

Bachelor of Science Physiotherapy



Bachelor of Science: Physiotherapy

MISSION

The SRU's Bachelor of Science in Physiotherapy's mission is to empower aspiring physiotherapists with the knowledge, skills and compassion needed to enhance human-health and well-being. Through evidence-based practice, interdisciplinary collaboration, and community engagement, we strive to produce graduates who excel in clinical care, research and leadership. Our commitment extends beyond rehabilitation, it encompasses prevention, education, and advocacy.

At Springfield Research University, our Bachelor of Science in Physiotherapy program is dedicated to preparing students for successful careers in the dynamic field of physiotherapy. Our mission rests on three fundamental pillars:

1. Academic Excellence:

- We maintain rigorous standards, fostering critical thinking and intellectual growth. Through engaging coursework, practical training, and evidence-based practice, we empower students to excel in the complex world of physiotherapy.
- Students gain a solid foundation in anatomy, biomechanics, exercise physiology, and rehabilitation techniques.

2. Cutting-Edge Research:

- Our faculty and students actively contribute to advancing physiotherapy practice. By addressing real-world challenges, exploring innovative treatment modalities, and shaping clinical guidelines, we drive positive change within the field.
- Students engage in research projects, clinical trials, and evidence synthesis, enhancing their ability to provide evidence-based care.

3. Societal Impact:

- We recognize our responsibility to society. Our graduates are not only skilled clinicians but also ethical leaders who advocate for patient well-being, health promotion, and community health.
- We empower them to make meaningful contributions to individual lives and public health, promoting physical well-being and quality of life.

The Physiotherapy program at Springfield Research University is committed to training skilled practitioners who blend science, compassion, and innovation. Our mission is to help individuals regain mobility, prevent injury, and enhance overall well-being. Through evidence-based practice, hands-on training, and a passion for healing, we prepare graduates to make a lasting impact on the lives of their patients.

The **Bachelor of Science in Physiotherapy** program at Springfield Research University (SRU). Physiotherapy, also known as physical therapy, is a dynamic field that plays a crucial role in improving people's health and well-being. The Physiotherapy program at SRU is designed to prepare students for rewarding careers as physiotherapists. Students learn how to assess, diagnose, and treat a wide range of musculoskeletal, neurological, and cardiopulmonary conditions. The curriculum integrates theoretical knowledge, practical skills, and clinical experience.

1. Anatomy and Physiology:

- In-depth study of the human body's structure and function.
- Understanding how different systems work together.

2. **Biomechanics and Kinesiology:**

- Exploration of movement patterns, joint mechanics, and muscle function.
- Application to therapeutic exercises and rehabilitation.

3. Clinical Assessment and Diagnosis:

- Learning to assess patients, identify impairments, and formulate treatment plans.
- Hands-on practice in clinical settings.

4. **Therapeutic Interventions:**

- Techniques such as manual therapy, exercise prescription, and electrotherapy.
- Rehabilitation for injuries, surgeries, and chronic conditions.

5. **Neurorehabilitation:**

- Understanding neurological conditions (e.g., stroke, spinal cord injury).
- Strategies to improve motor function and independence.

6. **Cardiopulmonary Rehabilitation:**

- Managing cardiovascular and respiratory conditions.
- Exercise programs for heart health and lung function.

7. **Professional Ethics and Communication:**

- Emphasis on ethical practice, patient-centered care, and effective communication.
- Interacting with patients, families, and healthcare teams.

8. Clinical Placements:

- Practical experience in hospitals, clinics, and community settings.
- Applying knowledge under supervision.

RATIONALE FOR THE BACHELOR OF SCIENCE IN PHYSIOTHERAPY

The **Bachelor of Science in Physiotherapy** program at Springfield Research University is purposefully designed to prepare students for rewarding careers in healthcare. Rooted in academic excellence, this program equips students with essential knowledge, practical skills, and clinical experience. By emphasizing evidence-based practice and patient-centered care, our graduates emerge as competent professionals poised to make a positive impact on health outcomes.

National Needs (Eswatini):

1. Quantitative Expertise:

- Eswatini requires skilled physiotherapists who can navigate complex healthcare scenarios.
- The program equips students with mathematical proficiency and critical thinking abilities to assess patient conditions effectively.

2. Evidence-Based Practice:

- Graduates advocate for evidence-based decision-making, ensuring fairness and equitable treatment.
- By enhancing clinical reasoning, they contribute to better patient outcomes.

3. Policy and Practice:

• The program fosters critical thinking, enabling graduates to engage in research, policy formulation, and informed clinical decision-making at the national level.

Regional Needs (SADC):

1. Harmonization of Practices:

- SADC member states share healthcare challenges.
- The program aligns with SADC's goal of harmonizing clinical frameworks, promoting cooperation, and advancing patient care.

2. Human Capital Development:

- Physiotherapists play a pivotal role in regional health systems.
- The program contributes to building a skilled workforce capable of addressing cross-border health complexities.

3. Healthcare Stability:

- SADC's prosperity relies on informed healthcare practices.
- Our graduates contribute to maintaining health system order, resolving health challenges, and fostering regional well-being.

Purpose of the Program:

1. Clinical Leadership:

- The program educates ethical leaders who champion evidence-based practice, fairness, and patient-centered care.
- Graduates not only assess patient data but also shape clinical policies and protocols.

2. Cutting-Edge Research:

- Students engage in specialized clinical research, addressing contemporary health issues.
- Their findings contribute to evidence-based practice, risk assessment, and practical solutions.

3. Community Impact:

• The program prepares graduates to drive positive change through clinical practice, patient management, and health system analysis.

PROGRAM LEARNING OBJECTIVES

The Bachelor of Science in Physiotherapy program at Springfield Research University is purposefully designed to prepare students for rewarding careers in healthcare. Rooted in academic excellence, this program equips students with essential knowledge, practical skills, and clinical experience. By emphasizing evidence-based practice and patient-centered care, our graduates emerge as competent professionals poised to make a positive impact on health outcomes. Let's delve into the details of how this program aligns with national and regional needs, as well as its overall purpose.

1. Clinical Excellence:

- **Knowledge and Competence:** Develop expertise in physiotherapy skills to provide exceptional client-centered healthcare services.
- **Evidence-Based Practice:** Apply the latest research and evidence to clinical decisionmaking, ensuring optimal patient outcomes.
- Ethical and Professional Responsibility: Uphold the highest standards of ethical conduct and professionalism in patient care.

2. Collaborative Leadership:

- Effective Communication and Teamwork: Cultivate strong communication skills to collaborate seamlessly with patients, colleagues, and interdisciplinary teams.
- **Leadership Skills:** Exhibit leadership qualities within healthcare settings, driving positive change and fostering a collaborative environment.

3. Critical Thinking and Innovation:

- **Problem-Solving:** Analyze and solve complex clinical challenges through critical thinking and innovative approaches.
- Lifelong Learning: Engage in continuous learning to stay abreast of advancements in physiotherapy practice.

4. Technopreneurship and Management:

- **Business Acumen:** Apply technopreneurial competencies to physiotherapy management and business practices.
- **Technological Integration:** Understand the intersection of technology, entrepreneurship, and healthcare for sustainable impact.

5. Community Impact:

- **Transforming Lives:** Our guiding philosophy is that the highest level of attainment is measured by the extent of impact any endeavor has on lives in communities.
- Intellectual Property and Products: Our research focuses on producing intellectual property and innovative products that impact industry, education, business, and healthcare.

6. Global Research Standards:

- University Research Institutes and Networks: We create research institutes, centers, and networks aligned with our strengths and societal needs.
- Attracting Top Talent: By attracting the best teaching and learning talent, we shape new academic disciplines and lead in transformative research.
- **Strategic International Partnerships:** Collaborating globally, we address local and global challenges through agile research approaches.

PROGRAM LEARNING OUTCOMES

Knowledge

Integrate scientist's knowledge necessary and significant for the management operation related to physiotherapeutic field.

- **Practical Skills** Perform effective physiotherapeutic skills, interpret assessment finding and evaluate the outcome.
- Social Skills and Responsibilities
 Demonstrate sensitivities and responsibilities towards the community, culture, religion
 and environment.
- Ethics, Professionalism and Humanities Commit professionally, ethically in line with physiotherapy Code of Conduct.
- Communication, Leadership and Team skills Demonstrate effective teamwork communication and leadership skills.
- Scientific Methods, Critical thinking and Problem Solving Recommend creative innovative and effective solution to clinical practices in Physiotherapy based on scientific research findings.
- Lifelong Learning and Information Management Skills Engage in lifelong learning and physiotherapy professional development.
- Entrepreneurship and Managerial Skills Enhance entrepreneurship skills in physiotherapy management, business practices and technopreneurial competencies.

ENTRY REQUIREMENTS

The student must have 6 passes in SGCSE/GCE/IGCSE O' Level including a pass with Grade C or better in English Language and at least four other subjects, special: **A-Level**: Mathematics, and any other two from Biology, Chemistry, Combined Science, Physics, Physical Science and/or Human Social Biology. Faculty may set mature entry requirements subject to approval by Senate.

CAREER OPPORTUNITIES

Graduates produced in this program will not only contribute to medical and health services, but to universities, public health agencies, fitness laboratories and private research agencies.

- Physiotherapist
- Teaching Staff

- Therapy Manager
- Researcher
- Research Assistant
- Sports Physio Rehabilitator
- Sports Physiotherapist
- Specialized Physiotherapist in orthopaedic, paediatrics, geriatrics, women and men's health, etc.
- Self-employed private physiotherapist

ASSESSMENT

Assessment within our program is designed to comprehensively evaluate students' knowledge, skills, and clinical competencies. We employ a multifaceted approach that aligns with the unique demands of physiotherapy practice:

- 1. Clinical Competence Assessment:
 - Coursework: Rigorous coursework serves as the foundation for assessment. Students engage in assignments, quizzes, and active participation in class. This assesses their understanding of anatomical, physiological, and biomechanical concepts relevant to physiotherapy.
 - Clinical Skills Evaluation: Practical assessments focus on hands-on skills, patient interactions, and clinical reasoning. Students demonstrate their ability to apply theoretical knowledge in real-world scenarios.

2. Research and Evidence-Based Practice:

- Research Projects: Through research projects, students explore specialized topics within physiotherapy. They analyze patient data, critically evaluate evidence, and present well-reasoned arguments. This enhances their research and analytical abilities.
- **Evidence-Based Practice Assignments:** Students learn to integrate research findings into clinical decision-making. They assess the effectiveness of interventions based on current evidence.

3. **Problem-Solving and Critical Thinking:**

- **Case Studies:** Students analyze complex clinical cases, identifying patient needs, formulating treatment plans, and evaluating outcomes. This sharpens their problem-solving skills.
- **Clinical Simulations:** Practical assessments simulate real-world scenarios, allowing students to apply critical thinking to patient management.

4. **Professionalism and Communication:**

- **Patient Interaction Assessments:** Students demonstrate effective communication, empathy, and professionalism during patient interactions.
- **Teamwork and Leadership:** Collaborative assessments emphasize teamwork, leadership, and interdisciplinary communication.
- 5. Community Engagement and Practical Experience:

- **Clinical Placements:** Students participate in supervised clinical placements, applying their knowledge and skills in diverse healthcare settings.
- **Community Projects:** Engaging with community health initiatives allows students to make a positive impact beyond the classroom.

Our holistic assessment approach ensures that graduates are well-prepared to excel as skilled and compassionate physiotherapists, contributing to improved health outcomes and quality of life.

The Bachelor's Degree shall:

The Bachelor's degree program in Bachelor of Science in Physiotherapy at Springfield Research University is designed to equip students with the skills and knowledge necessary for a successful career in this dynamic field. Here are the key features of our program:

- 1. Duration:
 - The program spans **four years** for full-time students or **six years** for part-time students, including an industrial attachment or internship period.
- 2. Semester Structure:
 - Each academic year consists of **two semesters**.
 - Semester Duration: Each semester runs for 20 weeks.
 - Orientation Week: One week dedicated to orientation.
 - **Teaching Weeks**: A minimum of **14 weeks** for instruction.
 - Mid-Semester Break: A one-week break for students.
 - **Examination Period**: Two weeks for final exams.
 - **Results Processing**: Two weeks allocated for marking and result processing.

Our program ensures a rigorous academic experience while allowing flexibility for part-time students. Students engage in hands-on learning, theoretical coursework, and practical projects, preparing them for the exciting challenges of the Health and Medical industry.

Special Departmental Regulations

- 1. Course Completion Requirements:
 - All Core, Prerequisite, Required, General, and Elective courses within the degree program are compulsory. Students must pass these courses with a minimum grade of 50% to graduate.
 - However, during the fourth and fifth years, all courses must be passed with a minimum grade of 60% (equivalent to a CGPA of 3.00) to qualify for graduation.
- 2. Optional Courses:

• Optional courses do not contribute to the final grade. Their marks are excluded from the computation of the overall grade.

3. Externalization of Courses:

• All courses within the degree programs must be completed internally. Externalization is not permitted.

4. Quality Control and Evaluation:

• Regular academic audits and reviews occur every four years, overseen by external moderators. Internal program evaluation is ongoing.

5. Competence and Preparation:

• The courses offered in the Bachelor of Science in Physiotherapy program provide adequate competences, preparing students for professional practice at the required academic level.

6. Core and Prerequisite Courses:

 Students must pass all Core and Prerequisite courses with a minimum grade of **50%** before progressing to the next level or enrolling in additional courses.

Degree Award and Classification

- Upon successful completion of all **Core**, **Required**, and **Education** courses, as well as meeting the program requirements, a student will be awarded the degree of **Bachelor of Science in Physiotherapy at** the end of the final year.
- The **normal classification** of a bachelor's degree is determined based on the academic performance during the third and fourth years of study.

