SYLLABUS

PTA 210 – Neurology for the PTA

PTA 210 – C01  Class Times: Lecture  M-W 8:30-10:45 am
Lab  W 11:30-2:30pm

Summer 2016  Classroom: AHB 204

Instructor: Dr. William Bails, MSPT, DPT
Physical Therapist Assistant Program

Office: AHB 307  Office Hours: By appointment.
Phone: 410-572-8740 (PTA Dept.)
Email: wbails@worwic.edu

Required Texts


Additional Texts (from other PTA courses)


Course Description

PTA 210 Neurology for the PTA (4 credits)
This course focuses on the study of nervous system physiology, anatomy, development, and pathology, as well as motor control and motor learning across the lifespan. These principles are applied to a variety of neurological diseases and conditions commonly encountered in physical therapy practice. Students are expected to apply appropriate data collection, treatment techniques and documentation skills to case studies involving patients with neurological pathologies. Students who complete this course can demonstrate the use of clinical reasoning skills in the safe application of treatment interventions. Hours: 39 lecture, 26 laboratory. Prerequisites: PTA 150 and permission of the department head. Course fee: $80. Laboratory fee: $35. Usually offered in the summer.
## Course Objectives

Upon completion of the course the student will:

<table>
<thead>
<tr>
<th>Course Objectives</th>
<th>Assessment Goals</th>
<th>Assessment Strategies</th>
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</thead>
</table>
| 1. Describe neurological anatomy and physiology. (GEO 1)                            | A. Describe structure and function of the central, peripheral and autonomic nervous systems.  
   B. Describe the vascular supply to the nervous system.                          | • Written Exams  
   • Quizzes  
   • Classwork  
   • Practical Exams |
| 2. Discuss the relationship among motor control, motor learning, and motor development. | A. Describe theories and components of motor control, motor learning, and motor development.  
   B. Describe motor development across the lifespan.                                | • Written Exams  
   • Quizzes  
   • Classwork  
   • Practical Exams |
| 3. Discuss common neurological disorders/diseases.                                 | A. Describe the etiology, diagnosis, prognosis, and treatment of common neurological disorders/diseases.  
   B. Describe recovery, potential complications, clinical manifestations and functional impact of common neurological disorders/diseases.  
   C. Explain the role of physical therapy in treating common neurological disorders/diseases.  | • Written Exams  
   • Quizzes  
   • Classwork  
   • Practical Exams |
| 4. Develop a treatment session within the physical therapy plan of care for the patient with a common neurological disorder/disease. | A. Identify pertinent information from patient chart when treating the neurological patient.  
   B. Describe when further information or discussion with the supervising PT/other healthcare provider is needed when treating a neurological patient.  
   C. Demonstrate proper collection and interpretation of data utilized in treatment of the neurological patient.  
   D. Demonstrate proper intervention technique.  
   E. Discuss clinical reasoning for chosen physical therapy intervention.  
   F. Determine further course of physical therapy treatment within plan of care for the neurological patient.  
   G. Document treatment session consistent with best practices in physical therapy.  | • Written Exams  
   • Quizzes  
   • Classwork  
   • Practical Exams  
   • Written Assignment |
| 5. Demonstrate various data collection and intervention skills as they relate to a patient’s functional activities. | A. Discuss patient education on home issues, environment, and self-care.  
   B. Identify safety concerns and physical barriers to patient’s environment at home, work, and community.  
   C. Identify components of various functional activities.  
   D. Demonstrate physical therapy intervention to improve performance of functional activities.  
   E. Educate the patient/caregiver in the safe use and care of adaptive and assistive equipment.  | • Written Exams  
   • Quizzes  
   • Classwork  
   • Practical Exams |
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<th>Assessment Strategies</th>
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<tbody>
<tr>
<td>6. Discuss other disciplines in the healthcare team and their role in the care of the neurological patient.</td>
<td>A. Identify problem areas addressed by each member of the healthcare team.</td>
<td>• Written Exams</td>
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<td>B. Identify topics to be discussed by an inter-professional healthcare team to promote continuum of care.</td>
<td>• Quizzes</td>
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<td></td>
<td>C. Discuss the PTA role in the inter-professional healthcare team.</td>
<td>• Classwork</td>
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<td></td>
<td>D. Describe elements of effective communication among the healthcare team.</td>
<td>• Practical Exams</td>
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</table>

General Education Objectives (GEO) may be found in the college’s catalog and website.
Course Objective (CO) see syllabus.

