pathophysiology and clinical features of clinical conditions commonly encountered by the physiotherapist working with children and young adults.

Module co-ordinator 2015-16: Juliette Hussey, jmhussey@tcd.ie

Overall learning objectives: On successful completion of this module the student will be able to:

3.5.1 Describe the pathophysiology and clinical features of clinical conditions commonly encountered by the physiotherapist.
3.5.2 Justify appropriate assessment and treatment of the patients with the clinical conditions considered in this module.
3.5.3 Justify the selection of physiotherapeutic techniques in paediatric conditions.
3.5.4 Discuss the differing approaches to physiotherapy treatment of clinical conditions supported by the relevant literature.
3.5.5 Describe the multidisciplinary management of both the acutely ill patient and the patient with chronic disease.
3.5.6 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.

Specific learning objectives: On successful completion of this module the student will be able to:

3.5.7 Paediatric Respiratory
3.5.7.1 Demonstrate an ability to compare and contrast anatomical and physiological differences between paediatrics and adult populations.
3.5.7.2 Knowledge of normal paediatric values and signs of distress.
3.5.7.3 Plan and demonstrate paediatric respiratory assessment.
3.5.7.4 Knowledge of indications for CPT and physiotherapy treatment techniques.
3.5.7.5 Understand ventilator settings and non-invasive ventilation in the paediatric ITU setting.
3.5.7.6 Be able to apply assessment and treatment techniques to specific disease pathologies – in cardiac, surgical and medical settings.
3.5.7.7 Awareness of contraindications and treatment techniques in premature setting.
3.5.7.8. Understand the disease pathology of cystic fibrosis and related treatment modalities.

3.5.8 Neurodevelopmental / Neurology
3.5.8.1 Understand normal foetal development, development of the human brain, maturation of the CNS, normal motor development, the normal neonate, factors influencing development.
3.5.8.2 Demonstrate knowledge of developmental milestones 0-18 months.
3.5.8.3 Be able to plan and demonstrate a paediatric neurological assessment (< 1 years old).
3.5.8.4 Broadly understand and apply treatment approaches to common paediatric neurological conditions.

3.5.9 Orthopaedics and Rheumatology
3.5.9.1 Understand normal variance.
3.5.9.2 Justify physiotherapy assessment and treatment in common paediatric lower limb pathologies and other conditions such as scoliosis osteogenesis imperfect, torticollis, limb reconstruction/lengthening.
3.5.9.3 Justify assessment and treatment of common sports Injuries in paediatrics.
3.5.9.4 Justify assessment and treatment in common rheumatological conditions such as juvenile idiopathic arthritis and joint hypermobility syndrome.

3.5.10 Haematology / Oncology
3.5.10.1 Understanding of common paediatric haemophilia, Sickle Cell Disease and Malignant Haematology.
3.5.10.2 Understanding of CNS tumours, bone tumours.
3.5.10.3 Understanding treatment-related side effects.
3.5.10.4 Justify the role of the physiotherapist in paediatric haematology/oncology settings.
Module learning resources


Module assessment

There is a two-hour written examination, in which three out of four questions must be answered. This is held in Trinity Term.
Module 6: Rehabilitation in bone & joint disease

**Aim:** This module builds on Clinical Sciences in Physiotherapy in the Senior Freshman year. The clinical sciences that will be studied are:
- Musculoskeletal II
- Bone & joint rehabilitation

In addition, physiotherapy in Women’s Health is included. 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.

**Module co-ordinator 2015-16:** Dr Fiona Wilson, wilsonf@tcd.ie

**Overall learning objectives:** On successful completion of this module the student will be able to:

3.6.1 Describe the pathophysiology and clinical features of clinical conditions commonly encountered by the physiotherapist.
3.6.2 Undertake appropriate assessment and treatment of the patient with the clinical conditions covered by this module.
3.6.3 Justify the selection of physiotherapeutic techniques using sound clinical reasoning processes.
3.6.4 Discuss the differing approaches to physiotherapy treatment of clinical conditions supported by the relevant literature.
3.6.5 Describe the multidisciplinary management of both the acutely ill patient and the patient with chronic disease.
3.6.6 Demonstrate proficient in physiotherapy treatment in the clinical conditions covered in the module and an understanding of the indication and contraindications for such treatment.
3.6.7 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.
3.6.8 Prescribe exercise in the management of bone and joint disease.
Specific learning objectives: On successful completion of this module the student will be able to:

3.6.9 Musculoskeletal
3.6.9.1 Describe and discuss the aetiology, pathophysiology and clinical features of the musculoskeletal spinal conditions listed below.
3.6.9.2 Perform an appropriate subjective examination of the cervical, thoracic and lumbar spine.
3.6.9.3 Demonstrate the basis of clinical reasoning in respect of a subjective examination.
3.6.9.4 Perform an appropriate physical examination of the cervical, thoracic and lumbar spine.
3.6.9.5 Demonstrate the basis of clinical reasoning in respect of a physical examination.
3.6.9.6 Identify the principles of management of musculoskeletal injury.
3.6.9.7 Justify the selection of physiotherapeutic techniques using sound clinical reasoning processes.
3.6.9.8 Plan a management programme for a patient presenting with spinal dysfunction.
3.6.9.9 Describe and discuss the multidisciplinary and physiotherapeutic management of the musculoskeletal spinal conditions listed below.
3.6.9.10 Prescribe exercise in the management of spinal musculoskeletal disorders.

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

3.6.11 Women’s Health
3.6.11.1 Outline physiological, structural and psychological changes that occur during the childbearing years, and their impact on women’s well-being.
3.6.11.2 Demonstrate understanding of common musculoskeletal problems that may occur during the child-bearing years, and justify the management of such conditions.
3.6.11.3 Describe the stages of parturition.
3.6.11.4 Appreciate indications for medical/surgical intervention: forceps, vacuum, episiotomy, caesarean section.
3.6.11.5 Demonstrate understanding of the complications of pregnancy and the puerperium.
3.6.11.6 Demonstrate an understanding of common urogynaecological problems.
3.6.11.7 Demonstrate an understanding of the role of the physiotherapist in the promotion of continence, and justify the physiotherapeutic management of patients with continence problems.
Module learning resources

Learning resources for the musculoskeletal and bone and joint sub-sections will be provided during the module.

Women’s Health

Texts


Useful websites

- www.ics.org
- http://pogp.csp.org.uk/
- http://www.iofbonehealth.org/
- www.irishosteoporosis.ie

Module assessment

There are written examinations in this module at the end of Trinity Term. This is a three-hour examination. The paper has six questions, five of which must be answered. The marking guideline for answers to examination questions is provided in the prevention and management of chronic disease module.
Module 7: Practice Education II

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. Students 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.

Module co-ordinator 2015-16: Lucy Alpine, lucy.alpine@tcd.ie

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

3.7.1 An ability to formulate and evaluate SMART learning goals appropriate to the clinical environment.
3.7.2 An ability to plan and apply a subjective and objective assessment for a patient.
3.7.3 An ability to analyse the assessment findings and apply clinical reasoning to the assessment and reassessment findings in order to plan, prioritise, implement and modify appropriate physiotherapy treatment.
3.7.4 An ability to apply physiotherapy assessment and treatment techniques safely.
3.7.5 An ability to evaluate treatment outcomes and to understand some of the factors that influence outcomes.
3.7.6 An ability to work as a member of a health care team and to understand the roles of the members of the multidisciplinary team.
3.7.7 An ability to communicate effectively with patients, relatives, colleagues and other members of the multidisciplinary team.
3.7.8 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.
3.7.9 An appreciation of the Irish health care system in which physiotherapy is delivered.
3.7.10 An understanding of infection control and safety procedures in the hospital environment.

3.7.11 An understanding of the ethical, moral and legal issues in relation to physiotherapy practice.

Module Learning Resources

- *Discipline of Physiotherapy Practice Education Handbook.*
- *Guidelines for Good practice in Practice Education* (2008) HSE.

Methods of teaching and learning

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.