Rationale to Course Numbering

At Springfield Research University, we meticulously design our Bachelor of Science in Physiotherapy curriculum to empower students with the knowledge and skills needed to thrive in this dynamic field. Our course numbering system serves as a roadmap, guiding students through their academic journey - ****100-level courses**** introduce foundational concepts. - ****200-level courses**** build on those foundations. - ****300-level courses**** explore more specialized topics. - ****400-level courses**** are advanced and often include research or project components. Let's delve into the reasons behind our thoughtful approach:

- 1. **Logical Progression**: Our course numbers reflect a logical progression. Foundational concepts begin with the "100" series, followed by deeper explorations in the "200" and "300" levels. Advanced topics and research opportunities reside in the "400" series.
- 2. **Prerequisites and Coherence**: Clear numbering helps students understand prerequisites and co-requisites. For instance, a 200-level course assumes knowledge from related 100-level courses, ensuring a coherent learning experience.
- 3. **Specialization and Depth**: As students advance, higher-level courses delve into specialized areas such as oral anatomy and physiology, physiotherapy materials and techniques. The numbering system communicates this depth of study.

- 4. Alignment with Program Goals: Each course number aligns with our program's learning outcomes. Whether it's mastering anatomy or diving into kinetics materials, students can track their progress.
- 5. **Transferability**: Consistent numbering facilitates credit transfer between institutions, supporting seamless academic mobility.

In summary, our course numbering isn't just a sequence—it's a deliberate framework that enhances learning, fosters curiosity, and prepares our students for impactful careers in Physiotherapy industry. Bachelor of Science in Physiotherapy courses simplify the course numbering system.

100-Level Courses:

- **1. BPT 101:** Introduction to Physiotherapy
- 2. BPT 110: Anatomy and Physiology for Physiotherapists
- 3. BPT 120: Biomechanics and Movement Science

200-Level Courses:

- 1. BPT 201: Musculoskeletal Assessment and Rehabilitation
- 2. BPT 210: Neurological Rehabilitation
- **3. BPT 220:** Cardiopulmonary Physiotherapy

300-Level Courses:

- 1. **BPT 301:** Sports and Exercise Physiology
- 2. BPT 310: Pediatric Physiotherapy
- 3. BPT 320: Geriatric Rehabilitation

400-Level Courses:

- 1. **BPT 401:** Research Methods in Physiotherapy
- 2. BPT 410: Clinical Internship and Practice
- 3. BPT 420: Advanced Topics in Physiotherapy

CREDIT TRANSFER, ACCUMULATION AND DISTRIBUTION OF NOTIONAL HOURS

The Bachelor of Science in Physiotherapy is a four (4) year program. The student is expected to accumulate 495 credit points to be considered to have met the requirements of the Bachelor of Science in Physiotherapy must pass each module by at least 50%.

- Level 1 = minimum of credits 124 (1240 notional hours of study)
- Level 2 = minimum of credits 124 (1240 notional hours of study)
- Level 3 = minimum of credits 124 (1240 notional hours of study)
- Level 4 = minimum of credits 124 (1240 notional hours of study)

TOTAL credit points 496 (4960 notional hours of study)

Credit Transfer and Accumulation

- 1. Credits are derived from engagement of students in learning activities during lectures, seminars, tutorials, micro or macro field trips, directed and self-directed learning and writing examination tests and assignments.
- 2. Modules from the health and medical faculty are worth 12 credit. Lecture attendance is compulsory. Students who attend less than 80% of lessons will not be allowed to sit for their sessional examinations.

Weighting

The degree class shall be based on weighting the results from part 1, 2, 3 and 4, the Degree weighting shall be as follows:

Level 1	20%
Level 2	20%
Level 3	30%
Level 4	30%

Distribution of Notional Hours

Module	Lecture Hrs	Tutorials/ Seminars	Self- Directed Study	Assignment Tests/Exams	Notional Hrs	Credits
BPT000	50	20	25	25	120	12
PROJECT	0	0	40	100	140	14

ASSESSMENT METHODS

- 1. Formative Assessment (30%):
 - **Class Participation:** Actively engage in discussions, seminars, and practical activities. This ongoing feedback enhances learning during the course.
 - **Quizzes and Short Tests:** Regular assessments of specific anatomical, physiological, and clinical topics.
 - **Draft Assignments:** Receive feedback on early drafts of assignments, refining your work.
 - **Peer Review:** Collaborate with peers to review and improve each other's clinical reasoning and treatment plans.

2. Summative Assessment (40%):

- **Final Examinations:** Comprehensive exams covering the entire program content, assessing theoretical knowledge and clinical application.
- **End-of-Semester Papers:** Demonstrate analytical skills by critically evaluating research articles related to physiotherapy practice.
- **Oral Presentations:** Communicate effectively, presenting clinical cases, treatment approaches, and evidence-based recommendations.

3. Continuous Assessment (30%):

- Clinical Placement: Engage in supervised clinical placements, applying theoretical knowledge to real patients. Assessments include patient interactions, treatment planning, and clinical reasoning.
- **Assignments and Projects:** Regular tasks contribute to the overall grade, emphasizing practical skills and evidence-based practice.

• **Attendance and Participation:** Active engagement in lectures, workshops, and community health initiatives.

These assessment methods align with our commitment to academic excellence and the development of competent and compassionate physiotherapists.

Teaching Methods

At Springfield Research University (SRU), we are committed to employing a diverse array of teaching methods to ensure a comprehensive and engaging learning experience for our students. Our teaching methods are carefully selected to align with the programme's objectives and to meet the needs of our diverse student body. The following are the key teaching methods utilized across all SRU programmes:

1. Lectures:

 Lectures are used to introduce and explain key concepts, theories, and principles. They provide a structured and systematic approach to delivering content, allowing students to gain a solid foundation in their respective fields. Lectures are often supplemented with visual aids, multimedia presentations, and interactive elements to enhance understanding and engagement.

2. Seminars:

• Seminars are interactive sessions that promote critical thinking and in-depth discussion on specific topics. Students are encouraged to actively participate, share their perspectives, and engage in debates. Seminars provide an opportunity for students to develop their analytical and communication skills.

3. Workshops:

• Workshops are hands-on sessions that focus on practical skills and applications. These sessions allow students to engage in experiential learning, apply theoretical knowledge to real-world scenarios, and collaborate with peers on projects and activities. Workshops are designed to foster creativity, problem-solving, and teamwork.

4. Problem-Based Learning (PBL):

• Problem-Based Learning is a student-centered approach that involves presenting students with complex, real-world problems to solve. Students work in small groups to research, discuss, and propose solutions, developing critical thinking and collaborative skills in the process. PBL encourages independent learning and active engagement.

5. Case Studies:

 Case studies are used to analyze real-life situations and decision-making processes. Students examine and discuss case studies to understand the context, identify key issues, and evaluate possible solutions. This method helps students develop their analytical and problem-solving abilities while relating theoretical concepts to practical situations.

6. Clinical Practice:

• For programmes that include a clinical component, such as Health and Medical Sciences, clinical practice is an integral part of the curriculum. Students gain handson experience in clinical settings, working under the supervision of qualified professionals. This method provides valuable opportunities for students to apply their knowledge, develop clinical skills, and gain insights into professional practice.

7. Research Projects:

 Research projects are designed to cultivate a culture of inquiry and innovation. Students engage in independent or group research projects, exploring topics of interest and contributing to the body of knowledge in their field. Research projects develop students' research skills, critical thinking, and ability to communicate findings effectively.

8. Online Learning:

 Online learning is incorporated to provide flexible and accessible education. SRU utilizes online platforms to deliver lectures, conduct discussions, and facilitate collaborative projects. Online learning allows students to access course materials, participate in virtual classrooms, and engage with peers and instructors remotely.

9. Continuous Assessment:

 Continuous assessment methods, such as quizzes, assignments, and presentations, are used to monitor students' progress and provide ongoing feedback. These assessments help identify areas for improvement and ensure that students are meeting learning objectives throughout the course.

10. Peer Learning:

• Peer learning encourages students to collaborate and learn from each other. Group projects, study groups, and peer review sessions provide opportunities for students to share knowledge, offer feedback, and support each other's learning journey.

At SRU, our commitment to employing diverse and effective teaching methods ensures that our students receive a well-rounded education that prepares them for success in their chosen fields. We continuously review and enhance our teaching practices to provide the best possible learning experience for our students.

Delivery Methods

At Springfield Research University (SRU), we utilize a variety of delivery methods to ensure that our educational programmes are accessible, engaging, and effective. Our delivery methods are designed to cater to the diverse needs of our students and to provide flexible learning opportunities. The following are the key delivery methods employed across all SRU programmes:

1. In-Person Delivery:

- **Classroom Lectures:** Traditional classroom lectures provide a structured and interactive environment where students can engage with instructors and peers. These sessions often include discussions, presentations, and multimedia resources to enhance learning.
- **Laboratory Sessions:** For programmes that require practical and experimental learning, laboratory sessions are conducted in specialized labs equipped with the necessary tools and equipment. These hands-on sessions allow students to apply theoretical knowledge in a controlled environment.

• **Clinical Placements:** Health and Medical Sciences programmes include clinical placements in hospitals, clinics, and healthcare facilities. These placements provide students with real-world experience under the supervision of qualified professionals.

2. Online Delivery:

- Virtual Classrooms: Online platforms are used to deliver lectures, conduct discussions, and facilitate collaborative projects. Virtual classrooms enable students to access course materials, participate in live sessions, and engage with peers and instructors from remote locations.
- **Recorded Lectures:** Recorded lectures are made available for students to access at their convenience. This flexible approach allows students to review and revisit course content as needed.
- **Online Assessments:** Online assessments, including quizzes, assignments, and exams, are conducted through secure online platforms. These assessments provide timely feedback and help monitor students' progress.

3. Blended Learning:

- **Hybrid Courses:** Blended learning combines in-person and online delivery methods to provide a flexible and comprehensive learning experience. Hybrid courses may involve alternating between classroom sessions and online activities.
- Flipped Classroom: In the flipped classroom model, students access instructional content online before class and use in-person sessions for interactive, application-based activities. This approach encourages active learning and deeper engagement with the material.

4. Independent Study:

- **Self-Paced Learning:** Self-paced learning allows students to progress through course materials at their own speed. This method is ideal for students who prefer to learn independently and manage their own schedules.
- **Research Projects:** Independent research projects provide students with the opportunity to explore topics of interest, develop research skills, and contribute to the body of knowledge in their field. Faculty advisors provide guidance and support throughout the research process.

5. Collaborative Learning:

- **Group Projects:** Group projects foster teamwork and collaboration among students. These projects often involve problem-solving, research, and presentations, allowing students to learn from each other and develop interpersonal skills.
- **Peer Review:** Peer review sessions encourage students to provide and receive constructive feedback on each other's work. This method promotes critical thinking, reflection, and improvement.

6. Experiential Learning:

 Internships and Work Placements: Internships and work placements provide students with practical experience in their chosen field. These opportunities allow students to apply their knowledge in real-world settings, develop professional skills, and build industry connections. • Field Trips and Excursions: Field trips and excursions offer experiential learning opportunities outside the classroom. These activities provide students with firsthand exposure to relevant sites, industries, and practices.

7. Continuous Assessment:

- Formative Assessments: Formative assessments, such as quizzes, assignments, and in-class activities, provide ongoing feedback to students and help track their progress. These assessments are designed to support learning and identify areas for improvement.
- **Summative Assessments:** Summative assessments, including final exams, projects, and presentations, evaluate students' overall performance and mastery of course content.

At SRU, our diverse delivery methods ensure that students receive a well-rounded and flexible education that caters to their individual learning preferences. We are committed to continuously enhancing our delivery methods to provide the best possible learning experience for our students.

COURSES AND MODULES

Code	Course	Lectures	Practical	Credits
BPT100	Biophysics	120	0	12
BPT101	Population Health and Safety	120	0	12
BPT102	Human Anatomy and Physiology	120	0	12
BPT103	Physiotherapy Techniques I	20	120	14
BPT104	Professional Health Principles	120	0	12
	Total			62

Year 1 Semester 2

Code	Course	Lectures	Practical	Credits
BPT105	Functional Anatomy	120	0	12
BPT106	Psychology I	120	0	12
BPT107	Clinical Physiotherapy I	20	100	12
BPT108	Physiotherapy Techniques II	20	120	14
BPT109	Communication for Academic Purposes	120	0	12
	Total			62

Year 2 Semester 3

Code	Course	Lectures	Practical	Credits
BPT210	Biomechanics	120	0	12
BPT211	Pathophysiology	120	0	12
BPT212	Research Methods	120	0	12
BPT213	Physiotherapy Techniques III	20	120	14
BPT214	Communication for Professional Purposes	120	0	12
	Total			62

Year 2 Semester 4

Code	Course	Lectures	Practical	Credits
BPT215	Neuroanatomy	120	0	12

BPT216	Clinical Pharmacology	20	100	12
BPT217	Psychology and Health	120	0	12
BPT218	Kinesiology	20	120	14
BPT219	Introduction to Pharmacology	120	0	12
	Total			62

Year 3 Semester 5

Code	Course	Lectures	Practical	Credits
BPT320	Cardiorespiratory Physiotherapy	60	60	12
BPT321	Neurological Physiotherapy	60	60	12
BPT322	Orthopedic Physiotherapy	60	60	12
BPT323	Clinical Education A (Acute Care)	20	120	14
BPT324	Radiology	60	60	12
	Total			62

Year 3 Semester 6

Code	Course	Lectures	Practical	Credits
BPT325	Exercise Rehabilitation	60	60	12
BPT326	Neurological Rehabilitation	60	60	12
BPT327	Clinical Sciences	60	60	12
BPT328	Musculoskeletal Physiotherapy	20	120	14
BPT329	Introduction to Statistics	120	0	12
	Total			62

Year 4 Semester 7

Code	Course	Lectures	Practical	Credits
BPT430	Pediatric Physiotherapy	60	60	12
BPT431	Physiotherapy for Chronic illness and Disease	60	60	12
BPT432	Clinical Education B (Rehabilitation)	20	100	12
BPT433	Clinical Education C (Ambulance Care)	20	120	14
BPT434	Gender-Based Health	120	0	12
	Total			62

Year 4 Semester 8

Code	Course	Lectures	Practical	Credits
BPT435	Complex Cases and Professional Issues	60	60	12
BPT436	Integrating Research into Physiotherapy	60	60	12
BPT437	Clinical Education D (Pediatrics)	20	100	12
BPT438	Clinical Education E (Advanced Care)	20	120	14
BPT439	Physiotherapy Research Project	0	120	12
	Total			62

COURSE DESCRIPTIONS

POPULATION AND HEALTH AND SOCIETY

The course will provide you with Foundation concepts and factors relating to population health in our society. The social and environmental determents of health will be introduced and their roles towards disease health and wellbeing will be explored. The Health Care Systems will be compared with alternative models to examine strengths and challenges in advancing population health.