**Course Requirements and Expectations**

(CO 1 – 6)

For successful completion of the course, students are expected to:

- Complete the course with a minimum grade of 75%.
- Complete all written exams.
- Complete practical exams with a minimum grade of 75%.
- Actively participate in discussions and complete quizzes and assignments when given.
- Demonstrate behaviors consistent with the Values-based Behaviors for the PTA.
- Complete an electronic research/writing assignment.
- Abide by the attendance, grading and make-up examination policies of the course.

**Academic Honesty Policy**

Academic integrity is expected of all students. Cheating and plagiarism are violations of academic integrity. All papers and presentations must be the student’s own work. Any student who has violated the academic honesty policy by exhibiting any of the following types of behavior during or in the preparation/performance of any quiz, project, report, test, or exam will receive a ZERO “0” for the assignment, and the student conduct violation will be referred to the Student-Faculty Disciplinary Committee. Cheating will not be tolerated in the Physical Therapist Assistant Program. Students found cheating will be dismissed from the Physical Therapist Assistant Program. Documented evidence of the offense will be kept in the General Education Department office and/or the Physical Therapist Assistant Program office.

1. Cheating is defined as the act of obtaining information or data improperly or by dishonest or deceitful means. This includes the intentional use of unauthorized materials, information, or study aids in any academic exercise. This also includes helping or attempting to help another student to cheat or submit the same paper for two different classes without the explicit authorization / approval of both instructors. Each instructor will be available for consultation regarding any confusion a student may have before submitting an assignment.

2. Plagiarism is defined as the copying or imitating the language, ideas, or thoughts of another author and presenting them as one’s original work or the copying of another’s words in any medium without giving credit in a footnote in the proper format (such as...
MLA or APA documentation format). In both oral and written communication, the following guidelines for avoiding plagiarism must be followed:

- Any words quoted directly from a source must be in quotation marks and cited.
- Any paraphrasing or rephrasing of the words and/or ideas of a source must be cited.
- Any ideas or examples derived from a source that are not in the public domain or of general knowledge must be cited.

Sharing information that was present on a quiz/test/exam is an example of academic dishonesty and will result in a grade of “F” for the course and immediate dismissal from the Physical Therapist Assistant Program.

**Services for Students with Disabilities**

Wor-Wic provides reasonable accommodations for students with disabilities, in Compliance with the Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973. If you are in need of accommodations, please contact the Counseling office at (410) 334-2899. For more information, see Wor-Wic's Services for Students with Disabilities web page.

**Emergency Information**

In the event of severe inclement weather or other emergency, information about the closing of the college will be communicated via e2Campus and the College's website. Faculty will communicate with students about their courses and course requirements, such as assignments, quiz and exam dates, and class and grading policies, via Blackboard. Students will be responsible for completing all assignments in accordance with class policies.

**Attendance**

(CO 1 – 6)

Students are expected to attend all class and laboratory sessions; therefore, attendance records will be maintained. Consistent with the standards of professionalism, students are expected to arrive early and be ready for class at the scheduled time. If a student is unable to attend a class or lab session, they are to notify the instructor as soon as possible. When a student misses a class or lab session, it is the student’s responsibility to acquire the information reviewed and ask questions to the course instructor during a scheduled tutoring time and/or another scheduled time. Students absent from class will not be permitted to make-up missed quizzes or graded assignments administered during the scheduled class session.

Students are expected to act and perform in a respectful and professional manner at all times, including while in class, laboratory, and clinical experiences. Repeated episodes of in-class disruption will be considered a valid reason for dismissal from the class session. Cell phones and electronic devices must be placed in silent mode during the class sessions. **Talking on cell phones or sending texts messages during class is prohibited.**
Course Materials/ Blackboard

Blackboard will be used in all PTA courses. To access course information in Blackboard you need to have access to a computer with an Internet connection. Computers that meet these requirements are available on campus in BH 217, FOH 305, HH 100, GH 204, and AHB 108.