Module Assessment

Continuous Assessment: Clinical competencies are evaluated by the Common Assessment Form (CAF) Level II 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.
14. Senior Sophister year

Subjects of study
Students who have successfully completed the third year of the course may enter the fourth year. 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 1: Scientific Investigation II

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.

Module co-ordinator 2015-16: Dr John Gormley, jgormley@tcd.ie

Module learning objectives: On successful completion of this module, the student will be able to:

4.1.1 Critically review the relevant literature, and present this review in written format.
4.1.2 Formulate a research proposal.
4.1.3 Design a research project.
4.1.4 Demonstrate practical research skills.
4.1.5 Implement a research project.
4.1.6 Demonstrate effective teamwork and communication skills.
4.1.7 Critically analyse the research findings.
4.1.8 Evaluate the research process.
4.1.9 Draw conclusions from the research project.
4.1.10 Write an accurate report of the research project in a specified format.
Methods of teaching & learning
Students choose their subject for the literature review and are guided by staff in the completion. For the project proposal, the subject is provided and supervised by the members of academic staff who supervise the research project. For further details see the Research Handbook.

Module assessment
Assessment is by written assignments - (i) Literature review/Research Proposal; (ii) Research Project. The review and research proposal accounts for 50% of the overall mark for the module. The research project accounts for the other 50%. Marking guidelines are included in the Research Handbook.

Module learning resources are provided in the Research Handbook.
Module 2: Advances in Physiotherapy

Aim: This module aims to introduce students to emerging and/or advanced physiotherapy practice. In addition, it explores changes within physiotherapy professional practice and regulation in a global context.

Module co-ordinator 2015-16: Cillin Condon, condonc@tcd.ie

Module learning objectives: On successful completion of this module, the student will be able to:

4.2.1 Demonstrate an understanding of the changing professional and regulatory environment in a global context.

4.2.2 Evaluate the advances in the scope of physiotherapy practice and the attendant governance, service delivery and clinical practice responsibilities.

4.2.3 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.

4.2.4 Demonstrate an understanding of how to prepare a proposal for a new physiotherapy service.

Methods of teaching and learning: This module runs six weekly seminars at which students hear from expert and advanced practitioners who share their personal professional experiences as well as how they have developed their services in weekly seminars. There is an opportunity to hear from two or three speakers in each seminar and time for discussion, questions and answers. Participants also include business and social entrepreneurs. There is a focused session on the development of a business plan. Thereafter, students decide on the new physiotherapy service they will develop and create the business plan. The module co-ordinators will guide the development.

Module assessment: Students work in groups to develop an idea for a new physiotherapy practice and will deliver a presentation in weeks eight and nine of Hilary Term. This accounts for 50% of the module mark. Thereafter, students are required to write up and submit an individual report to be submitted at the end of
Hilary Term. This report accounts for 50% of the module mark. The marking guideline is provided below.

**Module learning resources:** Will be provided during the module

### Advances in Physiotherapy Practice

#### Marking guideline for group presentation & individual written submission

The overall purpose of the group presentation (50%) is to provide the rationale for and description of the proposed new development. The presentation will demonstrate that the student group:

- Has reviewed the environmental e.g., health policy, community, service development plan context(s) & can provide a clearly justified rationale for the development of the service proposed.
- Is able to present the information in a short presentation to an audience in a manner that is clear & engaging.

The purpose of the individual written submission (50%) is to establish that the student has participated in the project development and can bring an individual perspective to the proposal.

The module equates to 5 ECTS i.e. approximately 100 student effort hours and accounts for 10% of the year mark.

There are four components to be considered in the oral presentation and again in the written submission.

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<td>Final mark /100</td>
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### WHY IS THIS DEVELOPMENT TIMELY? IS THERE ADEQUATE JUSTIFICATION FOR THE SERVICE OFFERING DEVELOPMENT?
The headings below are a guide to various questions that might be answered in this section. Not all may be relevant or apply to the particular – they serve as a guide.

