PTA 1

FOUNDATIONS OF PHYSICAL THERAPY

SYLLABUS AND COURSE INFORMATION PACKET

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3 credits
5 contact hours

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KINGSBOROUGH COMMUNITY COLLEGE
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Physical Therapist Assistant Program

Course Syllabus

PTA 1
Foundations of Physical Therapy

Course Description: This course is designed to introduce students to medical terminology and abbreviations, effective documentation, and interpretation of physical therapy documents. Students are introduced to multimedia documentation strategies. This course also introduces the student to basic skills and competencies including: range of motion, vital signs monitoring, body mechanics, lifting techniques, bed mobility / draping and transfer activities.


Pre-requisites: BIO 11

Co-requisite Courses: PTA 10, PTA 20, PTA 2
Student Learning Objectives

As evidenced by successful performance and completion of written and practical examinations, assignments, research article reviews, lab presentations, and the role playing analysis of clinical scenarios, the student will:

1.0 Interpret and use medical terminology and documentation.
   1.1. Recognize medical terminology and medical abbreviations.
   1.2. Identify the need for documentation.
   1.3. Recognize the components of a MD consult/ prescription.
   1.4. Define the components of a physical therapy evaluation.
   1.5. Identify the contents of a patient progress notes.
   1.6. Identify short and long term goals and the importance of setting and reassessing goals.
   1.7. Recognize and define defensive and outcome oriented documentation.
   1.8. Identify components of continuous quality improvement.
   1.9. Interpret medical technology given MD consult/ prescriptions and physical therapy evaluation.
   1.10. Explain the need for documentation.
   1.11. Interpret short and long term goals, within the plan of care, in physical therapy evaluations, re-evaluations and progress notes.
   1.12. Interpret defensive and outcome oriented documentation
   1.13. Use medical terminology and medical abbreviations in the construction of progress notes.
   1.15. Analyze physical therapy documentation considering medical terminology and medical abbreviations, pathological conditions, short and long term goals and psycho-social factors as they relate to the contemporary practice of physical therapy.

2.0 Implement research reviews.
   2.1. Identify components of experimental design and the scientific method.
   2.2. Given a research article, describe professional literature considering experimental design, analysis of results and applicability to clinical practice.
   2.3. Interpret professional literature considering experimental design, analysis of results and applicability to clinical practice.
   2.4. Analyze professional literature considering experimental design, analysis of results and applicability to clinical practice.

3.0 Perform extremity range of motion activities including passive and active techniques.
   3.1. Identify the principles of therapeutic range of motion activities.
   3.2. Differentiate the various modes of range of motion, passive and active.
   3.3. Describe the rationale for the selection of range of motion techniques.
3.4. Identify proper technique of range of motion activities.
3.5. Document range of motion activities.

4.0 **Perform vital signs monitoring.**

4.1. Define vital signs including pulse, blood pressure and respiratory rate.
4.2. List signs and symptoms of abnormal vital signs.
4.3. State precautions to be taken when measuring vital signs.
4.4. Differentiate signs and symptoms of abnormal vital signs given mock patient scenarios.
4.5. Explain precautions to be taken when measuring vital signs.
4.6. Measure vital signs including pulse, blood pressure and respiratory rate utilizing proper technique and considering precautions.
4.7. Observe and measure changes in vital signs in response to changes in position and level of activity (tilt table, running, etc.).
4.8. Associate abnormal vital signs with common pathologies (discussed in PTA 20) encountered in physical therapy.
4.9. Differentiate normal and abnormal vital signs considering pathological conditions.

5.0 **Demonstrate understanding of human posture and body mechanics.**

5.1. State the definition of posture and the anatomical/standing position by interpreting body alignment using plumb lines and other basic postural assessment tools.
5.2. Explain the importance of body mechanics as it relates to patient safety, injury prevention and transfer activities.
5.3. Discuss body mechanics and moving and lifting techniques.
5.4. Describe observed posture and anatomical positions using each other as models.
5.5. Perform moving and lifting techniques using proper body mechanics.
5.6. Associate posture and body mechanics with muscular-skeletal structure and function.
5.7. Examine human movement considering principles of body mechanics.