Please follow these directions to access course syllabi and any other materials posted for this course:

**Login Information:**
1. From the Wor-Wic home page, point to “Quick Links” (top-right) and click the “Blackboard Login” link.
2. Enter your Wor-Wic user ID and password. Don’t know your user ID or password? Contact Student Services.

**Blackboard Components:**
1. Posted course syllabus.
2. Messages from the course instructor will be located under the messages section of Blackboard.
3. When completed the following may be posted: presentations, study guides, assignment information, and grades.

**Blackboard Integrity**

All students logging into Blackboard affirm that they understand and agree to follow Wor-Wic Community College policies regarding academic integrity and the use of College resources as described in the college catalog.

Wor-Wic Community College considers the following as violations of the computer usage policy:

- Using the campus computing network and facilities to violate the privacy of other individuals.
- Sharing of account passwords with friends, family members or any unauthorized individuals.

Violators are subject to college disciplinary procedures.

**Electronic Research/Writing Assignment**
(CO 4)

For this course, each student shall use the Wor-Wic electronic resource center to identify reference materials to support a research paper on the following topic: **given a patient with a neurologic diagnosis, develop a treatment session based on the PT plan of care.**

The report you prepare must:

1. Have a cover page in APA format which includes the course number, your name, the due date, and running head.
2. Be at least 3 full pages and no more than 4 pages in length, not including cover page and references page(s).
3. Be double spaced, and be typed using Times New Roman in 12 point font.
4. Be properly referenced following the current APA format. A copy of the APA format is available in the Media Center. An abstract page IS NOT required.
(If you wish to have additional help on a writing assignment, you may schedule an appointment with a writing conference instructor by going to your MyWorWic portal, selecting the Student Resources tab and then selecting Academic Support. Click on Writing Conferences to schedule a conference. Limited time slots are available, so an appointment is required. If you cannot keep your appointment, it is your responsibility to cancel it by going back to the Writing Conferences link. Please note that writing conferences are conducted in BH 227.)

5. Have at least three (3) references, two of which must be a peer-reviewed physical therapy journals. References must come from peer-reviewed journals, up-to-date physical therapy or medical textbooks or publications, or APTA publications. Wikipedia may not be used as a cited reference source.

6. Be submitted in an electronic format (paper documents will not be accepted), and your assignment must be in the file format of a Microsoft Word document.

**Due Date:** July 25th, 2016, 9:00 a.m. by electronic submission.

Failure to submit the writing assignment by due date and time, will earn a grade of 0 for the paper.

Examination / Test Policy
(CO 1 – 6)

It is expected that students complete all examinations. This course has 2 written and 1 practical exams as well as a comprehensive final written and comprehensive final practical examination. Examinations are based on the objectives for the course. Material for the exams is derived from the course texts, assignments, and lecture and laboratory sessions. Please keep in mind that material assigned from the texts may not be covered during lecture. The student is responsible for reading the text and knowing the assigned material regardless of whether or not it is discussed during the lectures.

**ATTENDANCE AT ALL SCHEDULED EXAMINATIONS IS MANDATORY.** Any student absent from examinations due to illness or injury must have a written justification from their physician. All other cases of a missed examination will require a meeting with the faculty member in charge of the course to discuss the absence. It is at the discretion of the faculty member to determine if extenuating circumstances are sufficient to allow for a make-up examination. IF ALLOWED, any make up examination must be taken no later than three (3) days after the student returns to class. Any un-excused absence from an examination will automatically result in a score of ZERO for that examination.

After all exams are graded, students will be given an opportunity to review their exam. After review, the student must return all testing instruments to the instructor. You may view your exam file with the instructor by scheduling a special appointment.