HUMAN ANATOMY AND PHYSIOLOGY I

The course covers the biochemistry and histology, general anatomy and physiology of the major body systems including the central and peripheral nervous systems, integumentary system, musculoskeletal system (bones. Muscles and joints), special sense and endocrine system. Emphasis will be placed on the interconnection and relationship between structure and function at every level of organization.

INTRODUCTION TO PHYSIOTHERAPY PRACTICE

This course introduces students to the concept of physiotherapy as a profession, including regulatory, ethical and legal frameworks underpinning practice within the context of the changing health environment. In addition, students will be introduced to fundamental aspects of physiotherapy practice including, gathering, analyzing and problem-solving information through a process of clinical reasoning. Students will also develop practical skills in relation to assessment of movement, patient manual handling and transfers and patient education regarding gait and use assistive devices.

PROFESSIONAL HEALTH COMPETENCIES

The course introduces skills for studying and working in health science. Student will gain understanding of the interdisciplinary science practice in the 21st Century and how professions, client and community expectations I health science. Students will learn foundations competences that will underpin their academic development and their safe, responsible and ethical practice in health science service environments.

FUNCTIONAL ANATOMY

The course covers in depth the functional anatomy of the musculoskeletal system. Special attention is given to the relationship between form and function, the terminology used to describe human movement and through knowledge of the body landmarks, joints, muscle attachment's, innervation, blood supply along with detailed actions of specific muscles and muscle groups. Emphasis is on a practical functional context with the relevance to clinical applications such as surface and imaging anatomy, and the anatomical basis of common injuries. Learning experience intends to stimulate proactive deep approach in learning anatomy motivated by the outcomes driven from specialist work within the Health professions.

HUMAN ANATOMY AND PHYSIOLOGY 2

Human Anatomy and Physiology 2 systematically covers anatomy and physiology at an introductory level. The course is designed to provide students especially those in clinical health science programs, with an overview of body systems and their functions, to ensure a suitable basis for their future studies. The course covers the basic structure and function of the major body systems such as cardiovascular, respiratory, digestive, urinary, reproductive and lymphatic, the course also explores the physiological process involved in the immune

response, cell metabolism, regulation of body fluids and acid-base balance. Emphasis is placed on the interconnection and relationship between structure and function at every level of organization.

FOUNDATIONS OF RESEARCH AND EVIDENCE-BASED PRACTICE

This course considers the reasons and roles for evidence-based practice and research on healthcare, introducing student to core concepts and relevant terminology. skills are developed for asking Clinical or professional healthcare questions and translating these skills into search strategies for finding evidence. To make sense of the evidence, students are introduced to quantitative and qualitative research methods, types of data, how data are described and how biostatistics is used to provide meaning to research data.

COMMUNICATION FOR ACADEMIC PURPOSES

Good communication within the healthcare setting is associated within proved outcomes. The course introduces student to foundation knowledge and skills required for effective communication with various stakeholders I varied and complex health situations. The course is skills-based and uses case studies to create scenarios to which student learn to respond. There is a focus on the client interview and various questioning techniques designed to facilitate a therapeutic relationship as a means to promote communication within, between and across health professional disciplines, teams and government agencies is explored. Written forms of documentation as well as communication skills required to communicate health information to client's groups and wider community are also presented. The course uses a "student capital" framework to facilitate reflection on current communication skills and those required for success at the university and in future practice.

BIOMECHANICS

The study of biomechanics, the science that examines the forces acting upon a structure and the effects of these forces, is essential for understanding how the human body moves during daily activities, exercise and sport. It is also important when considering where problems may arise with human movement, such as with disease process, over exercising and injury and postural pathology. The course is designed to introduce the student biomechanics by studying the mechanical principles of human movement: balance movement: balance and equilibrium mechanical factors involved in tissue type and motion, and the analysis of human movement.

PATHOPHYSIOLOGY

The course is designed to equip student with a detailed knowledge of pathophysiology process evident in a number of key human diseases that are vocationally relevant to these students. The content is organized using a systems-based approach. Problem-based learning methods will be adapted in the tutorial component of this course to help student develop critical problem-solving skills.

RESEARCH METHODS (QUANTITATIVE AND QUALITATIVE)

The course further explores research methods used to acquire knowledge in healthcare. This includes research designs, international standards, key statistics, and interpretation of results. The range of health research methods will be presented, and studies about treatment effectiveness9 clinical trials and systematic reviews), diagnostics effectiveness and qualitative approaches will be explored in detail. Pathways for early-career research are also introduced.

CULTURE, DIVERSITY AND HEALTH

The course introduces skills for understanding and engaging effectively with the culturally and socially diverse world in which we live and work. Indigenous Africa is a major theme and students will gain an appreciation of the achievement and needs of indigenous Africans. The course examines cultural safety more broadly and puts these issues in context of health professionals handling culturally different health philosophies and practices. Cultural diversity is increasingly recognized as a major issue in the delivery of health care and a major determinant indigenous health.

NEUROANATOMY

This course builds on the human anatomy and physiology studied in first and second year, equipping students with detailed knowledge of functional neuroanatomy with particular emphasis on the central nervous system. Cadaver specimens are used to facilitate the learning of spatial relationships between structure. The study of neurological function and dysfunction integrates man previously learned scientific principle.

CLINICAL PHARMACOLOGY

The course explores in depth clinical pharmacology fundamental to the practice of allied health and complimentary medicine. General principles of pharmacology, pharma kinetics and pharma dynamics will be discussed. Key drug categories affecting the main body systems will introduced in terms of their mechanisms of action, adverse reactions and clinical applications. In the context of antimicrobial pharmacology, general concepts of microbiology will be introduced affecting students an understanding of causative microorganisms, the complex relationship between host and pathogen, the pharmacological actions of antimicrobial drugs and the principles of infection control.

PSYCHOLOGY AND HEALTH

This course provides an introduction to the psychology of health, mental health and health related behaviour as relevant to health science professions. Students will be introduced to the principles and applications of psychology and health behaviour, using a biopsychosocial frame work. This will be followed by an examination of the psychological aspects of injury and illness and introduction to psychological interventions related to health concerns. Emphasis sis upon understanding health status and mental illness in light of relevant theory and research.

CORE COMPETENCIES IN PHYSIOTHERAPY

Students build on their knowledge and skills explored in their 1.5 years of physiotherapy study. It focuses on the core competencies of physiotherapy professional practice, which will be developed through a variety experiential and community engagement learning activities. Profession competences addressed in this course include communication, documentation, and reflection, professional and ethical behaviour. In addition, student will develop skills in client assessment, and interpretation of findings to formulate hypothesized problem lists and goals for patients.

CARDIORESPIRATORY PHYSIOTHERAPY

This course builds on the knowledge and skills developed in the first 2.5 years of physiotherapy study. This course focuses on client assessment and evidence-based management in acute cardiorespiratory physiotherapy contexts. Students will extend and advance the knowledge, competences and skills in cardiorespiratory physiotherapy clinical reasoning including assessment, interpretation and prioritization of findings, synthesis of complex information along with the implementation and evaluation of appropriate treatment strategies. The framework will also be applied to the management of patients with cardiorespiratory failure and complex comorbidities. This will require strong communication skills, ethical and professional behaviour and an appreciation of interprofessional care required in acute clinical scenarios including intensive care units.

NEUROLOGICAL PHYSIOTHERAPY

This course builds on the knowledge and skills developed in the first two years of physiotherapy study. It focuses on client assessment and evidence-based management in acute neurological physiotherapy contexts. This will require strong communication skills, ethical and professional behaviour and an appreciation of interprofessional care. Professional competencies addressed in this course will include introductory skills in neurological physiotherapy assessment, interpretation and prioritization of findings along with implementation and evaluation of appropriate treatment strategies.

ORTHOPAEDIC PHYSIOTHERAPY

This course builds on the knowledge and skills developed in the first 2 years of physiotherapy study. It focuses on client assessment and evidence-based management in accurate orthopaedic physiotherapy contexts. This will require strong communication skills, ethical and professional behaviour and an appreciation of interprofessional care. Professional competencies addressed in this course include skills in orthopaedic physiotherapy assessment, interpretation and prioritization and evaluation of appropriate treatment strategies.

CLINICAL EDUCATION A (ACUTE CARE)

This clinical education placement will provide the context for students to apply the theoretical and research knowledge and skills learnt. Student will be required to assess and treat clients in the acute care and intensive care settings. Assessment and treatments will focus on improving or preventing clients' impairments. These may include decreased mobility and function altered by acute illness or injury, which may be combined with a chronic disease or a disability. These assessments and treatments will tend to have a cardiorespiratory physiotherapy focus, but clients may also present with neurological and musculoskeletal conditions which require intervention. Student will therefore, be expected to integrate knowledge and skills learnt across all physiotherapy specific units in their provision of client-centred as well as draw on more general knowledge and skills from earlier stages of this course.

EXERCISE REHABILITATION

Exercise Rehabilitation focuses on the assessment and management of patients using exercise training. All patients' groups are covered but there is an emphasis on cardiorespiratory disorders. Professional competencies addressed in this course include an understanding of the normal physiological responses to exercise, the implications of pathology and exercise. the course also includes further development and practice of skills in the patient physical examination, and critical reasoning such as that hypothesized problem lists and goals for patients are developed. The prescription of exercise-based interventions with other physiotherapy modalities is also covered. This course also facilities the attainment of skills, ethical reasoning, professional behavior and an appreciation of interprofessional care.

NEUROLOGICAL REHABILITATION

The course focuses on client assessment and evidence-based physiotherapy management in neurological rehabilitation. This will require strong communication skills, ethical and professional behavior and an appreciation of interprofessional care. Professional competencies addressed in this module include clinical reasoning in neurological physiotherapy assessment and treatment, implementation and evaluation of evidence-based interventions and management of complex conditions.

EVIDENCE-BASED PRACTICE

In this course students incorporate previous research and biostatistics knowledge to develop new skills for using evidence to inform all aspects of their professional practice. Evidencebased practice uses an enquiry led approach to manage expanding and uncertain knowledge by formulating answerable questions, effectively searching literature, critically appraising evidence validity and results, and to assess significance in clinical practice and healthcare decision-making. Students will incorporate evidence in communication and shared decisionmaking processes for patient scenarios relevant to the program.

MUSCULOSKELETAL PHYSIOTHERAPY

This course focuses on client assessment and treatment using manual physiotherapy techniques. An emphasis is placed on diagnostic reasoning and evaluation, understanding the implications of pathology in physiotherapy context, prioritizing problems and integrating

manual therapy with other physiotherapy treatments. This requires strong communication skills, ethical and professional behaviour and an appreciation of interprofessional care.

PAEDIATRIC PHYSIOTHERAPY

This course aims to prepare the student as competent entry-level practitioner in paediatric physiotherapy. It focuses on understanding the changes which occur from infancy to maturing and the impact of congenital or acquired conditions, or lifestyle diseases causing dysfunction. Clinical and ethical reasoning and family-centred practice are both stressed. The approach will also emphasize the role of physiotherapy within inter-professional teams to prepare for different work settings (acute care, rehabilitation and /or community). The course integrates prior learning from previous years (especially modules related to neurology musculoskeletal, cardiopulmonary physiotherapy and exercise rehabilitation).

PHYSIOTHERAPY FOR CHRONIC ILLNESS AND DISEASE

This course focuses on the role of physiotherapy in chronic disease management. A casebased learning approach will be undertaken to provide students with the theory, research and practice which underpins the assessment and treatment of people with chronic disease. The role of lifestyle factors in the development of chronic disease will be explored, along with health promotion and preventative strategies. The importance of client-central care, which respects culture and diversity, and the multidisciplinary team approach will also be investigated in the context of frequently occurring chronic.

CLINICAL EDUCATION B (REHABILITATION)

The clinical education placement will operationalize the theoretical and research knowledge and skills learnt in the first three years of the course. Students will be required to assess and treat clients un rehabilitation settings. Treatments will be focused on improving client mobility and function that is altered by illness. Injury, chronic disease or a disability. This will assist in preparation for client discharge home or to an appropriate residential facility, as well as enhance functioning at home or in the community.

Assessments and treatments will tend to have a neurological physiotherapy focus, but clients may also present with cardiorespiratory and musculoskeletal conditions which require intervention. Students will therefore be expected to integrate knowledge and skills learnt across all physiotherapy-specific units in the provision of client-centered care as well as draw on their more general knowledge from earlier stages of the course.