6.0 **Use proper body mechanics during transfer activities.**

6.1. Identify basic guarding techniques.
6.2. Define concepts of levels of assistance.
6.3. State and describe positioning and draping techniques.
6.4. Identify positioning and draping precautions as it relates to different pathological conditions.
6.5. State bed mobility and transfer techniques.
6.6. Identify how to organize patient transfers to promote a safe environment.
6.7. Identify and explain mechanical transfer equipment.
6.8. Explain body mechanics and moving and lifting techniques as they relate to patient bed mobility, transfers, ambulation and wheelchair activities.
6.9. Discuss basic guarding techniques for transferring patients as they relate to proper body mechanics.
6.10. Interpret levels of assistance as they relate to bed mobility, transfers and activities.
6.11. Explain positioning and draping techniques.
6.12. Describe bed mobility and transfer techniques.
6.13. Discuss how to organize patient transfers to promote a safe environment.
6.15. Perform rolling and bed mobility techniques using sound principles of body mechanics.
6.16. Perform (on a lab partner) the following transfers while utilizing sound body mechanics and proper guarding techniques: supine to sit, sit to supine, sit to stand, and stand to sit using a variety of techniques i.e., stand pivot, and one, two, and three person lifts.
6.17. Teach a lab partner the following transfers while utilizing sound body mechanics and proper guarding techniques: supine to sit, sit to supine, sit to stand, and stand to sit using a variety of techniques i.e., stand pivot, and one, two, and three person lifts.
6.18. Implement concepts of levels of assistance while performing transfers.
6.19. Teach peers to perform transfers to promote a safe environment.
6.20. Delineate patient goals for bed mobility, and transfers and their relationship to different pathologies.
6.21. Perform activity of daily living interventions as they relate to transfers (commode, car, etc.).

7.0 Demonstrate transfers and bed mobility and adaptations to architectural barriers.
   7.1. Describe architectural barriers as they relate to activities in daily living.
   7.2. Assess and modify architectural barriers.
   7.3. Detect architectural barriers.
   7.4. Determine the appropriate bed mobility, and transfer given patient pathologies and architectural barriers.
   7.5. Administer standardized questionnaires regarding functional status and architectural barriers.

8.0 Demonstrate understanding of human gait.
   8.1. Define the characteristics of human gait.
   8.2. Explain the significance of normal gait and typical gait patterns.
   8.3. Identify normal gait via video presentations.

9.0 Given mock patient scenarios, implement comprehensive physical therapy plan of care as directed by a physical therapist.
   9.1. Perform therapeutic techniques demonstrating an understanding of the role of the physical therapist assistant in rehabilitation.
   9.2. Perform therapeutic techniques appropriately employing universal precautions.
   9.3. Perform therapeutic techniques demonstrating an understanding of organizational structure, levels of authority, and fiscal considerations in the
health care delivery system.

9.4 Implement sound rationale when performing vital signs and body mechanics and selecting appropriate transfer and bed mobility activities, considering specific characteristics of pathological conditions.

9.5 Identify patient progress as it relates to the achievement of short term goals.

9.6 Teach the uses, applications and responses of vital signs, bed mobility and transfer activities, therapeutic exercise and concepts effectively to mock patient, family and other healthcare workers with emphasis on safety and rationale as directed by the physical therapist.

9.7 Demonstrate the adjunctive nature of vital signs monitoring, body mechanics, bed mobility/ draping and transfers by integrating their use in complete treatment applications.

9.8 Implement therapeutic interventions within the plan of care considering knowledge of assessment and measurement, pathology, kinesiology, anatomy, vital signs, and functional activity.

9.9 Implement therapeutic interventions within the plan of care demonstrating consideration of time management, therapeutic sequence and procedure selection issues.

9.10 Implement physical therapy interventions for a variety of patient types including: orthopedic, neurological and general deconditioned patients in a variety of mock patient settings.

9.11 Demonstrate appropriate documentation of physical therapy interventions considering patient response, precautions, treatment parameters, long/short term goals, and effectiveness.

9.12 Perform physical therapy interventions considering influencing factors (psychosocial, cultural, economic, patient satisfaction, legal/ethical, etc.).

9.13 Describe discharge planning and alternative levels of care decisions.

9.14 Recognize patient response(s) that require the attention of the supervising physical therapist or immediate intervention such as basic first aid or cardiopulmonary resuscitation.

9.15 Communicate to supervising physical therapist the patient response to vital signs monitoring, bed mobility/draping and transfer activities.