**Written Exam Procedures:**
Seating assignments, length of time to complete the test, and test format are at the discretion of the course instructor. Written exams may be in the form of true/false, multiple choice, fill in the blank, matching, short answer, and/or essay questions. Upon entering the room, students will be directed
to place all personal belongings in a designated area within the classroom. All electronic devices are to be turned off during the examination. The only personal items allowed to be with students are #2 pencils. If it is deemed necessary to have scrap paper for an examination, the instructor will provide it for students. Once an examination has been passed out, students are not allowed to leave the testing room until they have completed their examination and turned in their paper. Upon completion of their test, students should turn in their examination and score sheet, gather their personal belongings and exit the room as quietly as possible. It is highly recommended students do not loiter outside the doors to the testing room to avoid the appearance of cheating. All students must turn in all test materials. Failure to turn in all test materials will result in a score of ZERO on the exam.

**Competencies:**
During this course, students will be required to complete competencies for specific data collection and/or intervention techniques. The competency gives a student the opportunity to demonstrate proper and safe completion of a particular skill to the course instructor or laboratory assistant. Competencies are expected to be completed during scheduled lab hours. Some competencies may contain safety procedures identified as critical safety elements. Failure to properly follow a critical safety element(s) will result in failure of the competency. If a student fails a competency, it must be repeated. If not passed after the second attempt, the student is required to meet with the course instructor regarding performance. The student is allowed a third and final attempt at passing the competency after meeting with the course instructor. Failure to pass a competency on the third and final attempt will result in the student failing the competency and the course. Students are required to complete all of the competencies identified for a unit and listed in the course syllabus prior to sitting for the unit practical exam. It is the student’s responsibility to make arrangements with the course instructor to complete any missing competencies before the scheduled date for a practical exam.

**Competencies: Motor Development, Handling/ Positioning**

**Practical Exam Procedures:**

**Unit Practical Exams**
Students are required to pass all competencies for a unit prior to taking a unit practical exam. Failure to complete all of the required competencies may result in the inability to take a unit practical exam and a failing grade for the exam. Students will be provided with the grading rubric to be used during a unit practical exam prior to the test date and time. As part of the unit practical examination, students may be required to provide requested clinical information, demonstrate proper safety precautions, demonstrate appropriate patient interaction behaviors, demonstrate proper technique(s) for chosen treatment skills, data collection skills, documentation skills, and to demonstrate sound clinical reasoning. Some items on the grading rubric may be identified as critical safety elements. Failure to properly complete items identified as critical safety elements will be grounds for receiving a failing grade on a unit practical examination.

In the event a student fails a unit practical exam, the student will have an opportunity to complete a **second and final attempt** remedial unit practical exam. The student must have an opportunity for remediation after a failed unit practical exam and before a remedial unit practical exam. If a student passes the remedial unit practical exam, their assigned score for the exam will be the average score between the original and remedial unit practical exams. Failure to pass the remedial unit practical exam will result in a failing grade for the course.
Due to the nature of unit practical testing, students will be tested in pairs or small groups. Some students will have completed the unit practical exam before other students have been tested. Any communication between students who have taken the exam and students waiting to take the exam will be considered cheating and therefore grounds for all involved students to receive a grade of ZERO on the unit practical exam. Speaking within earshot of students waiting to take the exam is unacceptable and can be considered cheating. It is in everyone’s best interest for students who have completed their unit practical exam to quietly leave the exam area, and not communicate verbally or electronically any information about the unit practical exam.

The unit practical exam schedule will be available on Blackboard and will be posted in the PTA laboratory before the exam. Unit Practical Exams will typically be on regularly scheduled lab days, however an individual student’s timeslot may or may not be within regularly scheduled lab hours. If a student is scheduled after normal lab hours and there is a legitimate conflict that interferes with a student’s scheduled practical exam time, it is the responsibility of the student to inform the course instructor and request permission for a change in timeslot. Whether circumstances warrant a change to a students scheduled practical exam time is at the course instructor’s discretion. If approved, it is then the student’s responsibility to seek and secure a trade in timeslot with another student. BOTH students must notify the instructor in writing via email, and the change must be approved by the instructor no later than 24 hours prior to the test.