CLINICAL EDUCATION C (AMBULATORY CARE)

This clinical education placement will operationalize the theoretical and research knowledge and skills learnt in the first three years of the course. Students will be required to assess and treat clients who present in hospital outpatient department, community settings and private practices. This involves the assessment of the client's impairments, function and disability within their home and community environment. Interventions may include manual and exercise therapy, use of electrophysical agents, taping and bracing; and education regarding both prevention and management of cardiorespiratory conditions that require intervention. Students will therefore integrate knowledge and skills learnt across all physiotherapy – specific units in their provision of client-centered care as well as draw on their more general knowledge from earlier stages of the course.

COMPLEX CASES AND PROFESSIONAL ISSUES

In this course, students will further develop their clinical reasoning with respect to clients with complex presentations in areas such as aged care, women's health, return for work, private practice and culturally and linguistically diverse individuals. Complex information will be synthesized such as the theory, research and skills across the spectrum of physiotherapy care and theories related to professionalism, ethics, safety, and communication. This course also contains the discussion of range of recent professional developments in physiotherapy, which are relevant to entry level practitioners. These include registration as a physiotherapist, continuing education, workload control strategies, duty of care responsibilities and quality improvement processes (including critical reflection) employment strategies and career pathways.

INTEGRATING RESEARCH INTO PHYSIOTHERAPY PRACTICE

In this course, students will further develop their evidence-based practice skills and knowledge by applying it in practice settings. This will involve applying the academic knowledge and skills from three prior evidence-based practice and research units by synthesizing it with their clinical experience and skills. Students will be allocated to a topic are from which they will identify a clinical problem or health-related issue. Students will then plan and design a robust research project to answer this question. Students will be expected to reflect on the barriers and facilitators of evidence-based practice and develop strategies and interventions to be used to facilitate the implementation of evidence in practice by clients and health care practitioners.

CLINICAL EDUCATION D (PAEDIATRICS)

This clinical education placement will operationalize the knowledge (theory and research) and skills learnt in Paediatric Physiotherapy. Students will also integrate and apply the knowledge and skills learnt in musculoskeletal, cardiorespiratory and neurological physiotherapy, as well as other health science modules to provide appropriate and holistic family-centered care to paediatric clients. Students will be required to assess and treat paediatric clients in acute hospital, rehabilitation or community settings. This approach to management involves the consideration of a child's age, development, and diagnosis during assessment and treatment. Advanced communication skills are required to educate parents and children on the prevention and management of paediatric conditions.

CLINICAL EDUCATION E (ADVANCED CARE)

This clinical course involves the integration of musculoskeletal, neurological and cardiorespiratory physiotherapy assessment and treatment skills in an advanced physiotherapy care environment. Advanced problem-solving skills will be required to manage complicated client presentations in various clinical environments. Advanced care

environments may include specialty areas such as burns, spinal emergency, intensive care and aged care units within a hospital, or private practice and community-based services where the physiotherapist is the primary care practitioner. Student preferences and prior clinical placement experience will be considered in the clinical placement allocation process. This will help to ensure all students are given the opportunity to explore the breadth of practice of physiotherapy in different environments.

COURSE OUTLINES

Course Title: Biophysics

Course Description:

The Biophysics course provides an interdisciplinary understanding of the physical principles underlying biological systems. You'll explore how physics concepts apply to physiological processes, medical imaging, and biomechanics. The course integrates theory with practical applications relevant to physiotherapy practice.

Learning Objectives:

- 1. Foundations of Biophysics: Develop a solid understanding of biophysical principles.
- 2. **Physiological Systems**: Study the physics of biological systems (e.g., muscles, nerves, cardiovascular system).
- 3. Medical Imaging Techniques: Explore the physics behind X-rays, MRI, and ultrasound.
- 4. **Biomechanics**: Understand how physics influences movement and rehabilitation.

Topics Covered:

- 1. Cellular Biophysics:
 - o Membrane potentials
 - Ion channels and transport
- 2. Muscle Mechanics:
 - Muscle contraction
 - Force generation and energy expenditure
- 3. Medical Imaging Physics:
 - X-ray attenuation
 - Magnetic resonance principles
- 4. Biomechanical Analysis:
 - Joint mechanics
 - o Gait analysis

Assessment:

- Laboratory Work: Apply biophysical concepts through hands-on experiments.
- Written Assignments: Analyze case studies related to physiotherapy practice.
- Final Exam: Assess understanding of course material.

Recommended Reading:

1. "Biophysics: An Introduction" by Rodney Cotterill

2. "Medical Imaging Physics" by William R. Hendee and E. Russell Ritenour

Course Title: Population Health and Safety

Course Description:

The Population Health and Safety course focuses on understanding health at a broader societal level. You'll explore population health issues, safety considerations, and their relevance to physiotherapy practice. The course integrates theoretical knowledge with practical skills for promoting health and preventing injuries.

Learning Objectives:

- 1. **Population Health Awareness**: Develop an understanding of health determinants, social factors, and health disparities.
- 2. Safety Protocols: Learn safety guidelines for patients, practitioners, and the community.
- 3. **Health Promotion Strategies**: Explore evidence-based approaches to improve health outcomes.
- 4. **Advocacy and Education**: Understand the role of physiotherapists in promoting population health and safety.

Topics Covered:

- 1. Social Determinants of Health:
 - Income, education, housing, and access to healthcare
 - Health equity and social justice
- 2. Injury Prevention and Safety:
 - Fall prevention strategies
 - Ergonomics and workplace safety
- 3. Health Promotion:
 - Physical activity promotion
 - Nutrition and lifestyle interventions

4. Advocacy and Community Engagement:

- Collaborating with other healthcare professionals
- Public health campaigns

Assessment:

- Case Studies: Analyze population health scenarios and propose solutions.
- Safety Assessments: Evaluate safety protocols in clinical settings.
- Group Projects: Develop health promotion initiatives.

- 1. "Social Determinants of Health: The Solid Facts" by World Health Organization
- 2. "Injury Prevention: An International Perspective" by Peter Barss

Course Title: Human Anatomy and Physiology

Course Description:

The Human Anatomy and Physiology course provides a comprehensive understanding of the structure and function of the human body. You'll explore both macroscopic and microscopic aspects, including organ systems, tissues, and cellular processes. The course integrates theoretical knowledge with practical applications relevant to physiotherapy practice.

Learning Objectives:

- 1. **Foundations of Anatomy and Physiology**: Develop a solid understanding of the body's organization, homeostasis, and basic functions.
- 2. **Systemic Approach**: Study major organ systems (e.g., cardiovascular, respiratory, nervous, musculoskeletal) and their interrelationships.
- 3. **Cellular and Molecular Mechanisms**: Explore how cellular processes (metabolism, electrophysiology) underpin whole-body function.
- 4. **Clinical Relevance**: Understand anatomical variations, common pathologies, and implications for physiotherapy interventions.

Topics Covered:

1. Introduction to Anatomy and Physiology:

- Levels of organization
- Homeostasis and physiological regulation
- 2. Gross Anatomy and Movement:
 - Musculoskeletal system
 - Joint mechanics and movements
- 3. Cardiovascular and Respiratory Systems:
 - Heart structure and function
 - Blood vessels and gas exchange
- 4. Nervous System and Senses:
 - Neurons and synapses
 - Sensory perception (vision, hearing, touch)

Assessment:

- Lectures and Labs: Attend interactive sessions to reinforce theoretical concepts.
- Practical Demonstrations: Identify anatomical structures on models and cadavers.
- Written Assignments: Analyze case studies related to physiological conditions.
- Final Exam: Assess understanding of course material.

- 1. "Human Anatomy & Physiology" by Elaine N. Marieb and Katja Hoehn
- 2. "Clinical Anatomy for Dummies" by David Terfera and Shereen Jegtvig

Course Title: Physiotherapy Techniques I

Course Description:

The Physiotherapy Techniques I course provides foundational knowledge and practical skills necessary for physiotherapy practice. Students will learn assessment techniques, treatment modalities, and evidence-based interventions. The course integrates theoretical principles with hands-on training to prepare students for clinical settings.

Learning Objectives:

1. Assessment Techniques:

- Understand and apply various assessment methods (e.g., range of motion, strength testing, palpation).
- Interpret assessment findings to inform treatment planning.

2. Manual Therapy Techniques:

- Learn hands-on techniques such as joint mobilization, soft tissue mobilization, and myofascial release.
- Practice safe and effective manual therapy under supervision.

3. Electrotherapy and Modalities:

- Explore the use of electrical modalities (e.g., ultrasound, electrical stimulation) for pain management and tissue healing.
- Understand indications, contraindications, and parameters for each modality.

4. Exercise Prescription:

- Design individualized exercise programs for rehabilitation and prevention.
- Consider patient-specific goals, functional limitations, and evidence-based practices.

Topics Covered:

1. Assessment Techniques:

- Range of motion measurements
- Muscle strength testing
- Postural assessment
- 2. Manual Therapy:
 - Joint mobilization techniques
 - Soft tissue techniques (massage, trigger point release)

3. Electrotherapy and Modalities:

- Ultrasound therapy
- Transcutaneous electrical nerve stimulation (TENS)

4. Exercise Prescription:

- Therapeutic exercises for different conditions (e.g., orthopedic, neurological)
- Progression and modification of exercises

Assessment:

- **Practical Skills Evaluation**: Demonstrate proficiency in assessment and manual techniques.
- Case Studies: Apply knowledge to clinical scenarios.
- Written Assignments: Reflect on treatment planning and exercise prescription.

Recommended Reading:

- 1. "Therapeutic Exercise: Foundations and Techniques" by Carolyn Kisner and Lynn Allen Colby
- 2. "Orthopedic Physical Assessment" by David J. Magee

Course Title: Professional Health Principles

Course Description:

The Professional Health Principles course provides essential knowledge and skills for physiotherapy practice. It focuses on professional conduct, ethical considerations, and foundational principles guiding physiotherapists' interactions with patients, colleagues, and the healthcare system. The course integrates theoretical understanding with practical application in clinical settings.

Learning Objectives:

- 1. Professional Conduct and Ethics:
 - Understand the role of physiotherapists in healthcare.
 - Adhere to ethical standards and legal requirements.
- 2. Effective Communication and Collaboration:
 - Develop communication skills for patient interactions.
 - Collaborate with interdisciplinary teams.

3. Healthcare Systems and Policies:

- Explore healthcare delivery models.
- Understand health policies and regulations.

4. Self-Reflection and Continuous Learning:

- Reflect on professional growth and limitations.
- Engage in lifelong learning.

Topics Covered:

1. Professionalism and Scope of Practice:

- o Code of ethics for physiotherapists
- Professional boundaries

2. Patient-Centered Care:

- Cultural competence
- Informed consent and shared decision-making
- 3. Healthcare Systems and Advocacy:
 - Public health principles
 - Advocacy for patient rights

4. Self-Care and Well-Being:

- Burnout prevention
- Balancing personal and professional life

Assessment:

- Reflective Journals: Document personal insights and growth.
- Case Studies: Apply ethical reasoning to clinical scenarios.
- **Group Discussions**: Engage in discussions on professional dilemmas.

Recommended Reading:

- 1. "Physiotherapy Ethics and Professionalism: A Practical Guide" by Lesley Anne Long and Ruth Grant
- 2. "Health Policy and Politics: A Nurse's Guide" by Jeri A. Milstead

Course Title: Functional Anatomy

Course Description:

The Functional Anatomy course provides a comprehensive introduction to musculoskeletal anatomy for Physiotherapy and Sport Exercise and Health Science students. It serves as a foundation for advanced study in subsequent years. Students will develop knowledge of the musculoskeletal anatomy of the upper limb, lower limb, and spine, alongside basic human biomechanics. The course emphasizes understanding functional movement and exercise.

Learning Objectives:

- 1. **Musculoskeletal Anatomy**: Understand the structure and function of muscles, bones, and joints.
- 2. Biomechanics: Apply basic principles of human movement and mechanics.
- 3. Assessment Skills: Learn techniques for movement analysis, palpation, and surface marking.
- 4. Clinical Application: Relate anatomical knowledge to physiotherapy practice.

Topics Covered:

1. Upper Limb Anatomy:

- Shoulder girdle, arm, forearm, and hand structures
- Functional movements (e.g., reaching, gripping)

2. Lower Limb Anatomy:

- Hip joint, thigh, leg, and foot structures
- Gait analysis and lower limb biomechanics

3. Spinal Anatomy:

- Vertebral column, intervertebral discs, and spinal cord
- Posture and spinal movement

Assessment:

- **Practical Sessions**: Apply anatomical knowledge through movement tasks and palpation.
- Lecture Activities: Engage in video movement analysis and concept reinforcement.
- **Class Test and Exam**: Assess understanding of functional anatomy.

- 1. "Human Anatomy & Physiology" by Elaine N. Marieb and Katja Hoehn
- 2. "Clinical Anatomy for Dummies" by David Terfera and Shereen Jegtvig

Course Title: Psychology II

Course Description:

The Psychology II course builds upon foundational knowledge from Psychology I and explores advanced topics relevant to physiotherapy practice. Students will delve deeper into psychological theories, behavior change strategies, and patient communication. The course integrates theoretical understanding with practical skills for effective patient management.

Learning Objectives:

1. Psychological Theories and Models:

- Understand cognitive, behavioral, and psychosocial theories.
- Apply psychological concepts to patient interactions.

2. Behavior Change Strategies:

- Learn evidence-based techniques for promoting health behavior change.
- Develop skills in motivational interviewing and goal setting.

3. Patient Communication and Empathy:

- Enhance communication skills for effective patient engagement.
- Understand the impact of empathy on patient outcomes.