9.16 Deduce the effectiveness of bed mobility and transfer techniques considering pathological conditions, attainment of short term goals and the patient’s overall response.

9.17 Assess patient response to treatment and appropriately alter bed mobility and transfer techniques within the plan of care.

9.18 Verify the effectiveness of his/her teaching behavior by analyzing performance.

9.19 Delineate the beneficial and untoward effects of vital sign monitoring, use of proper body mechanics, bed mobility and transfer techniques.

9.20 Analyze the relationship of vital signs, body mechanics, documentation, bed mobility/draping and transfer techniques with principles of kinesiology and pathology as they relate to the achievement of rehabilitation goals.
10.0 **Demonstrate appropriate professional behavior.**

10.1. Attend and be on time for class, lab, and scheduled appointments.
10.2. Be prepared for lab activities; attend to tasks assigned.
10.3. Accept constructive criticism and respond and/or follows through appropriately.
10.4. Express self in a clear and easily understood manner.
10.5. Maintain appropriate personal hygiene.
10.6. Treat others with positive regard, dignity and respect.
10.7. Analyze and examine professional literature considering: specific scientific methods, interpretation of results, and clinical significance in order to foster further personal investigation and clinical effectiveness.
10.8. Explain the importance of life long learning.
10.9. Describe how professional development can occur.

**Student Assessment**

As indicated in the student handbook, to receive a passing grade in this course the student must successfully complete all comprehensive examinations, assignments and practical examination with a grade of “C” or better. Additionally, the instructor assesses student competencies in skills critical to this course using the standardized skills checklists, located in the laboratory, requiring a passing score of at least 90%. Critical skills in this course include:

1. Using and understanding medical terminology.
2. Documentation of observational experiences.
3. Monitoring of vital signs.
4. Performance of proper body mechanics during lifting activities.
6. Use of universal precautions.
7. Performance of bed mobility techniques.
8. Instruction of bed mobility techniques.
9. Performance of basic transfers using proper body mechanics.
10. Instruction of basic transfers using proper body mechanics.
11. Analysis and observation of components of normal gait.
12. Performance of active and passive range of motion techniques (formally assessed in PTA 5).

**Grade Determination**

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<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Research Article Presentation</td>
<td>5 %</td>
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<tr>
<td>Graded Laboratory Activities</td>
<td>5 %</td>
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<tr>
<td>Documentation Project</td>
<td>10%</td>
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<tr>
<td>Lab Practical</td>
<td>25 %</td>
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Documentation Quizzes 15 %
Mid-term Examination 20 %
Final Examination 20 %
100 %

Research Article Presentation
Students in the class are divided into study groups. Each group presents a research article from *Physical Therapy*, based on normal gait or gait deviations. Format for the presentation is distributed in class. The presentation is made on the twelfth week of the course and is worth 5 % of the final grade.

Documentation Project
Students are assigned either a patient education project or a health care worker education project. The format for these projects is distributed in class. The project is due the tenth week and is worth 10 % of the final grade.

Graded Laboratory Activities / Lab Practical
A variety of laboratory activities are performed throughout the course. Certain laboratory activities are performed by each student and graded. During week 5/6, each student must summarize a note and present it orally to the instructor as if reporting to a P.T. in the clinic. In addition, during finals week, students take a laboratory practical examination based on laboratory activities. Participation in lab assignments is worth 5 % and the laboratory practical is worth 25 % of the final grade.

Documentation Quizzes
The student completes a series of quizzes derived from *Documentation for Physical Therapists Assistants*. These quizzes are worth 15 % of the final grade.

Mid-term Examination
The student takes a cumulative examination covering the first five to six weeks of the course. The examination includes mainly short essay, and multiple choice type questions. The mid-term examination is worth 20 % of the final grade.

Final Examination
The student takes a cumulative final examination. The examination is worth 20 % of the final grade.

Course Outline

**Week #1—Introduction to Medical Terminology and Abbreviations**
**Lecture**
Assignments: Bircher - Chapter1 and Appendix A,
Worksheets.
Dreeben, Chapter 11, pages 189-192 and Chapter 12, pages 196-202

This initial week introduces the student to medical terminology and abbreviations including prefixes/suffixes. Planes of the body and major body parts (previously learned in BIO 11) are reviewed.