#### Review of the environment & justification for the development?
- Has the need for the service been articulated?
- Has the size, scope, growth of the patient/client group been clearly established?
- Do different patients/clients within the group have differing needs?
- Where relevant, has the service/patient cohort/client group been segmented and the different requirements of each segment established? Or has just one sub-set been chosen with justified reasons?

#### Uniqueness/differentiation/proprietary position
- Has any duplication with other services been established? If yes, have they been adequately explained?
- Has any recognisable barrier to the establishment of the service been considered/proposed? Are solutions proposed?
- Is this proposal a novel development or the application of an international model not previously implemented in Ireland? Or does it implement previously unimplemented or updated clinical guidelines?

#### Evidence of client/patient & community acceptance
- Does the proposal contain any proof that patients/clients/referrers will use the service proposed? Such proof can include evidence from trials, demonstrations, exhibitions or user surveys.
- Have any patient organisations been involved in the development or have they advocated for this service?
- Does the proposal represent a challenge to any existing services? If yes, how is this proposed to be managed?
- Are there other services that need to be involved e.g. IT, OT?
- What are the potential risks involved? Have they been considered and addressed?

### LOGISTICS & IMPLEMENTATION ISSUES
The headings below are a guide to various questions that might be answered in this section. Not all may be relevant or apply to the particular – they serve as a guide.

#### Staffing
- Have the staffing requirements been identified?
- Have the attributes of all key staff been identified?
- Have any recruitment challenges been considered?

#### Professional advice/peer-review
- Is there evidence of the developing team having sought advice from relevant advisers?
- Have national or international professional organisation policies been referred to?

#### Clinical governance
- Have any governance or professional practice issues been considered?

### FINANCIAL ISSUES
The headings below are a guide to various questions that might be answered in this section. Not all may be relevant or apply to the particular – they serve as a guide.
### Source/Use of Funds
- **Source of funding:** Who might provide funding and why?
  - Is there justification for costs with savings to the organisation?
- **Are the demand projections believable and supported with facts where possible?**
- **Are the costs inclusive of all staff costs (including PRSI, pension) and non-pay (consumables, equipment etc.) described?**

How well are major uses of funds explained and supported with a business justification?

### Written / Oral Presentation
- **Does the executive summary excite interest and adequately explain the proposal and what is wanted of the reader?**
- **Has the business plan been clearly and comprehensively set out?**
- **Is the business plan easy to read and understand?**
- **Is the narrative the right length?**

**Style and presentation:** Consider errors in spelling, evidence of proof reading, page numbers, use of headings, labelling of tables/figures, appropriate referencing.
Module 3: Ergonomics II

Aim: Ergonomics II builds on the Ergonomics I in Clinical Sciences in Physiotherapy completed in SF year. The module aims to develop knowledge and understanding of ergonomics, with particular emphasis on the workplace.

Module co-ordinator 2015-16: Sara Dockrell, sara.dockrell@tcd.ie

Module learning objectives: In this module, the students are required to integrate knowledge and experience from Clinical Placement into their coursework and assessment.

On successful completion of this module, the student will be able to:
4.3.1 Evaluate the effectiveness of ergonomic intervention in different healthcare settings.
4.3.2 Comply with health and safety legislation and integrate it into physiotherapy practice.
4.3.3 Justify safety at work practices and explain risk assessment.
4.3.4 Analyse posture, and work practices in the workplace.
4.3.5 Analyse manual handling and moving and handling in the workplace.
4.3.6 Justify modifications that may be required to work practices and workstations.
4.3.7 Demonstrate an understanding of the incidence, causes, management and prevention of work-related musculoskeletal disorders.
4.3.8 Demonstrate an understanding of manual handling/moving and handling training programmes.

Module 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.
Module learning resources
All learning material and details of assessment will be provided during the module and it will be available to the students on Blackboard. The following are some of the references that are provided.

- http://www.hsa.ie
- http://www.hse.gov.uk

Module assessment: The module is assessed by two methods:

1. A written assignment (1,500-2000 words) which is undertaken during P6 Clinical Placement and is submitted at the end of Michaelmas Term. This can be a clinically-based case study or a risk assessment. A marking guideline is provided below.