4. Psychosocial Aspects of Rehabilitation:

- Explore psychological factors influencing recovery and adherence.
- Address patient fears, beliefs, and emotional well-being.

Topics Covered:

1. Health Psychology:

- Stress and coping mechanisms
- Pain perception and management

2. Patient Education and Adherence:

- Effective communication strategies
- Promoting treatment compliance

3. **Psychological Assessment**:

- o Screening for anxiety, depression, and psychosocial risk factors
- Patient-centered assessment tools

Assessment:

- **Case Studies**: Analyze patient scenarios from a psychological perspective.
- Role-Play Exercises: Practice patient communication skills.
- Written Assignments: Reflect on psychological aspects of patient care.

- 1. "Health Psychology: Biopsychosocial Interactions" by Edward P. Sarafino
- 2. "Motivational Interviewing: Helping People Change" by William R. Miller and Stephen Rollnick

Course Title: Clinical Physiotherapy I

Course Description:

The Clinical Physiotherapy I course provides foundational knowledge and practical skills necessary for physiotherapy practice. Students will learn assessment techniques, treatment modalities, and evidence-based interventions. The course integrates theoretical principles with hands-on training to prepare students for clinical settings.

Learning Objectives:

1. Assessment Techniques:

- Understand and apply various assessment methods (e.g., range of motion, strength testing, palpation).
- Interpret assessment findings to inform treatment planning.

2. Manual Therapy Techniques:

- Learn hands-on techniques such as joint mobilization, soft tissue mobilization, and myofascial release.
- Practice safe and effective manual therapy under supervision.

3. Electrotherapy and Modalities:

- Explore the use of electrical modalities (e.g., ultrasound, electrical stimulation) for pain management and tissue healing.
- Understand indications, contraindications, and parameters for each modality.

4. Exercise Prescription:

- Design individualized exercise programs for rehabilitation and prevention.
- Consider patient-specific goals, functional limitations, and evidence-based practices.

Topics Covered:

1. Assessment Techniques:

- Range of motion measurements
- Muscle strength testing
- Postural assessment
- 2. Manual Therapy:
 - Joint mobilization techniques
 - Soft tissue techniques (massage, trigger point release)

3. Electrotherapy and Modalities:

- Ultrasound therapy
- Transcutaneous electrical nerve stimulation (TENS)

4. Exercise Prescription:

- Therapeutic exercises for different conditions (e.g., orthopedic, neurological)
- Progression and modification of exercises

Assessment:

- **Practical Skills Evaluation**: Demonstrate proficiency in assessment and manual techniques.
- Case Studies: Analyze clinical scenarios and propose appropriate interventions.
- Written Assignments: Reflect on treatment planning and exercise prescription.

Recommended Reading:

- 1. "Therapeutic Exercise: Foundations and Techniques" by Carolyn Kisner and Lynn Allen Colby
- 2. "Orthopedic Physical Assessment" by David J. Magee

Course Title: Communication for Academic Purposes

Course Description:

The Communication for Academic Purposes course equips physiotherapy students with essential communication skills necessary for academic success and professional practice. Students will learn how to effectively communicate in various academic contexts, including writing, presentations, and interactions with colleagues and patients. The course integrates theoretical understanding with practical application to enhance communication competence.

Learning Objectives:

1. Academic Writing Skills:

- Develop proficiency in writing academic papers, reports, and reflective essays.
- Understand citation conventions and referencing styles.

2. Oral Communication Techniques:

- Practice delivering effective presentations, including job talks and case studies.
- Enhance public speaking skills and confidence.

3. Interprofessional Communication:

- Collaborate with colleagues from different disciplines.
- Understand the importance of clear communication in multidisciplinary teams.

4. Patient-Centered Communication:

- Apply communication strategies to interact with patients, families, and caregivers.
- Learn active listening and empathy skills.

Topics Covered:

1. Academic Writing:

- Structure of research papers
- Literature review and critical analysis
- Academic vocabulary and tone

2. Oral Presentations:

- Organizing content
- Visual aids and slide design
- Handling questions and feedback

3. Interprofessional Collaboration:

- Effective team communication
- Conflict resolution
- Role clarity and shared decision-making

Assessment:

- Written Assignments: Submit academic essays, literature reviews, and reflective pieces.
- Oral Presentations: Deliver presentations on relevant topics.

• **Group Discussions and Role-Play**: Engage in interprofessional communication scenarios.

Recommended Reading:

- 1. "How to Write and Publish a Scientific Paper" by Robert A. Day and Barbara Gastel
- 2. "Presentation Zen: Simple Ideas on Presentation Design and Delivery" by Garr Reynolds

Course Title: Physiotherapy Techniques II

Course Description:

The Physiotherapy Techniques II course provides foundational knowledge and practical skills necessary for physiotherapy practice. Students will learn assessment techniques, treatment modalities, and evidence-based interventions. The course integrates theoretical principles with hands-on training to prepare students for clinical settings.

Learning Objectives:

1. Assessment Techniques:

- Understand and apply various assessment methods (e.g., range of motion, strength testing, palpation).
- Interpret assessment findings to inform treatment planning.

2. Manual Therapy Techniques:

- Learn hands-on techniques such as joint mobilization, soft tissue mobilization, and myofascial release.
- Practice safe and effective manual therapy under supervision.

3. Electrotherapy and Modalities:

- Explore the use of electrical modalities (e.g., ultrasound, electrical stimulation) for pain management and tissue healing.
- Understand indications, contraindications, and parameters for each modality.

4. Exercise Prescription:

- Design individualized exercise programs for rehabilitation and prevention.
- Consider patient-specific goals, functional limitations, and evidence-based practices.

Topics Covered:

1. Assessment Techniques:

- Range of motion measurements
- Muscle strength testing
- Postural assessment
- 2. Manual Therapy:
 - Joint mobilization techniques
 - Soft tissue techniques (massage, trigger point release)

3. Electrotherapy and Modalities:

- Ultrasound therapy
- Transcutaneous electrical nerve stimulation (TENS)

4. Exercise Prescription:

- Therapeutic exercises for different conditions (e.g., orthopedic, neurological)
- Progression and modification of exercises

- **Practical Skills Evaluation**: Demonstrate proficiency in assessment and manual techniques.
- Case Studies: Analyze clinical scenarios and propose appropriate interventions.
- Written Assignments: Reflect on treatment planning and exercise prescription.

Recommended Reading:

- 1. "Therapeutic Exercise: Foundations and Techniques" by Carolyn Kisner and Lynn Allen Colby
- 2. "Orthopedic Physical Assessment" by David J. Magee

Course Title: Biomechanics

Course Description:

The Biomechanics course provides a comprehensive understanding of the mechanical principles governing human movement. Students will explore the application of biomechanics to physiotherapy practice, including gait analysis, joint mechanics, and functional movement. The course integrates theoretical knowledge with practical skills for assessing and improving movement patterns.

Learning Objectives:

1. Foundations of Biomechanics:

- Understand the principles of mechanics, kinetics, and kinematics.
- Apply biomechanical concepts to human movement.
- 2. Gait Analysis:
 - Learn techniques for analyzing walking and running patterns.
 - o Identify abnormal gait patterns and their implications.

3. Joint Mechanics:

- Explore joint structure, function, and range of motion.
- Understand joint loading during activities.

4. Functional Movement Assessment:

- Assess movement quality and efficiency.
- Develop skills in movement screening.

Topics Covered:

1. Introduction to Biomechanics:

- Terminology and basic concepts
- Forces, moments, and vectors
- 2. Gait Analysis:
 - Phases of gait (stance and swing)
 - Gait deviations and compensations
- 3. Joint Mechanics:
 - Joint types (synovial, fibrous, cartilaginous)

• Joint stability and mobility

- 4. Functional Movement Assessment:
 - Functional tests (e.g., squat, lunge, reach)
 - Movement dysfunction and corrective exercises

- Practical Labs: Apply biomechanical principles through hands-on activities.
- Case Studies: Analyze movement patterns in clinical scenarios.
- Written Assignments: Reflect on biomechanical assessments.

Recommended Reading:

- 1. "Biomechanics of Human Motion: Basics and Beyond for the Health Professions" by Barney F. LeVeau and Don T. Kirkendall
- 2. "Clinical Biomechanics of the Spine" by Augustus A. White III and Manohar M. Panjabi

Course Title: Pathophysiology

Course Description:

The Pathophysiology course provides an in-depth understanding of the underlying mechanisms of diseases and disorders. Students will explore how deviations from normal physiological processes lead to pathological conditions. The course integrates theoretical knowledge with practical implications for physiotherapy practice.

Learning Objectives:

1. Foundations of Pathophysiology:

- Understand cellular and molecular changes associated with diseases.
- Explore the impact of altered homeostasis on organ systems.

2. Common Pathological Conditions:

- Study specific diseases (e.g., cardiovascular diseases, neurological disorders, musculoskeletal conditions).
- o Identify risk factors, etiology, and clinical manifestations.

3. Clinical Implications:

- Relate pathophysiological knowledge to patient assessment and treatment planning.
- o Understand how diseases affect functional abilities and rehabilitation.

Topics Covered:

1. Cellular and Tissue Responses to Injury:

- Inflammation, repair, and tissue regeneration
- Cellular adaptations (hypertrophy, atrophy, metaplasia)
- 2. Cardiovascular and Respiratory Pathophysiology:
 - Heart failure, hypertension, pulmonary diseases
 - Gas exchange abnormalities
- 3. Neurological Disorders:
 - Stroke, multiple sclerosis, spinal cord injuries
 - Motor and sensory deficits

4. Musculoskeletal Pathology:

- Osteoarthritis, rheumatoid arthritis, fractures
- Joint degeneration and pain mechanisms

- **Case Studies**: Analyze disease scenarios and propose appropriate physiotherapy interventions.
- Written Assignments: Reflect on pathophysiological mechanisms.
- **Examinations**: Assess understanding of disease processes.

Recommended Reading:

- 1. "Pathophysiology: The Biologic Basis for Disease in Adults and Children" by Kathryn L. McCance and Sue E. Huether
- 2. "Clinical Pathophysiology Made Ridiculously Simple" by Aaron Berkowitz

Course Title: Research Methods

Course Description:

The Research Methods course equips physiotherapy students with essential skills for conducting research in the field. Students will learn various research methodologies, data collection techniques, and critical appraisal of scientific literature. The course integrates theoretical knowledge with practical application to enhance evidence-based practice.

Learning Objectives:

1. Research Design and Planning:

- Understand different research paradigms (quantitative, qualitative, mixed methods).
- Develop research questions and hypotheses.

2. Data Collection Techniques:

- Learn how to collect and analyze data (surveys, interviews, observations).
- Explore ethical considerations in research.
- 3. Critical Appraisal of Literature:
 - Evaluate research articles for validity, reliability, and relevance.
 - Understand statistical concepts used in research.

4. Research Proposal Development:

• Write a research proposal, including study design, sampling, and data analysis plan.

Topics Covered:

1. Introduction to Research Methods:

- Research process and terminology
- Ethical guidelines
- 2. Quantitative Research:
 - Experimental design
 - Descriptive statistics and inferential tests

3. Qualitative Research:

- Phenomenology, grounded theory, case studies
- Data coding and thematic analysis

4. Evidence-Based Practice:

- Using research findings to inform clinical decisions
- Implementing research in physiotherapy practice

- **Research Proposal**: Develop a research proposal on a relevant topic.
- Critical Appraisal Exercises: Evaluate research articles.
- Written Assignments: Reflect on research methodologies and findings.

Recommended Reading:

- 1. "Research Methods in Health: Investigating Health and Health Services" by Ann Bowling
- 2. "Understanding Research Methods" by P. Adamson and A. Foster

Course Title: Physiotherapy Techniques III

Course Description:

The Physiotherapy Techniques III course builds upon foundational knowledge from previous courses and focuses on advanced assessment and treatment techniques. Students will learn specialized interventions for various patient populations and conditions. The course integrates theoretical principles with hands-on training to prepare students for clinical practice.

Learning Objectives:

1. Advanced Assessment Techniques:

- Develop proficiency in specialized assessment methods (e.g., neurological, pediatric, geriatric).
- Interpret assessment findings to guide treatment planning.

2. Specialized Treatment Modalities:

- Explore advanced manual therapy techniques (e.g., neural mobilization, myofascial release).
- Learn evidence-based interventions for specific conditions (e.g., stroke rehabilitation, sports injuries).

3. Complex Case Management:

- Apply critical thinking to complex patient cases.
- Develop individualized treatment plans based on patient needs and goals.

Topics Covered:

1. Neurological Assessment and Treatment:

- Assessing motor function, sensory deficits, and balance.
- Implementing interventions for neurological conditions (e.g., stroke, spinal cord injuries).

2. Pediatric and Geriatric Physiotherapy:

- Special considerations for pediatric and older adult populations.
- Age-appropriate assessment techniques and treatment approaches.

3. Advanced Manual Therapy Techniques:

- Neural mobilization
 - Myofascial release and trigger point therapy

4. Sports Rehabilitation:

- Injury prevention and management
- Return-to-sport protocols

- Practical Skills Evaluation: Demonstrate proficiency in specialized techniques.
- **Case Studies**: Analyze complex patient scenarios and propose evidence-based interventions.
- Written Assignments: Reflect on treatment planning and clinical decision-making.

Recommended Reading:

- 1. "Neurological Rehabilitation" by Darcy Ann Umphred and Rolando T. Lazaro
- 2. "Geriatric Physical Therapy" by Andrew A. Guccione, Dale Avers, and Rita Wong

Course Title: Communication for Professional Purposes

Course Description:

The Communication for Professional Purposes course equips physiotherapy students with essential communication skills necessary for academic success and professional practice. Students will learn how to effectively communicate in various professional contexts, including interactions with colleagues, patients, and other healthcare professionals. The course integrates theoretical understanding with practical application to enhance communication competence.