**Laboratory**
Students complete worksheet assignments on medical terminology and abbreviations. Students translate medical terminology in assigned written medical and physical therapy documentation. Students are instructed in the review of professional literature including: parts of a research article, how to read and present a research article and how to write a research paper. Class discussion of a research article selected by the instructor.

**Week #2-Introduction to Documentation and Range of Motion**

**Lecture**
Assignments: Dreeben, Chapter 10 and 11, pages 171-192
Pierson - Chapter 6
Documentation assignments.

The student is introduced to medical documentation. Components of the medical record and the MD consult and prescription are outlined.

**Laboratory**
Physical therapy evaluations and progress notes are read and components identified. Universal precautions are reviewed. Passive and active range of motion techniques are demonstrated. Students perform and practice these techniques. Given mock patient scenarios, students perform range of motion treatments and practice writing simple progress notes regarding their intervention. In addition, students use standardized forms and dictation methods in documenting simple progress.

**Week #3—Documentation and Range of Motion con’t.**

**Lecture**
Assignments: Documentation assignments.

Discussion on documentation continues. Short term and long term goals are studied emphasizing the importance of goals and reassessing goals.

**Laboratory**
Students continue to practice range of motion techniques. Typical patient goals are discussed with emphasis on range of motion. In addition, students use computer software and standardized forms and dictation methods in documenting simple progress.
Week #4—Specific Documentation Strategies and Range of Motion

Lecture
Assignments:

Discussion on documentation continues with emphasis on defensive and outcome oriented documentation. Documentation in reference to discharge planning is also undertaken. The role of documentation in continuous quality improvement is explored. In addition, specific types of documentation are introduced including documentation in different rehabilitation settings.

Laboratory
Students continue to perform and document range of motion activities. Documentation is critiqued in regard to its defensive and outcome oriented nature. Given mock patient scenarios students analyze documentation differences according to rehabilitation settings. Each student will identify critical components of a note and orally present it to the instructor.

Week #5—Vital Signs / Introduction to Human Posture

Lecture
Assignment: Pierson - Chapter 3

Vital Signs are presented (reviewed again in BIO12). Discussion includes importance of vital signs, signs and symptoms of abnormal vital signs and precautions.

Laboratory
Students monitor blood pressure, heart rate and respiratory rate in different positions (supine, sitting, standing and tilt table). Discussion of when to measure vital signs and how to document measurements are also undertaken. Students identify trunk structure and function and their impact on human posture.

Week #6—Human Posture / Introduction of Body Mechanics

Lecture
Assignments: Lippert Chapter 21
Pierson- Chapter 4

Discussion of human posture continues. Postural terms including scoliosis, lordosis, and kyphosis are discussed. The student is introduced to proper body mechanics and the importance of maintaining good body mechanics.

Laboratory
Midterm Examination
Students observe posture and use plumblines and other postural assessment tools. Palpation of general surface landmarks are practiced to assess symmetry (further explored in PTA 2). Given mock patient scenarios, students predict patient appearance and postural habits. Students justify their responses orally.
**Week #7—Body Mechanics / Introduction to Transfers**

**Lecture**
Assignments: Pierson - Chapter 4,8

Students document the activities practiced during lab. in an objective format.

Principles of moving and lifting are undertaken. Students are introduced to the importance of good body mechanics when transferring patients.

**Laboratory**

Students practice lifting and moving techniques. Students move and lift objects of varying size, shape and weight, while being observed and critiqued by their peers. Importance of these precautions in patient transfers and general treatment is emphasized and students are encouraged to incorporate them in physical therapy practice. During this week the student is introduced to different types of transfers. In addition, components of transfers are presented including: amounts of assistance, preparation, precautions and organization. Students learn how to instruct patients and family in transfers using clear and concise commands.

**Week #8 --Transfers**

**Lecture**
Assignments: Pierson Chapter 8

Discussion of transfers continues. Different transfer techniques are discussed in relation to pathological conditions.

**Laboratory**

Students practice transfers: supine to sit, bed to chair & chair to chair, and sit to stand and vice versa, using a variety of techniques (stand pivot, one, two and three person lifts). Given mock patient scenarios, students practice transfer.