**Final Practical Exam**
The final practical exam will be cumulative. Students may be tested on any material covered during the course including but not limited to items covered in competencies and unit practical exams. Failure to adhere to identified safety elements during the final practical exam will result in failure of the exam and course. Failure to achieve a score of 75% or higher on the final practical exam will result in failure of the exam and the course. There are NO opportunities for remediation for a failed final practical exam.

**Quizzes**
(CO 1-6)
Students will complete quizzes on information found in the reading assignments and on information presented during class. Quizzes administered during class sessions will have a time limit for completion. Quizzes will be distributed throughout the semester to measure the student’s knowledge of course concepts and to encourage class attendance. Students are expected to complete chapter reading assignments before scheduled class meetings for quiz preparation. Quizzes will not be announced and will be given at different times throughout the class session. Students who report late or leave early may miss the quiz. NO MAKE-UP QUIZZES WILL BE ADMINISTERED. Quizzes are at the discretion of the course instructor. The instructor may choose to give or not give a quiz during any lecture meeting that does not have an exam scheduled.

**Class Assignments**
(CO 1-6)
Students will complete assignments during scheduled course sessions and/or for homework. Completion by the deadline indicated is required to earn credit for assignments. Failure to attend class or arriving late/leaving early may result in students earning a grade of 0 for assignments completed for that day. Class assignments are at the discretion of the course instructor. The instructor may choose to give an assignment during any lecture meeting that does not have an exam scheduled.
Course Evaluation

- In Class Assignments/Quizzes: 10% of grade
- Writing/Research Assignment: 10% of grade
- Written Exams (2): 20% of grade
- Practical Exam (1): 20% of grade
- Comprehensive Written Final Examination: 20% of grade
- Comprehensive Practical Final Examination: 20% of grade

Grading Scale

A  93 – 100  Excellent
B  84 – 92  Good
C  75 – 83  Average
D  66 – 74  Course Failure
F  0 – 65  Course Failure

A final grade below a 75.0% results in course failure and dismissal from the Physical Therapist Assistant Program. Grades will not be rounded, a 74.9% is considered a failing grade.
PTA 210 – **Neurology for the PTA: Lecture**

**Tentative Schedule:** The Instructor reserves the right to modify the schedule.

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<tr>
<th>Dates</th>
<th>Lecture Topic</th>
<th>Text Reference</th>
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<tbody>
<tr>
<td>June 1</td>
<td>Role of the PT &amp; PTA and healthcare team in neurorehab., Neuroanatomy (part 1)</td>
<td>Neuro. Interventions: Ch. 1, 2</td>
</tr>
<tr>
<td>June 6</td>
<td>Neuroanatomy (part 2)</td>
<td>Neuro. Interventions: Ch. 2</td>
</tr>
<tr>
<td>June 8</td>
<td>Motor control and Motor Learning</td>
<td>Neuro. Interventions: Ch. 3</td>
</tr>
<tr>
<td>June 13</td>
<td>Motor Development</td>
<td>Neuro. Interventions: Ch. 4</td>
</tr>
<tr>
<td>June 15</td>
<td>Cerebral palsy/Myelomeningocele</td>
<td>Neuro. Interventions: Ch. 6, 7</td>
</tr>
<tr>
<td>June 20</td>
<td>Genetic Disorders</td>
<td>Neuro. Interventions: Ch. 8</td>
</tr>
<tr>
<td>June 22</td>
<td>Developmental assessment tools/Guidelines for treating children</td>
<td>Neuro. Interventions: Ch. 5</td>
</tr>
<tr>
<td>June 27</td>
<td>Assistive and adaptive equipment for children</td>
<td>Neuro. Interventions: Ch. 5, Physical Rehab.: Ch. 30</td>
</tr>
<tr>
<td><strong>June 29</strong></td>
<td><strong>EXAM 1</strong></td>
<td></td>
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<tr>
<td>July 6</td>
<td>Cerebrovascular accidents</td>
<td>Neuro. Interventions: Ch. 10</td>
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<tr>
<td>July 11</td>
<td>Traumatic brain injury</td>
<td>Neuro. Interventions: Ch. 11</td>
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<tr>
<td>July 13</td>
<td>Spinal cord injuries</td>
<td>Neuro. Interventions: Ch. 12</td>
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<tr>
<td>July 18</td>
<td>CNS degenerative disorders</td>
<td>Neuro. Interventions: Ch. 13</td>
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<tr>
<td>July 20</td>
<td>PNS diseases and disorders/ Autonomic NS/ CRPS</td>
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<tr>
<td>July 25</td>
<td>Neurologic rehab and the healthcare team/Home assessment and adaptation</td>
<td>Physical Rehab.: Ch. 9</td>
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<tr>
<td>July 27</td>
<td>Neurological intervention review</td>
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<tr>
<td><strong>Aug 1</strong></td>
<td><strong>EXAM 2</strong></td>
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<tr>
<td>Aug 3</td>
<td>Review Units 1 &amp; 2</td>
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<tr>
<td><strong>TBA</strong></td>
<td><strong>FINAL WRITTEN EXAM</strong></td>
<td><strong>COMPREHENSIVE</strong></td>
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# PTA 210 – Neurology for the PTA: Laboratory