Learning Objectives:

1. Professional Communication Skills:

- Develop proficiency in verbal and written communication relevant to physiotherapy practice.
- Understand the importance of clear and concise communication in healthcare settings.
- 2. Patient-Centered Communication:
 - Learn patient-centered communication techniques.
 - Practice active listening, empathy, and rapport-building.

3. Interprofessional Collaboration:

- Collaborate effectively with other healthcare professionals.
- Understand interdisciplinary roles and responsibilities.

4. Ethical and Legal Considerations:

- Explore ethical dilemmas related to communication.
- Understand patient confidentiality and informed consent.

Topics Covered:

1. Verbal Communication:

- Effective patient interviews and history-taking.
- Giving clear instructions and explanations.

2. Written Communication:

- Documentation (patient records, progress notes).
- Professional emails and reports.

3. Interprofessional Communication:

- Team meetings and case discussions.
- Conflict resolution and assertiveness.

4. Cultural Competence:

- Communicating with diverse patient populations.
- Sensitivity to cultural differences.

- Role-Play Exercises: Practice communication scenarios with standardized patients.
- Written Assignments: Reflect on communication challenges and strategies.
- Group Discussions: Engage in interprofessional communication activities.

Recommended Reading:

- 1. "Effective Communication in Healthcare" by Catherine P. O'Toole
- 2. "Communication Skills for Healthcare Professionals" by Laurie Kelly McCorry

Course Title: Neuroanatomy

Course Description:

The Neuroanatomy course provides an in-depth understanding of the structure and function of the nervous system. Students will explore the anatomy of the brain, spinal cord, and peripheral nerves. The course integrates theoretical knowledge with practical implications for physiotherapy practice, emphasizing the clinical relevance of neuroanatomy.

Learning Objectives:

1. Foundations of Neuroanatomy:

- Understand the organization of the central nervous system (CNS) and peripheral nervous system (PNS).
- Identify key anatomical structures and their functions.

2. Functional Neuroanatomy:

- Explore sensory pathways, motor control, and autonomic functions.
- Understand neural circuits and their role in movement, sensation, and cognition.

3. Clinical Applications:

- Relate neuroanatomical knowledge to neurological conditions (e.g., stroke, spinal cord injuries, neuropathies).
- Apply understanding of neural pathways to patient assessment and treatment planning.

Topics Covered:

- 1. Gross Neuroanatomy:
 - Brain regions (cerebrum, cerebellum, brainstem)
 - Spinal cord segments and tracts

2. Functional Systems:

- Sensory pathways (ascending tracts)
- Motor pathways (descending tracts)

3. Clinical Correlations:

- Neurological examination techniques
- Localization of lesions based on symptoms

- Practical Labs: Identify neuroanatomical structures on models and diagrams.
- Case Studies: Analyze clinical scenarios related to neurological disorders.
- Written Assignments: Reflect on the clinical significance of neuroanatomy.

Recommended Reading:

- 1. "Clinical Neuroanatomy" by Richard S. Snell
- 2. "Neuroanatomy Through Clinical Cases" by Hal Blumenfeld

Course Title: Clinical Pharmacology

Course Description:

Clinical Pharmacology explores the principles of drug action, interactions, and therapeutic applications. It focuses on medications commonly used in physiotherapy practice, emphasizing their effects, side effects, and safe administration.

Learning Objectives:

- Understand the pharmacokinetics (absorption, distribution, metabolism, and excretion) of drugs.
- Recognize common drug classes and their mechanisms of action.
- Evaluate drug interactions and adverse effects.
- Apply pharmacological knowledge to patient care.

Topics Covered:

- 1. Introduction to Clinical Pharmacology
- 2. Pharmacokinetics and Pharmacodynamics
- 3. Autonomic Nervous System Drugs
- 4. Analgesics and Anti-inflammatory Agents
- 5. Cardiovascular Medications
- 6. Respiratory Medications
- 7. Gastrointestinal Drugs
- 8. Neurological and Psychiatric Medications
- 9. Endocrine and Metabolic Agents
- 10. Musculoskeletal Medications

Assessment:

- Quizzes and Examinations
- Case Studies
- Group Projects
- Practical Demonstrations

- 1. "Pharmacology for Physiotherapists" by Karen Whalley Hammell
- 2. "Basic and Clinical Pharmacology" by Bertram G. Katzung

3. Relevant research articles and clinical guidelines

Course Title: Psychology and Health

Course Description:

The "Psychology and Health" course explores the intersection of psychological factors with physical health and well-being. It delves into how mental processes, emotions, and behavior impact overall health outcomes. As a physiotherapy student, understanding these connections is crucial for providing holistic patient care.

Learning Objectives:

- **Understand Psychological Factors:** Explore the role of stress, coping mechanisms, and mental health in physical health outcomes.
- **Behavior Change Strategies:** Learn techniques to promote positive health behaviors and adherence to treatment plans.
- **Patient Communication:** Develop effective communication skills to address psychological aspects during patient interactions.

Topics Covered:

1. Health Psychology Basics:

- Introduction to health psychology
- Biopsychosocial model of health
- Stress and its impact on health

2. Behavioral Interventions:

- o Motivational interviewing
- Health behavior change theories
- Adherence to exercise and rehabilitation programs

3. Psychosocial Aspects of Illness:

- Pain perception and management
- Anxiety and depression in patients
- Coping strategies for chronic conditions

4. Patient-Provider Relationship:

- Effective communication
- Empathy and patient-centered care
- Addressing patient fears and misconceptions

Assessment:

- Written Assignments: Reflective essays on psychological aspects encountered during clinical placements.
- Group Discussions: Analyzing case studies related to patient psychology.
- **Oral Presentations:** Presenting research on psychological interventions in physiotherapy.

- 1. "Health Psychology: Biopsychosocial Interactions" by Edward P. Sarafino
- 2. "Psychology and Health" by David F. Marks
- 3. Relevant research articles on psychology and physiotherapy practice.

Course Title: Kinesiology

Course Description:

Kinesiology explores the science of human movement, emphasizing biomechanics, anatomy, and physiology. As a physiotherapy student, understanding kinesiology is essential for assessing movement patterns, designing exercise programs, and promoting optimal function.

Learning Objectives:

- **Biomechanical Principles:** Understand how forces, levers, and joint mechanics influence movement.
- Muscle Function: Explore muscle actions, activation patterns, and muscle groups.
- Gait Analysis: Learn to assess normal and abnormal walking patterns.
- **Functional Movement Assessment:** Apply kinesiological principles to evaluate patients' mobility.

Topics Covered:

1. Biomechanics:

- Joint structure and function
- Kinematics and kinetics
- Muscle-tendon interactions

2. Anatomy of Movement:

- Skeletal system
- Muscular system
- Nervous system control
- 3. Applied Kinesiology:
 - Posture analysis
 - Movement screening
 - Exercise prescription

4. Clinical Applications:

- Rehabilitation exercises
- Sports-specific movement
- Injury prevention

Assessment:

- **Practical Labs:** Hands-on application of kinesiological concepts.
- Written Assignments: Reflective essays on movement analysis.
- Final Exam: Assessing theoretical knowledge.

- 1. "Kinesiology of the Musculoskeletal System" by Donald A. Neumann
- 2. "Clinical Kinesiology and Anatomy" by Lynn S. Lippert
- 3. Relevant research articles on kinesiology and physiotherapy practice.

Course Title: Introduction to Pharmacology

Course Description:

"Introduction to Pharmacology" provides an overview of the fundamental principles of pharmacology. Students will explore the uses, effects, and modes of action of drugs. Key topics include drug classification, formulation, administration, basic pharmacokinetics, and pharmacodynamics. The course emphasizes the role of drugs in treating human diseases and managing health conditions.

Learning Objectives:

- Understand drug classification and its relevance to patient care.
- Comprehend basic pharmacokinetics (absorption, distribution, metabolism, excretion) and pharmacodynamics (drug effects).
- Recognize the importance of selective toxicity and clinical trials.
- Explore over-the-counter medications, complementary therapies, and drugs of dependence.

Topics Covered:

1. General Principles of Pharmacology:

- Drug classification
- Formulation and administration
- Pharmacokinetics and pharmacodynamics

2. Drugs Affecting Major Systems:

- Nervous system drugs
 - Effects on major organs
 - Selective toxicity for infection treatment
- 3. Clinical Pharmacology:
 - Polypharmacy
 - Side effects and adverse drug reactions
 - Drug interactions

Assessment:

- Quizzes and examinations
- Case studies
- Exploration of clinical scenarios

Recommended Reading:

- 1. "Pharmacology for Health Professionals" by Bronwen Bryant and Kathleen Knights
- 2. "Basic and Clinical Pharmacology" by Bertram G. Katzung

Course Title: Cardiorespiratory Physiotherapy

Course Description:

The "Cardiorespiratory Physiotherapy" course focuses on the assessment, management, and treatment of cardiorespiratory conditions. It equips students with the necessary skills to work

with adults and children who have common cardiorespiratory issues. The course integrates theoretical concepts, evidence-based practice, and clinical reasoning.

Learning Objectives:

- **Clinical Reasoning:** Develop skills to assess cardiorespiratory conditions, prioritize problems, and implement evidence-based interventions.
- **Patient Evaluation:** Learn examination techniques relevant to adults and children with cardiorespiratory issues.
- **Healthcare Team Collaboration:** Understand the broader role of physiotherapists within the healthcare team.

Topics Covered:

- 1. Cardiorespiratory Anatomy and Physiology:
 - Understanding the structure and function of the cardiovascular and respiratory systems.
- 2. Assessment Techniques:
 - Patient evaluation methods, including thoracic imaging.
 - Problem identification and prioritization.
- 3. Interventions and Progression:
 - Evidence-based treatment techniques.
 - Manual, mechanical, and exercise interventions.
 - Positioning for optimal patient outcomes.

4. Specific Conditions:

- Chronic lung diseases (e.g., COPD)
- Acute lung injuries
- Cardiac conditions
- Physiological effects of anesthesia
- 5. Rehabilitation and Discharge Planning:
 - Cardiac and pulmonary rehabilitation.
 - Exercise prescription for critically ill patients.

Assessment:

- Clinical Scenarios: Apply knowledge to practical cases.
- Evaluation: Assess patient progress.
- Discharge Planning: Plan patient transitions.

Recommended Reading:

- 1. "Cardiorespiratory Physiotherapy: Adults and Paediatrics" by Eleanor Main and Linda Denehy
- 2. "Physiotherapy in Respiratory Care: An Evidence-Based Approach to Respiratory and Cardiac Management" by Alexandra Hough

Course Title: Neurological Physiotherapy

Course Description:

The "Neurological Physiotherapy" course focuses on the assessment, management, and treatment of neurological injuries and conditions. It covers a range of disorders, from acute to

chronic, mild to severe. Students explore evidence-based approaches to rehabilitation, clinical reasoning, and person-centered practice.

Learning Objectives:

- **Understanding Neuroplasticity:** Explore the principles of neuroplasticity and its role in recovery from neurological injury.
- Application of ICF Framework: Learn to use the International Classification of Functioning, Disability, and Health (ICF) framework in assessment and treatment planning.
- **Person-Centered Practice:** Understand the importance of tailoring interventions to individual needs.

Topics Covered:

1. Neuroanatomy and Physiology:

- Structure and function of the nervous system.
- Neural plasticity and recovery mechanisms.

2. Assessment Techniques:

- Evaluation of neurological impairments.
- Functional assessments using the ICF model.

3. Intervention Strategies:

- Evidence-based treatment approaches.
- Therapeutic exercises and functional activities.

4. Specific Conditions:

- Stroke rehabilitation.
- Traumatic brain injuries.
- Spinal cord injuries.
- Neurodegenerative diseases.

Assessment:

- **Case Studies:** Apply clinical reasoning to real-world scenarios.
- **Practical Skills Assessment:** Demonstrate intervention techniques.
- **Reflective Assignments:** Analyze patient-centered care.

Recommended Reading:

- 1. "Neurophysiotherapy: Evidence for Rehabilitation and Practice" (UCL Short Course)
- 2. "Neurological Physiotherapy Level 1 Part A" (APACPD Guide)

Course Title: Orthopedic Physiotherapy

Course Description:

"Orthopedic Physiotherapy" focuses on the assessment, treatment, and rehabilitation of musculoskeletal conditions. Students delve into the biomechanics of joints, bones, and soft tissues, learning how to address injuries, post-operative rehabilitation, and chronic orthopedic issues. The course emphasizes evidence-based practice and clinical reasoning.

Learning Objectives:

- **Musculoskeletal Assessment:** Develop skills in evaluating joint range of motion, muscle strength, and functional limitations.
- **Therapeutic Techniques:** Learn manual therapy, exercise prescription, and pain management for orthopedic conditions.
- **Post-Operative Rehabilitation:** Understand protocols for surgical interventions (e.g., joint replacements, ligament repairs).

Topics Covered:

1. Musculoskeletal Anatomy and Biomechanics:

- Joints, bones, ligaments, and muscles.
- Movement patterns and dysfunction.

2. Common Orthopedic Conditions:

- Osteoarthritis
 - Sprains and strains
 - Fractures
 - Low back pain

3. Treatment Approaches:

- Manual therapy techniques (mobilizations, manipulations)
- Therapeutic exercises (strengthening, flexibility)
- Pain management strategies

4. Clinical Reasoning and Case Studies:

- Applying knowledge to patient scenarios.
- Developing individualized treatment plans.

Assessment:

- **Practical Skills Evaluation:** Demonstrate techniques in simulated and clinical settings.
- **Case Presentations:** Analyze orthopedic cases.
- **Reflective Assignments:** Reflect on clinical decision-making.