2. A one-and-a-half-hour written paper held at the end of Trinity Term. This consists of three questions, two of which are to be answered.

Each component accounts for 50% of the overall grade and the pass mark is 40%.
SS Ergonomics Written Assignment

Guidelines
- The written assignment is undertaken during P6 (2nd Clinical Placement in Michaelmas term of SS Year).
- The assignment is based on a clinical situation, scenario or process of events of the student’s choosing. The assignment is to be presented in such a way that no individual person or workplace is identified.
- The written assignment is one-and-a-half spaced on one side of paper. It should be approximately 1,500-2000 words.
- The assignment is submitted during the week following the clinical placement on a date to be specified.
- The mark achieved represents 50% of SS Ergonomics II module.

SS Ergonomics Written Assignment – Marking Criteria

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<th>1. Presentation of content</th>
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<td>1.1 Effective use of grammar</td>
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<td>1.2 Correct pagination</td>
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<td>1.3 Good proof reading</td>
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<td>1.4 Within word count</td>
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<td>1.5 Appendices/Figures numbered (if appropriate)</td>
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<th>2. References</th>
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<tbody>
<tr>
<td>2.1 Relevant</td>
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<td>2.2 Correct</td>
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<thead>
<tr>
<th>3. Content</th>
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<tbody>
<tr>
<td>3.1 Organisation of the content in a clear and logical sequence</td>
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<tr>
<td>3.2 Evidence of analysis and evaluation</td>
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<td>3.3 Identifies key issues</td>
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<td>3.4 Demonstrates an understanding of the issues</td>
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<td>3.5 Demonstrates an understanding of the implications of the situation</td>
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<td>3.6 Demonstrates an ability to problem-solve</td>
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<td>3.7 Summary</td>
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<td>3.8 Conclusions/recommendations</td>
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Guidelines for the Appraisal and Marking of the SS Ergonomics Written Assignment

| Grade 1 | Best possible organisation of the material. Clear and logical presentation of the case/scenario. Excellent level of analysis and evaluation. Excellent use and understanding of the assessment tool, if appropriate. Identifies key issues. Excellent ability to draw conclusions, problem solve and make appropriate recommendations. Evidence of independent reading and thinking. Correct use of English, proof reading, word count and pagination. Appropriate use of correct references. |
| Grade 2.1 | Clear and logical presentation of the case/scenario. Good level of analysis and evaluation. Good use and understanding of the assessment tool, if appropriate. Identifies key issues. Demonstrates ability to draw conclusions, problem solve and make appropriate recommendations. Correct use of English, proof reading, word count and pagination. Appropriate use of correct references. |
| Grade 2.2 | Clear presentation of the case/scenario. Includes some analysis and evaluation. Describes use, but has limited understanding of the assessment tool, if appropriate. Identifies some key issues. Demonstrates ability to draw some conclusions, problem solve and make some appropriate recommendations. Adequate use of English, proof reading, word count and pagination. Appropriate use of correct references. |
| Grade 3 | Adequate description of the case/scenario, although not always with a clear presentation. Limited analysis and evaluation. Limited use and understanding of the assessment tool, if appropriate. Limited ability to draw some conclusions, problem solve and make some appropriate recommendations. Adequate use of English, proof reading, word count and pagination. Limited use of correct references. |
| Fail | Poor description of the case/scenario. No analysis or evaluation. Limited use and understanding of the assessment tool, if appropriate. No conclusions, problem solving or appropriate recommendations. Poor use of English, proof reading, word count and pagination. Poor use of correct references. |
Module 4: Professional Issues III

**Aim:** This module is part of a theme – professional issues – that runs through the course from second to fourth year. The overall aim of the theme is to prepare graduates with knowledge and understanding of the profession they will enter on graduation. This module continues to build on Professional Issues 1 and 2.

