Montgomery County Community College
PTA 110
Therapeutic Modalities in Physical Therapy
4 - 3 - 4

COURSE DESCRIPTION:
This course addresses the basic physical science, data collection, and principles of selected physical therapy interventions to facilitate healing and pain control. Presentation of a wide variety of clinical scenarios and pathologies facilitates the student's ability to use clinical judgment in selecting applying appropriate modalities. During student-to-student practice in the on-campus laboratory setting students use simulated patient scenarios to demonstrate competency attainment. This course is subject to a course fee. Refer to http://mc3.edu/adm-fin-aid/paying/tuition/course-fees for current rates.

REQUISITES:
Previous Course Requirements
- BIO 131 Human Anatomy & Physiology I
- BIO 132 Human Anatomy & Physiology II
- MAT 106 Math Applications
- PHY 115 Technical Physics
- ENG 101 English Composition I
- ESW 222 Applied Kinesiology
- ESW 224 Exercise Physiology
- THA 105 Introduction to Acting I: Improvisation and Fundamentals
- PSY 206 Human Development – A Life-Span Approach

Concurrent Course Requirements:
- PTA 100 Fundamentals of Physical Therapist Assisting and Data Collection
- PTA 125 Therapeutic Interventions for Physical Therapist Assisting

COURSE COMMENT
Registration is restricted to students admitted to the Physical Therapist Assistant Program.

LEARNING OUTCOMES Upon successful completion of this course, the student will be able to:	LEARNING ACTIVITIES	EVALUATION METHODS
1. Identify physiologic responses to therapeutic modalities used in physical therapy.	Lecture / Discussion Textbook Readings Supplemental Handouts Case Study / Application Hands-on laboratory interaction. Demonstration / Practice	Practical Examinations Written Assignments Skills Competency Checks Summative Written Examinations
2. Apply data collection techniques accurately to determine the safety and effectiveness of the use of therapeutic modalities, based on the physical therapy plan of care.	Lecture / Discussion Textbook Readings Supplemental Handouts Case Study / Application Hands-on laboratory interaction. Demonstration / Practice	Practical Examinations Skills Competency Checks
3. Utilize health care literature effectively to discuss current patterns of care and treatment modalities.	Lecture / Discussion Textbook Readings Supplemental Handouts Case Study / Application Hands-on laboratory interaction. Demonstration / Practice	Practical Examinations Written Assignments Skills Competency Checks Summative Written Examinations
4. Demonstrate competence in implementing treatment for selected therapeutic modalities, based on the physical therapy plan of care.	Lecture / Discussion Textbook Readings Supplemental Handouts Case Study / Application Hands-on laboratory interaction. Demonstration / Practice	Practical Examinations Written Assignments Skills Competency Checks Summative Written Examinations
5. Demonstrate competence in implementing treatment for electrotherapeutic agents, based on the physical therapy plan of care	Lecture / Discussion Textbook Readings Supplemental Handouts Case Study / Application	Practical Examinations Written Assignments Summative Written Examinations

6. Demonstrate the appropriate use of massage therapy within the physical therapy plan of care.	Lecture / Discussion Textbook Readings Supplemental Handouts Case Study / Application Hands-on laboratory interaction. Demonstration / Application	Practical Examinations Written Assignments Skills Competency Checks Summative Written Examinations
7. Demonstrate an appropriate use of selected therapeutic modalities from within the physical therapy plan of care.	Lecture / Discussion Textbook Readings Supplemental Handouts Case Study / Application	Written Assignments Summative Written Examinations
8. Describe the common types of therapeutic exercises used in aquatic therapy.	Lecture / Discussion Textbook Readings Supplemental Handouts Case Study / Application	Written Assignments Summative Written Examinations

At the conclusion of each semester/session, assessment of the learning outcomes will be completed by course faculty using the listed evaluation method(s). Aggregated results will be submitted to the Associate Vice President of Academic Affairs. The benchmark for each learning outcome is that *70% of students will meet or exceed outcome criteria*.