Recommended Reading:

- 1. "Orthopedic Physical Assessment" by David J. Magee
- 2. "Therapeutic Exercise: Foundations and Techniques" by Carolyn Kisner and Lynn Allen Colby

Course Title: Clinical Education A (Acute Care)

Course Description:

The "Clinical Education A (Acute Care)" course provides students with practical experience in acute care settings. It focuses on applying theoretical knowledge to real-world scenarios, enhancing clinical reasoning, and developing patient management skills. Students will work closely with physiotherapists in hospitals or other acute care facilities.

Learning Objectives:

• Clinical Application: Apply physiotherapy concepts to acute care patients.

- Interprofessional Collaboration: Work effectively within a healthcare team.
- Patient Assessment: Develop skills in evaluating acute conditions.

Topics Covered:

- 1. Introduction to Acute Care:
 - Role of physiotherapists in acute settings.
 - Understanding hospital protocols and workflows.

2. Assessment Techniques:

- Evaluating patients post-surgery or during acute illness.
- Monitoring vital signs and functional status.

3. Treatment Approaches:

- Early mobilization techniques.
- Pain management strategies.
- Respiratory interventions.

4. Clinical Reasoning and Decision-Making:

- Developing treatment plans based on patient needs.
- Adapting interventions as conditions change.

Assessment:

- Clinical Placements: Hands-on experience in acute care settings.
- Case Studies: Analyzing patient scenarios.
- **Reflective Journals:** Documenting experiences and learning.

Recommended Reading:

1. "Acute Care Handbook for Physical Therapists" by Jaime C. Paz and Michele P. West.

Course Title: Radiology for Physiotherapists

Course Description:

This course provides physiotherapists with essential knowledge of medical imaging modalities and their applications in the neuro-musculo-skeletal system. Understanding radiology enables better patient outcomes and informed clinical decision-making.

Learning Objectives:

- Imaging Modalities: Explore X-ray, CT scanning, fluoroscopy, MRI, and ultrasound.
- Anatomy Interpretation: Learn to analyze radiographic and cross-sectional images.
- **Radiological Science:** Understand principles of medical imaging and radiation protection.

Topics Covered:

- 1. Introduction to Radiology:
 - Role of imaging in physiotherapy practice.
 - Basics of radiographic techniques.

2. Anatomy and Pathology:

• Human anatomy relevant to radiology.

• Identifying common pathologies.

3. Imaging Techniques:

- X-ray interpretation.
- Cross-sectional imaging (CT, MRI).

4. Clinical Applications:

- Musculoskeletal conditions.
- Neurological imaging.

Assessment:

- Case Studies: Analyzing radiological findings.
- Practical Interpretation: Identifying anatomical structures.
- **Reflective Assignments:** Integrating radiology into patient care.

Recommended Reading:

- 1. "Essentials of Radiology" by Fred A. Mettler Jr.
- 2. "Radiology 101: The Basics and Fundamentals of Imaging" by Wilbur L. Smith.

Course Title: Exercise Rehabilitation

Course Description:

The "Exercise Rehabilitation" course focuses on designing and implementing exercise programs for individuals with musculoskeletal conditions, injuries, or chronic health issues. As a physiotherapy student, you'll learn how to promote recovery, improve function, and enhance overall well-being through evidence-based exercise interventions.

Learning Objectives:

- **Exercise Prescription:** Understand principles of exercise design, progression, and adaptation.
- Assessment Techniques: Learn to assess individual needs, functional limitations, and exercise tolerance.
- Clinical Decision-Making: Apply exercise science knowledge to tailor programs for diverse populations.

Topics Covered:

1. Exercise Physiology Basics:

- Energy systems
- Muscle physiology
- Cardiovascular responses to exercise

2. Musculoskeletal Rehabilitation:

- Strength training
- Flexibility exercises
- Neuromuscular re-education

3. Chronic Disease Management:

- Exercise for cardiovascular health
- Diabetes management
- Pulmonary rehabilitation

4. Special Populations:

- Geriatric exercise
- Pediatric rehabilitation
- Pregnancy-related exercise

- Practical Skills: Designing exercise programs.
- Case Studies: Applying theoretical knowledge to real-world scenarios.
- Written Assignments: Reflecting on evidence-based practices.

Recommended Reading:

- 1. "Therapeutic Exercise: Foundations and Techniques" by Carolyn Kisner and Lynn Allen Colby
- 2. Relevant research articles on exercise rehabilitation.

Course Title: Neurological Rehabilitation

Course Description:

The "Neurological Rehabilitation" course focuses on the assessment, management, and treatment of neurological injuries and conditions. As a physiotherapy student, you'll explore evidence-based approaches to rehabilitation, clinical reasoning, and person-centered practice. The course covers a range of neurological issues, from acute to chronic, mild to severe.

Learning Objectives:

- **Clinical Reasoning:** Develop advanced theoretical clinical reasoning skills based on evolving evidence.
- **Treatment Strategies:** Justify and apply neurorehabilitation techniques for various clinical presentations.
- **Psychosocial Factors:** Evaluate the influence of psychosocial factors on rehabilitation and patient outcomes.

Topics Covered:

1. Neuroanatomy and Pathophysiology:

- Understanding the nervous system.
- Mechanisms underlying neurological conditions.

2. Assessment Techniques:

- Evaluating neurological impairments.
- Functional assessments.

3. Intervention Approaches:

- Evidence-based treatment strategies.
- Neuromuscular re-education.

4. Specific Conditions:

- Stroke rehabilitation.
- Traumatic brain injuries.
- Neurodegenerative diseases.

- **Case Studies:** Apply clinical reasoning to real-world scenarios.
- **Practical Skills Evaluation:** Demonstrate intervention techniques.
- **Reflective Assignments:** Consider your scope of practice and role within the multidisciplinary team.

Recommended Reading:

- 1. "Neurophysiotherapy: Evidence for Rehabilitation and Practice"
- 2. Relevant research articles on neurological rehabilitation.

Course Title: Clinical Sciences

Course Description:

The "Clinical Sciences" course provides a foundation for understanding the scientific principles that underpin physiotherapy practice. It integrates theoretical knowledge with practical skills necessary for evidence-based clinical reasoning and patient management. Students explore various aspects of anatomy, physiology, and pathophysiology relevant to physiotherapy.

Learning Objectives:

- Anatomical Understanding: Develop a comprehensive knowledge of musculoskeletal, cardiovascular, and neurological anatomy.
- **Physiological Concepts:** Understand physiological processes related to movement, tissue healing, and homeostasis.
- **Pathophysiology:** Explore common pathological conditions and their impact on physical function.

Topics Covered:

1. Musculoskeletal Anatomy:

- Bones, joints, muscles, and ligaments.
- Functional anatomy for movement analysis.

2. Cardiovascular Physiology:

- Heart function, blood flow, and circulation.
- Cardiovascular adaptations during exercise.

3. Neurological Principles:

- Nervous system organization.
- Neurotransmission and motor control.

4. Tissue Healing and Repair:

- o Inflammation, tissue regeneration, and scar formation.
- Implications for rehabilitation.

Assessment:

- Written Examinations: Testing theoretical knowledge.
- **Practical Demonstrations:** Applying anatomical concepts.
- **Case Studies:** Integrating pathophysiology into clinical scenarios.

Recommended Reading:

- 1. "Clinical Anatomy for Physiotherapists" by Peter H. Abrahams
- 2. "Essentials of Exercise Physiology" by William D. McArdle

Course Title: Musculoskeletal Physiotherapy

Course Description:

The "Musculoskeletal Physiotherapy" course focuses on understanding and managing musculoskeletal conditions. As a physiotherapy student, you'll explore anatomy, biomechanics, and evidence-based approaches to assessment, treatment, and rehabilitation. This course prepares you for a rewarding career working with individuals across various age ranges and disabilities.

Learning Objectives:

- Anatomy and Biomechanics: Develop a comprehensive understanding of musculoskeletal structures, including muscles, bones, joints, and ligaments.
- Clinical Assessment: Learn assessment techniques for musculoskeletal conditions.
- Evidence-Based Practice: Explore research-backed approaches to treatment and rehabilitation.

Topics Covered:

- 1. Musculoskeletal Anatomy:
 - Bones, joints, and soft tissues.
 - Functional anatomy for movement analysis.
- 2. Biomechanics:
 - Forces, levers, and movement patterns.
- Understanding how the body functions during physical activities.

3. Common Musculoskeletal Conditions:

- Low back pain
- Osteoarthritis
- Sports injuries
- Postural imbalances
- 4. Treatment Approaches:
 - Therapeutic exercises
 - Manual therapy techniques
 - Pain management strategies

Assessment:

- Practical Skills Evaluation: Demonstrating assessment and treatment techniques.
- Case Studies: Applying theoretical knowledge to real-world scenarios.
- Reflective Assignments: Integrating evidence-based practice.

- 1. "Clinical Anatomy for Physiotherapists" by Peter H. Abrahams
- 2. Relevant research articles on musculoskeletal physiotherapy.

Course Title: Introduction to Statistics

Course Description:

The "Introduction to Statistics" course aims to equip students with essential statistical knowledge and skills necessary for evidence-based practice in physiotherapy. Students will learn how to analyze and interpret data, make informed decisions, and critically evaluate research findings.

Learning Objectives:

- Statistical Literacy: Understand fundamental statistical concepts and terminology.
- Data Analysis Techniques: Learn descriptive and inferential statistical methods.
- Application in Physiotherapy: Apply statistical reasoning to clinical scenarios.

Topics Covered:

- 1. **Descriptive Statistics:**
 - Measures of central tendency (mean, median, mode).
 - Measures of variability (range, variance, standard deviation).
- 2. **Probability and Distributions:**
 - Probability theory.
 - Normal distribution and other common distributions.
- 3. Hypothesis Testing:
 - Null and alternative hypotheses.
 - o t-tests, ANOVA, chi-square tests.

4. Correlation and Regression:

- Linear regression analysis.
- Correlation coefficients.

Assessment:

- Assignments and Quizzes: Applying statistical concepts.
- Data Analysis Projects: Analyzing real-world data.
- Final Exam: Demonstrating overall understanding.

Recommended Reading:

- 1. "Statistics for Health, Life, and Social Sciences" by Denis Anthony.
- 2. Relevant research articles on statistical applications in physiotherapy.

Course Title: Pediatric Physiotherapy

Course Description:

The "Pediatric Physiotherapy" course focuses on understanding and managing musculoskeletal, neurological, and cardiorespiratory conditions in children and adolescents. As a physiotherapy student, you'll learn specialized skills for working with young populations, emphasizing evidence-based practice and family-centered care.

Learning Objectives:

- Child Development: Understand typical motor development and milestones.
- Assessment Techniques: Learn age-appropriate assessment methods.
- Intervention Strategies: Explore treatment approaches for various pediatric conditions.

Topics Covered:

- 1. Pediatric Neurophysiotherapy:
 - Neuroanatomy and physiology in children.
 - Common neurological conditions (e.g., cerebral palsy, developmental delay).
 - Treatment approaches and outcome measures.
- 2. Pediatric Musculoskeletal Physiotherapy:
 - o Growth-related musculoskeletal conditions.
 - Adolescent sports injuries.
 - Exercise prescription for children.
- 3. Pediatric Cardiorespiratory Physiotherapy:
 - Respiratory anatomy and physiology in children.
 - Assessment of respiratory function.
 - Treatment for common respiratory conditions (e.g., asthma, cystic fibrosis).

Assessment:

- **Case Studies:** Applying theoretical knowledge to pediatric scenarios.
- Practical Skills Evaluation: Demonstrating assessment and treatment techniques.
- Quizzes and Examinations: Assessing understanding of pediatric concepts.

Recommended Reading:

- 1. "Pediatric Physical Therapy" by Jan Stephen Tecklin.
- 2. Relevant research articles on pediatric physiotherapy.

Course Title: Physiotherapy for Chronic Illness and Disease

Course Description:

The "Physiotherapy for Chronic Illness and Disease" course focuses on understanding and managing musculoskeletal, neurological, and cardiorespiratory conditions in individuals with chronic health issues. As a physiotherapy student, you'll learn specialized skills for working with patients across the lifespan who face long-term health challenges.

Learning Objectives:

- Chronic Disease Management: Understand the impact of chronic illnesses on physical function.
- Evidence-Based Interventions: Learn evidence-based physiotherapy approaches for chronic conditions.
- Holistic Care: Develop a person-centered approach to address physical, emotional, and social aspects.

Topics Covered:

1. Pathophysiology of Chronic Conditions:

- Understanding common chronic diseases (e.g., diabetes, arthritis, cardiovascular diseases).
- Effects on musculoskeletal and cardiopulmonary systems.

2. Assessment and Goal Setting:

- Functional assessments for chronic patients.
- Collaborative goal-setting with patients and their families.

3. Exercise Prescription and Rehabilitation:

- Tailoring exercise programs for chronic conditions.
- Managing pain, fatigue, and deconditioning.

4. Psychosocial Support:

- Addressing mental health aspects.
- Enhancing quality of life for individuals with chronic illnesses.

Assessment:

- Case Studies: Applying theoretical knowledge to real-world scenarios.
- **Practical Skills Evaluation:** Demonstrating assessment and treatment techniques.
- **Reflective Assignments:** Integrating evidence-based practice and patient experiences.

Recommended Reading:

- 1. "Chronic Illness: Impact and Intervention" by Ilene Morof Lubkin and Pamala D. Larsen.
- 2. Relevant research articles on physiotherapy for chronic conditions.