**Module co-ordinator 2015-16:** Marese Cooney, mcooney@tcd.ie

**Module learning objectives:** On successful completion of this module, the student will be able to:

4.4.1 Outline how the health service in general, and physiotherapy service in particular, is organised in Ireland.
4.4.2 Demonstrate an appreciation of the changing and diverse context within which physiotherapy is delivered.
4.4.3 Describe the role of the Professional Association, WCPT and the regulatory authority, CORU.
4.4.4 Understand the scope of physiotherapy in a range of health care settings.
4.4.5 Appreciate the significance professional standards of practice and working within personal standards of proficiency.
4.4.6 Demonstrate an awareness of contemporary health and safety legislation and how to integrate these into physiotherapy practice.
4.4.7 Explain how to handle information with due regard for legal and ethical requirements.
4.4.8 Be aware of medico-legal issues that concern physiotherapists including common diagnostic errors.
4.4.9 Understand the role of the expert witness.
4.4.10 Have an awareness of the role of physiotherapy in risk assessment.
4.4.11 Recognise the significance of continuing professional development.
4.4.12 Understand the difference between management and leadership.
4.4.13 Be familiar with the role of advocacy within physiotherapy.
4.4.14 Understand career options for physiotherapy, including CV preparation and interview.
Methods of teaching & learning: This module combines weekly lectures with two one-day seminars – all require active student participation and small group work.

Module learning resources: material will be provided during the module. The following are provided as reference sources:


Module assessment

This module will be evaluated by in-course assessment and will be in the form of written assignment on two topics covered in the module. Students will be asked to provide an analysis of a scenario and description of an appropriate management/implementation strategy.
Module 5: Sports & Exercise Medicine

Aim: This module continues to build on previous sub-sections of the Physiotherapy Theory & Practice module (2.2), Clinical Sciences in Physiotherapy (2.3) and Rehabilitation of Bone & Joint Disease (3.6) as well as developing an understanding of musculoskeletal, cardiovascular and respiratory systems during exercise in healthy subjects and in subjects with pathology building on sub-sections in 2.3 and Prevention & Management of Chronic Diseases (3.4).

Module co-ordinator 2015-16: Fiona Wilson, wilsonf@tcd.ie

Module learning objectives: On successful completion of this module, the student will be able to:
4.5.1 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.
4.5.2 Assess physical activity levels by a number of means that can be used in the clinical setting.
4.5.3 Assess aerobic capacity in subjects with pathology.
4.5.4 Assess muscle strength and endurance in subjects with pathology.
4.5.5 Justify the use of hydrotherapy in a variety of clinical settings.
4.5.6 Prescribe exercise (theoretically and practically) in a way appropriate to different pathologies.
4.5.7 Demonstrate an understanding of factors influencing adherence to exercise.
4.5.8 Demonstrate an understanding of exercise within health promotion.
4.5.9 Describe the role of the sports physiotherapist.
4.5.10 Demonstrate an understanding of issues affecting management of injury in sport.
4.5.11 Apply the clinical reasoning process in sports injury.
4.5.12 Demonstrate an understanding of the principles of assessment and management of neural tissue pain disorders.
4.5.13 Develop manual therapy skills.
4.5.14 Develop an understanding of the MDT in musculoskeletal management.
Module 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.

Module learning resources:

Texts:


**Journals**

• British Journal of Sports Medicine
• Journal of Sports Sciences
• Medicine and Science in Sports and Exercise

**Module assessment**: A written examination is held at the end of Trinity term. It is of three hours in duration. It consists of six questions, four of which are to be answered. The marking guideline for answers to examination questions is provided in the JS module Prevention and management of chronic diseases.
Module 6: Practice Education III

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.

Module co-ordinator 2015-16: Lucy Alpine, lucy.alpine@tcd.ie

Module learning objectives: On successful completion of this module, the student will be able to:

4.6.1 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.

4.6.2 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.

4.6.3 Application of condition specific appropriate treatment outcomes and understanding of the factors that influence outcomes including age, race, psychological and socio-economic factors.

4.6.4 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.

4.6.5 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.

4.6.6 Communication skills sufficient to communicate safely and effectively as a professional with patients, relatives, patient carers and colleagues.

4.6.7 An ability to document clear, concise, legible POMR.

4.6.8 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.