**Treatment Application Activity**

Students exhibit critical thinking and sound technical skills in the management of a cerebral vascular accident mock patient case as presented by the instructor and implement the prescribed plan of care. Students perform transfers and range of motion techniques appropriate to this scenario. While performing interventions, students consider additional factors influencing patient care and the contemporary practice of physical therapy including, continuous quality improvement and other issues impacting the health care delivery system. Students practice reporting and documenting consequences of treatment to supervising physical therapist. Following this treatment application activity, students discuss patient management and therapeutic techniques.
Week # 9 -- Transfers

Lecture
Discussion about transfers continues. This week the focus is placed on difficult transfers and what to do when transfers are unsuccessful.

Laboratory
Practice of transfer techniques continues. Each student group is given mock patient scenarios which they perform in front of the class. Students document transfers and use computerized software.

Treatment Application Activity
Students exhibit critical thinking and sound technical skills in the management of an adolescent traumatic brain injured mock patient case as presented by the instructor and implement the prescribed plan of care. Students apply their knowledge of psycho-social aspects of disabilities and teaching skills (concurrently learned in PTA 10). Students also perform transfer and range of motion techniques and vital signs monitoring, appropriate to this scenario. While performing interventions, students consider additional factors influencing patient care and the contemporary practice of physical therapy including, psycho-social issues, continuous quality improvement and other issues impacting the health care delivery system. Students practice reporting and documenting consequences of treatment to supervising physical therapist (the instructor). Following this treatment application activity, students discuss patient management and therapeutic techniques.

Week # 10 Draping/ Bed Mobility

Lecture
Assignments: Pierson, Chapter 5
          Documentation Project Due
Students are instructed in positioning and draping techniques as well as precautions to be taken when performing these techniques. One quarter, one half, three quarter turns, side-lying, supine, prone, rolling and moving in bed are introduced.

Laboratory
Students practice positioning/draping techniques, rolling, moving in bed and bed to stretcher transfers. Given mock patient scenarios, students perform bed mobility/draping activities.

Treatment Application Activity
Students exhibit critical thinking and sound technical skills in the management of an acute traumatic brain injured mock patient as presented by the instructor and implement the prescribed plan of care. Students perform range of motion, bed mobility, lifting, draping, transfer techniques and vital signs monitoring, appropriate to this scenario. While performing interventions, students consider additional factors influencing patient care and the contemporary practice of physical therapy including, psycho-social issues and other issues impacting the health care delivery system. Students practice reporting and documenting consequences of treatment to supervising physical therapist. Following
this treatment application activity, students discuss patient management and therapeutic techniques.

**Week #11--Bed Mobility con ’t / Architectural Barriers**

**Lecture**
Assignments: Pierson, Chapter 5
Student describes the type of home they live in and list the architectural barriers they find and suggestions for adaptations.

This week introduces the student to environmental accessibility, stressing the identification and accommodation of architectural barriers. The relationship between the state of the environment and safety, as it impacts on activities of daily living (ADL) is studied.

**Laboratory**
Given mock patient scenarios, students continue to practice bed mobility, draping and transfer techniques. Students examine and analyze the accessibility of the campus facilities.

**Treatment Application Activity**
Students exhibit critical thinking and sound technical skills in the management of a cerebral vascular accident mock patient case as presented by the instructor and implement the prescribed plan of care. Students perform range of motion, bed mobility, lifting, draping techniques, transfers, and vital signs monitoring, appropriate to this scenario. While performing interventions, students consider additional factors influencing patient care and the contemporary practice of physical therapy including, architectural barriers, psycho-social issues and other issues impacting the health care delivery system. Students practice reporting and documenting consequences of treatment to supervising physical therapist. Following this treatment application activity, students discuss patient management and therapeutic techniques.

**Week #12—Introduction to Gait**

**Lecture**
Assignments: Lippert - Chapter 22, Handouts
Research Article Presentations

The student is introduced to normal gait. Topics include: phases of gait, muscles involved, and when muscles contract and relax. Gait documentation will also be discussed.

**Laboratory**
Students observe and perform gait activities and distinguish the different phases of gait. Gait videos are observed.
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***Class attendance is a vital part of the learning experience. A student who has been absent 15% or more of the total instructional hours that a class meets may be considered excessively absent by the instructor. The instructor may consider excessive absences as a factor in the assignment of a student’s grade.

****The course professor utilizes a variety of teaching methodologies to facilitate accomplishment of student learning objectives. These methodologies may include interactive lecturing, supervised group and simulation activities, web-based instruction, use of custom computer based study guides, and active learning strategies.