Course Title: Clinical Education B (Rehabilitation)

Course Description:

The "Clinical Education B (Rehabilitation)" course provides physiotherapy students with practical experience in rehabilitation settings. It focuses on applying theoretical knowledge to real-world scenarios, enhancing clinical reasoning, and developing patient management skills. Students will work closely with experienced physiotherapists in rehabilitation centers, hospitals, or community-based settings.

Learning Objectives:

- Clinical Application: Apply physiotherapy concepts to rehabilitation patients.
- Interprofessional Collaboration: Work effectively within a multidisciplinary team.
- **Patient Assessment and Goal Setting:** Develop skills in evaluating rehabilitation needs and setting personalized goals.

Topics Covered:

1. Rehabilitation Principles:

- Understanding the rehabilitation process.
- Goal-oriented treatment planning.

2. Assessment Techniques:

• Evaluating functional limitations.

• Assessing progress and adjusting interventions.

3. Intervention Strategies:

- Evidence-based rehabilitation techniques.
- Therapeutic exercises, manual therapy, and assistive devices.

4. Patient-Centered Care:

- o Communication skills with patients and their families.
- Addressing psychosocial aspects of rehabilitation.

Assessment:

- Clinical Placements: Hands-on experience in rehabilitation settings.
- **Case Studies:** Applying theoretical knowledge to patient scenarios.
- **Reflective Journals:** Documenting experiences and learning.

Recommended Reading:

- 1. "Rehabilitation Techniques in Sports Medicine" by William E. Prentice.
- 2. Relevant research articles on rehabilitation practice.

Course Title: Clinical Education C (Ambulance Care)

Course Description:

The "Clinical Education C (Ambulance Care)" course provides physiotherapy students with practical experience in ambulance and pre-hospital care settings. It focuses on applying theoretical knowledge to real-world emergency scenarios, enhancing clinical reasoning, and developing patient management skills specific to ambulance services. Students will work closely with experienced paramedics and emergency medical teams.

Learning Objectives:

- **Emergency Assessment:** Develop skills in assessing and managing acute medical emergencies.
- **Pre-Hospital Interventions:** Learn about trauma management, resuscitation, and stabilization.
- Interprofessional Collaboration: Understand the role of physiotherapists within the ambulance service and collaborate effectively with other healthcare professionals.

Topics Covered:

1. Ambulance Operations:

- Understanding ambulance protocols and procedures.
- Communication during emergencies.

2. Trauma and Medical Emergencies:

- Assessment of trauma patients.
- Cardiac emergencies (e.g., heart attacks, arrhythmias).

3. **Pre-Hospital Interventions:**

- Airway management.
- Basic life support (BLS) and advanced life support (ALS).

4. Patient Transport and Handover:

- Safe transfer of patients to hospital.
- Effective communication with hospital staff.

- Clinical Placements: Hands-on experience in ambulance settings.
- Scenario-Based Assessments: Simulated emergency scenarios.
- Reflective Journals: Documenting experiences and learning.

Recommended Reading:

- 1. "Emergency Care in the Streets" by Nancy Caroline.
- 2. Relevant research articles on pre-hospital care and ambulance services.

Course Title: Gender-Based Health

Course Description:

The "Gender-Based Health" course explores the impact of gender on health and well-being. As a physiotherapy student, you'll delve into how biological, social, and cultural factors intersect to influence health outcomes. This course emphasizes evidence-based practice and a holistic understanding of gender-related health issues.

Learning Objectives:

- Gender Awareness: Understand the role of gender in health disparities.
- **Sex-Specific Considerations:** Explore how physiological differences between sexes affect health conditions.
- Cultural Competence: Develop skills to provide gender-sensitive care.

Topics Covered:

- 1. Gender and Health Determinants:
 - Social determinants of health (e.g., education, income, access to care).
 - Gender norms and stereotypes.

2. Sex-Specific Conditions:

- Women's health (e.g., pregnancy-related issues, osteoporosis).
- Men's health (e.g., prostate health, cardiovascular risks).

3. Gender-Responsive Interventions:

- Exercise prescription for different genders.
- Addressing gender-specific needs in rehabilitation.

4. Cultural Perspectives:

- LGBTQ+ health considerations.
- Intersectionality and health disparities.

Assessment:

- Research Projects: Investigate gender-related health topics.
- **Case Studies:** Apply gender-aware approaches to patient scenarios.
- **Reflective Essays:** Explore personal biases and cultural competence.

Recommended Reading:

- 1. "Gender, Women, and Health: What Do We Mean by Sex and Gender?" by Carla Makhlouf Obermeyer.
- 2. Relevant research articles on gender-based health.

Course Title: Complex Cases and Professional Issues

Course Description:

The "Complex Cases and Professional Issues" course prepares physiotherapy students to manage intricate clinical scenarios and navigate professional challenges. It emphasizes critical thinking, ethical practice, and collaboration within the healthcare system. Students will explore complex patient cases and engage in discussions about professional responsibilities.

Learning Objectives:

- **Clinical Reasoning:** Develop advanced problem-solving skills for complex patient presentations.
- Ethical Decision-Making: Understand professional boundaries, confidentiality, and informed consent.
- Interprofessional Collaboration: Learn to work effectively with other healthcare professionals.

Topics Covered:

1. Complex Patient Cases:

- o Multidimensional assessment of patients with multiple health issues.
- Integrating knowledge from various disciplines (e.g., musculoskeletal, neurological, cardiopulmonary).

2. Professional Issues:

- Legal and ethical considerations in physiotherapy practice.
- Scope of practice and professional boundaries.
- Cultural competence and patient-centered care.

3. Healthcare Systems and Advocacy:

- Understanding healthcare policies and resource allocation.
- Advocating for patient needs within the system.

Assessment:

- Case Presentations: Analyzing complex patient scenarios.
- Ethical Dilemmas: Discussing and resolving ethical challenges.
- **Reflective Essays:** Exploring personal growth and professional development.

- 1. "Ethics in Physical Therapy" by Nancy R. Kirsch.
- 2. Relevant research articles on complex cases and professional issues.

Course Title: Integrating Research into Physiotherapy

Course Description:

The "Integrating Research into Physiotherapy" course equips students with essential skills to critically evaluate and apply research evidence in clinical practice. It emphasizes evidence-based physiotherapy, research literacy, and the integration of scientific findings into patient care. Students will explore various research methodologies and their relevance to physiotherapy practice.

Learning Objectives:

- **Research Literacy:** Understand research design, statistical analysis, and interpretation of findings.
- Evidence-Based Practice: Learn to integrate research evidence into clinical decisionmaking.
- **Critical Appraisal:** Develop skills to evaluate research articles and apply findings to patient scenarios.

Topics Covered:

- 1. Introduction to Research:
 - Types of research (quantitative, qualitative, mixed methods).
 - Ethical considerations in research.

2. Research Methodologies:

- Experimental designs (randomized controlled trials, quasi-experiments).
- Surveys, case studies, and systematic reviews.

3. Critical Appraisal Skills:

- Evaluating research articles (validity, reliability, bias).
- Understanding effect sizes and clinical significance.

4. Applying Research in Physiotherapy:

- Evidence-based treatment approaches.
- Implementing research findings in patient care.

Assessment:

- Journal Club Presentations: Analyzing and discussing research articles.
- **Research Proposals:** Designing a small-scale research project.
- Written Reflections: Integrating research into clinical practice.

Recommended Reading:

- 1. "Evidence-Based Practice in Physiotherapy: A Systematic Review" by Linda Fetters and Julie Tilson.
- 2. Relevant research articles on physiotherapy and evidence-based practice.

Course Title: Clinical Education D (Pediatrics)

Course Description:

The "Clinical Education D (Pediatrics)" course provides physiotherapy students with practical experience in pediatric settings. It focuses on applying theoretical knowledge to real-world scenarios, enhancing clinical reasoning, and developing patient management skills specific to

children and adolescents. Students will work closely with experienced pediatric physiotherapists in hospitals, clinics, or community-based settings.

Learning Objectives:

- Pediatric Assessment: Develop skills in evaluating children's physical function.
- Evidence-Based Interventions: Learn age-appropriate treatment approaches.
- Interprofessional Collaboration: Understand the role of physiotherapists within the pediatric healthcare team.

Topics Covered:

1. Pediatric Conditions:

- Common childhood musculoskeletal, neurological, and cardiorespiratory conditions.
- Developmental milestones and variations.

2. Assessment Techniques:

- Pediatric-specific assessment tools.
- Functional evaluations for different age groups.

3. Intervention Strategies:

- Evidence-based treatment approaches for children.
- Therapeutic exercises, play-based interventions, and family-centered care.

4. Ethical Considerations:

- Consent and communication with children and parents.
- Cultural competence in pediatric physiotherapy.

Assessment:

- Clinical Placements: Hands-on experience in pediatric settings.
- **Case Studies:** Applying theoretical knowledge to pediatric patient scenarios.
- Reflective Journals: Documenting experiences and learning.

Recommended Reading:

- 1. "Pediatric Physical Therapy" by Jan Stephen Tecklin.
- 2. Relevant research articles on pediatric physiotherapy.

Course Title: Clinical Education E (Advanced Care)

Course Description:

The "Clinical Education E (Advanced Care)" course provides physiotherapy students with practical experience in advanced clinical settings. It focuses on applying theoretical knowledge to complex patient scenarios, enhancing clinical reasoning, and developing specialized patient management skills. Students will work closely with experienced physiotherapists in specialized areas such as critical care, neurorehabilitation, or specialized outpatient clinics.

Learning Objectives:

• Advanced Assessment Skills: Develop expertise in evaluating complex patient presentations.

- **Specialized Interventions:** Learn evidence-based approaches for specific patient populations.
- Interdisciplinary Collaboration: Understand the role of physiotherapists within specialized healthcare teams.

Topics Covered:

- 1. Advanced Clinical Areas:
 - Critical care physiotherapy.
 - Neurological rehabilitation.
 - Cardiorespiratory rehabilitation.

2. Specialized Interventions:

- Ventilator management.
- Stroke rehabilitation techniques.
- Cardiac rehabilitation protocols.

3. Ethical and Professional Considerations:

- Decision-making in complex cases.
- Advocacy for patient needs.

Assessment:

- **Clinical Placements:** Hands-on experience in specialized clinical settings.
- Case Studies: Applying theoretical knowledge to advanced patient scenarios.
- **Reflective Journals:** Documenting experiences and learning.

Recommended Reading:

- 1. "Advanced Physiotherapy Practice" by Darren A. Rivett and Kevin Banks.
- 2. Relevant research articles on advanced physiotherapy practice.

Course Title: Physiotherapy Research Project

Course Description:

The "Physiotherapy Research Project" course provides students with an opportunity to engage in independent research within the field of physiotherapy. Students will explore a specific area of interest, apply research methodologies, and contribute to the existing body of knowledge. This course emphasizes critical thinking, evidence-based practice, and effective communication of research findings.

Learning Objectives:

- Research Design: Understand research methodologies and study design.
- Literature Review: Conduct a comprehensive review of relevant literature.
- Data Collection and Analysis: Apply appropriate methods for data collection and analysis.

Topics Covered:

1. Research Proposal Development:

• Identifying research questions.

• Formulating hypotheses.

2. Literature Review:

- Searching databases for relevant studies.
- Critically evaluating existing research.

3. Data Collection and Analysis:

- Quantitative or qualitative data collection methods.
- Statistical analysis (if applicable).

4. Research Ethics and Dissemination:

- Ethical considerations in research.
- Communicating research findings through written reports or presentations.

Assessment:

- **Research Proposal:** Developing a research plan.
- Literature Review: Summarizing existing research.
- Final Research Report: Presenting findings and conclusions.

- 1. "Research Methods in Health: Investigating Health and Health Services" by Ann Bowling.
- 2. Relevant research articles on physiotherapy and related topics.

CAPITAL OPERATIONAL BUDGET FOR BACHELOR OF SCIENCE: PHYSIOTHERAPY

The programme budget is shown in the table below:

Capital Operational Budget for This budget projection calculation is based of student.	or the Bach	per year, cover	ience: Ph ing two semes	ysiothera ters, at a cost	Py of R52,000 per
Description	2023	2024	2025	2026	TOTAL
Equity Financing	7554354	-	-	-	7554354
BSc – Physiotherapy	2008890	12953250	14407650	19861650	49231440
Other	152712	192708	254520	363600	963 540
TOTAL	9715956	13145958	14662170	20225250	57749334
Expenditure					
Administrative Costs	690190	1090800	1090800	1090800	3962589
Salaries and Wages	767876	236340	236340	236340	1476896
Equipment Costs	1524073	363600	363600	363600	2614873
Operating Costs	1088626	501768	501768	501768	2593930
Research, Training & Workshops	435451	73811	73811	73811	656883
Construction and Infrastructure	2177248	545400	545400	545400	3813448
Marketing and Studio Recording	217728	36724		36724	291175
Travelling and Accommodation	653175	491587	491587	491587	2127936
Vehicles	-	653171		363600	1016771
Other Expenses	653175	93700	93700	93700	934 274
TOTAL	8207539	4086900	3397006	3797329	19488775
Repayment					
Equity and Dividend Payments	1888590	1888590	1888590	1888590	7554358
Interest - 18%	339948	339948	339948	339948	1359792
Charges and Accounting	66859	66859	66859	66859	267435
TOTAL	2295396	2295396	2295396	2295396	9181584
Total Income	9715956	13145958	14662170	20225250	57749334
Total Expenditure	10502935	6382296	5692402	6092725	28670358
B/Forward	-786979	6763662	8969768	14132525	29078976
B/ Down	-786979	6763662	8969768	14132525	29078976

Join Our Celestial Journey Illuminating Minds, Igniting Innovation. Be Part of the Spark as we Unlock the Universe's Secrets, One Equation at a Time



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Research Beyond Boundaries