4.6.9 An appreciation of the complexities of the health care system in which physiotherapy is delivered.

4.6.10 The application of clinical practice based on research evidence and best practice.

4.6.11 An integrated understanding of the ethical, moral and legal issues in relation to physiotherapy practice.

**Module 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.

**Module assessment** 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 and 6 will contribute 16.66% 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 16.66% towards the final award.
### Appendix 1 Mapping of year goals, module learning outcomes, graduate attributes and entry-level competencies

<table>
<thead>
<tr>
<th>Year</th>
<th>Structure as described by Trinity College</th>
<th>PT year goals</th>
<th>ISCP entry-level graduate competencies (EL-GC) Health Sciences graduate attributes (HSGA)</th>
<th>Honours degree awardee expectations</th>
</tr>
</thead>
</table>
| Junior Freshman or first year (JF) | *Focus on acquiring a broad base of knowledge in the major subjects and in related areas that complement the major subjects and increase the student’s understanding of them.* | At the end of their first year, students are expected to have:  
  - Started the transition from the teaching and learning styles that predominate in the Leaving Certificate cycle to become more independent adult learners.  
  - Acquired the foundational knowledge blocks upon which the more clinically focused modules build as they begin in the second year.  
  - Commence the application of translation of theory into practical application with parts of the physiology module and very specifically with the clinical anatomy module.  
  - Developed a preliminary understanding of the... | It can be seen in the mapping exercise in Appendix D7 that in the first year the main learning outcomes/competencies achieved fall within the foundational knowledge or background domain. In addition, the students begin to apply this knowledge in areas of physiotherapy practice. | Comprehension Application                                       |

<table>
<thead>
<tr>
<th>Modules completed</th>
<th>Anatomy, Clinical Anatomy, Physiology, Chemistry, Physics.</th>
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expectations of professional practice. Included in the anticipated learning of clinical anatomy is the beginnings of professional practice; for example working with other students, hands-on practice, respectfully managing palpation, attention to personal presentation – removal of jewellery, nail polish etc.

- In order to facilitate the transition in learning environments, the assessment methods link back to formal examination but begin to include practical/application methods as well as the beginning of the collection of data in laboratory journals.

| Senior Freshman or second year (SF) | Focus on acquiring a broad base of knowledge in the major subjects and in related areas that complement the major subjects and increase the student’s understanding of them. | At the end of the second year, students are expected to have continued on their journey to become independent and self-directed learners. They are expected to:
  - Understand their |
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<td>From the mapping (Appendix D7), it can be seen that there is a significant shift towards physiotherapy and professional practice in the second year. Learning outcomes of modules in the second year commence with the development of skills and</td>
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<td></td>
<td>Comprehension Application Interpersonal skills Communication</td>
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<tr>
<th>Modules completed</th>
<th>preferred learning styles and to have begun to develop self-awareness as individual learners and as participants in teams and groups. This is facilitated through several opportunities for reflective writing as part of their formative assessment, as well as participation in group assignments.</th>
</tr>
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</table>
| Anatomy, Physiotherapy Theory & Practice, Clinical Sciences in Physiotherapy, Professional Issues, Preparation for Clinical Practice & Clinical Placement | • Have completed the foundational knowledge in anatomy.  
• Demonstrate that they understand the theoretical underpinnings of physiotherapy practice – the theory, science and evidence to inform physiotherapy interventions as well as the initial content about those interventions.  
• Understand the expectations of professional practice through their professional knowledge in the EL-GC of professional practice, communication, physiotherapy assessment, case load management, physiotherapy intervention, documentation, evidence-based practice and - to a certain extent - the identification of their own learning needs. |
issues module and preparation for clinical practice module.

- Be adequately prepared for their initial clinical placement and their more substantive one at the end of the second year through a combination of modules that combine the theoretical, translational, professionally-focused and practical.

- Have developed presentation skills through practice on a number of modules.

- Be familiar with the concept of life-long learning and continuing professional development.