**Tentative Schedule:** The Instructor reserves the right to modify the schedule.

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<tr>
<th>Dates</th>
<th>Laboratory Topic</th>
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<tbody>
<tr>
<td>Week 1-</td>
<td>Data collection for the neurological patient</td>
<td>Physical Rehab: Ch 5, 6</td>
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<tr>
<td>June 1</td>
<td></td>
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<tr>
<td>Week 2</td>
<td>Motor Control and Motor Learning Handling/ Positioning Techniques</td>
<td>Physical Rehab.: Ch. 10</td>
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<tr>
<td>June 8</td>
<td></td>
<td>Imp. Func. Outcomes: Ch. 1-2 (p 12-25)</td>
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<td></td>
<td></td>
<td>Neuro. Interventions: Ch. 5</td>
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<tr>
<td>Week 3</td>
<td>Developmental milestones, Motor Development Treatment for abnormal tone</td>
<td>Neuro. Intervention: pgs. 113-119</td>
</tr>
<tr>
<td>June 15</td>
<td>Competency Due: Handling/ Positioning</td>
<td>Neuro. Interventions: Ch. 4</td>
</tr>
<tr>
<td>Week 4</td>
<td>Motor development assessment tools</td>
<td>Neuro. Interventions: Ch. 5 Handouts</td>
</tr>
<tr>
<td>June 22</td>
<td><strong>Competency:</strong> Motor Control and Motor Development</td>
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<tr>
<td>Week 5</td>
<td><strong>PRACTICAL EXAM 1</strong></td>
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<tr>
<td>June 29</td>
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<tr>
<td>Week 6</td>
<td>CVA Lab- Modified Ashworth Scale, Bed Mobility, Sitting, sitting balance, Transfers</td>
<td>Imp. Func. Outcomes: Ch.3,4,6</td>
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<tr>
<td>July 6</td>
<td></td>
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<tr>
<td>Week 7</td>
<td>Standing Balance Interventions</td>
<td>Imp. Func. Outcomes: Ch. 7</td>
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<tr>
<td>July 13</td>
<td>Gait Training Interventions</td>
<td>Imp. Func. Outcomes: Ch. 8</td>
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<tr>
<td>Week 8</td>
<td>Functional ADL training</td>
<td>Imp. Func. Outcomes: Ch. 9, 10</td>
</tr>
<tr>
<td>July 20</td>
<td>Home assessment</td>
<td>Physical Rehab.: Ch. 9</td>
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<tr>
<td>Week 9</td>
<td>Putting it all together- Case studies</td>
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<td>July 27</td>
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<tr>
<td>Week 10</td>
<td><strong>Review Lab</strong></td>
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<td>Aug 3</td>
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<tr>
<td>Final Practical</td>
<td><strong>FINAL PRACTICAL EXAM</strong></td>
<td><strong>COMPREHENSIVE</strong></td>
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<tr>
<td>Exam</td>
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