SEQUENCE OF TOPICS:

1. Introduction to Physical Agents and How They are Used
    a. Categories of Physical Agents
    b. History and Role of Physical Agents in Medicine and Rehabilitation
    c. General Contraindications and Precautions for Physical Agent Use
    d. Effects of Physical Agents
    e. Evidence-based Practice
    f. Using Physical Agents in Combination with Each Other or With Other interventions
    g. Using Physical Agents within Different Health Care Delivery Systems
2. Pathology Review
    a. Inflammation and Tissue repair
    b. Pain
    c. Tone Abnormalities
    d. Motion Restrictions
3. Therapeutic Massage Techniques
    a. Basic Therapeutic Massage Techniques of Petrissage, Effleurage, Friction, Percussion, Tapotement and Vibration
    b. Physiological Changes, indications and Contraindications of Therapeutic massage
4. Thermal Agents: Cold and Heat
    a. Indications and how the Modality Effects Injured Tissue

   b. Contraindications and Precautions
   c. Standard Preparation and Appropriate Application
   d. Documentation and Communication
5. Ultrasound
   a. Effects of Ultrasound
   b. Clinical Applications of Ultrasound
   c. Contraindications and Precautions for the Use of Ultrasound
   d. Adverse Effects of Ultrasound
   e. Application Technique
   f. Documentation and Communication
   g. Phonophoresis
6. Diathermy
   a. Physical Properties of Diathermy
   b. Types of Diathermy applicators
   c. Effects of Diathermy
   d. Clinical Indications for the Use of Diathermy
   e. Contraindications and Precautions for the Use of Diathermy
   f. Adverse Effects of Diathermy
   g. Applications Techniques
   h. Documentation and communication
7. Aquatics and Hydrotherapy
   a. Physical Properties of Water
   b. Physiological Effects of Hydrotherapy
   c. Contraindications and Precautions for Hydrotherapy
   d. Adverse Effects of Hydrotherapy
   e. Documentation and Communication
8. Electrical Currents
   a. Introduction and history
   b. Effects of Electrical Currents
   c. Clinical Applications of Electrical Currents
   d. Contraindications and Precautions for the Use of Electrical Currents
   e. Adverse Effects of Electrical Currents
   f. Applications Technique
   g. Documentation and Communication
   h. Iontopheresis
   i. Biofeedback
9. Traction
   a. Clinical Indications for the Use of Spinal Traction
   b. Contraindications and Precautions for the Use of Spinal Traction
   c. Adverse Effects of Spinal Traction
   d. Application Techniques
   e. Documentation and Communication
10. Compression
   a. Clinical Indications for the Use of External Compression
   b. Contraindications and Precautions for the Use of External Compression
   c. Adverse Effects of External Compression

d. Application Techniques
e. Documentation and communication

11. Electromagnetic Radiation: Lasers and Light
    a. Effects of lasers and Light
    b. Clinical Indications for the Use of lasers and Light
    c. Contraindications and Precautions for Lasers and Light
    d. Application Techniques for Lasers and Light
    e. Documentation and Communication
12. Ultraviolet Radiation
    a. Effects of Ultraviolet Radiation
    b. Clinical Indications for Ultraviolet radiation
    c. Contraindications and Precautions for the Use of Ultraviolet Radiation
    d. Adverse Effects of Ultraviolet Radiation
    e. Application Techniques
    f. Documentation and Communication

LEARNING MATERIALS:

- Behrens, B. and Beinert, H (2014) Physical Agents Theory and Practice (3rd ed.). Philadelphia, PA: F.A. Davis Company.
- Clynch, H. (2017) The Role of the Physical Therapist Assistant – Regulations and Responsibilities (2nd ed.). Philadelphia, PA: F.A. Davis Company.
- Resources required: PTA lab kit, APTA website, internet access
- Kisner, C. and Colby, L.A. (2017) Therapeutic Exercise – Foundations and Techniques (7th ed.). Philadelphia, PA: F.A. Davis Company.

RECOMMENDED COURSE TEXTBOOKS

- Bircher, W. (2017) Documentation for Physical Therapists Assistants (5th ed.). Philadelphia, PA: F.A. Davis Company.
- Goodman, C. (2017) Pathology for the Physical Therapist Assistant (2nd ed.). St. Louis, MO: Elserver.

Other learning materials may be required and made available directly to the student and/or via the College's Libraries and/or course management system.

COURSE APPROVAL:

Prepared by: Robert Cullen, PT, JD, MBA Date: 8//2015
VPAA/Provost or designee Compliance Verification:
Victoria L. Bastecki-Perez, Ed.D. Date: 7/14/2016

Revised by: Robert Cullen, PT, JD, MBA Date: 11/29/2017
VPAA/Provost or designee Compliance Verification:
Victoria L. Bastecki-Perez, Ed.D. Date: 12/4/2017

Revised by: Robert Cullen, PT, JD, MBA Date: 11/3/2020
VPAA or designee Compliance Verification: Date: 12/11/2020

This course is consistent with Montgomery County Community College's mission. It was developed, approved and will be delivered in full compliance with the policies and procedures established by the College.