The assessment and evaluation strategies combine continuous assessment employing group presentations and assignments, individual reflective writing, practical examinations and the
### Junior Sophister or third year (JS)

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<tr>
<th>A gradual shift to the study in depth of particular areas of major fields, with a greater emphasis on small group learning and on independent work and the development of a critical and analytical approach to the subject matter.</th>
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</thead>
</table>
| At the end of the third year, the goals are for the students to have continued their formation as emerging members of a professional community. They are expected to:  
  - Have continued to expand their body of knowledge about specific client groups and conditions.  
  - Understand the role of the physiotherapist as a communicator and facilitator of health behaviour change with a |
| In the third year, the students continue to develop their physiotherapy knowledge base but also broaden it out to health promotion. Their skills continue to develop – clinical, personal and professional. They are exposed to significant periods in clinical placement as their practice education expands. Hence, there is a focus on the EL-GC of professional practice, communication, caseload management, assessment, intervention, documentation and promoting research and evidence-based practice. The |

| Comprehension  |
| Specialist knowledge  |
| Application  |
| Knowledge  |
| generation  |
| &  |
| translation  |
| Interpersonal skills  |
| Communication  |
| Modules completed | Psychology, Rehabilitation in Bone and Joint Disease (BJD), Chronic Disease Management, Paediatrics & Learning Disability, Scientific Investigation, Professional Issues, Clinical Placement. | specific focus on chronic diseases. The concepts of health promotion and prevention are included as part of the modules on Rehabilitation in BJD and Chronic Disease Management. • Understand and apply management principles appropriate to their stage in their development as physiotherapists – specifically the use of outcome measurement in practice. • Further develop the concepts of incorporating research evidence into their evidence-based decision making and practice. • Have developed the skills to critically appraise research evidence, and have opportunities to incorporate this knowledge into their practice in clinical placements as well as competencies of participating in education/development emerge in this year. |
| Senior Sophister or fourth year (SS) | In the fourth year the student, having acquired a solid grasp of the fundamental elements and methodology of a particular discipline and a broad base of knowledge, is in a position to undertake advanced intellectually demanding work requiring extensive independent research; the critical evaluation of data; the search for new | In the final year, the focus of the programme is the preparation for entry into the physiotherapy community as graduates. The goals are to develop advanced knowledge in key areas of:  
- Professional issues;  
- Professional practice;  
- Scientific investigation & innovation; and  
- To complete the final | In the final year, the students continue to develop their physiotherapy practice education. They compete their final clinical assessment. In addition, consistent with the College requirements, they undertake independent research and data analysis. The Scientific Investigation and Advances in Physiotherapy Practice modules require advanced thinking, analysis and innovation. Students combine group work with individual | In addition to comprehension, application, communication, and interpersonal skills, the students build on their specialist knowledge and knowledge generation and translation. There is a focus in the final year on complexity and the development of |
interpretations; and the rigour, discipline and independence of effort that are designed to develop the mental capacities and creative skills.

| Modules completed | Scientific Investigation, Advances in Physiotherapy Practice, Sports & Exercise Medicine, Professional Issues, Ergonomics, Clinical Practice | aspects of their practice education in a last clinical placement. The students work in groups and are expected to be self-directed and autonomous in their management of both submissions for the modules of Scientific Investigation and Advances in Physiotherapy Practice. Seminars are provided from experts within the physiotherapy community and support is provided by the academic staff but the students are also expected to work independently and seek advice and assistance as required. The approach in this final year is ensure that the students will be independent practitioners when qualified, able to be creative and innovative when required in the development of services for physiotherapy, have the insight to know when they require assistance and how to source that help. endeavour. In both Professional Issues and Advanced Physiotherapy Practice they become familiar with aspects of the health, professional and regulatory environments in which they will be expected to practice. They develop more specialist knowledge in the area of sports and exercise medicine and ergonomics through those eponymous modules. Hence the EL-GCs not previously covered are now explored; for example, service development in the context of ‘Planning & maintaining a quality service’. In addition, the students learn more about social and political issues, inequalities and non-discriminatory practice and develop a greater appreciation of professional development and contribution to the profession – all graduate attributes of the Health Science Faculty. | independent scholarship. |