A. Academic Division: Health Sciences

B. Discipline: Physical Therapist Assistant

C. Course Number and Title: PHTA1110 Neuromuscular Rehabilitation

D. Course Coordinator: Renda Cline, PTA, BS HCM, ACCE
   Assistant Dean: Melinda Roepke, MSN, RN

Instructor Information:
- Name: Click here to enter text.
- Office Location: Click here to enter text.
- Office Hours: Click here to enter text.
- Phone Number: Click here to enter text.
- E-Mail Address: Click here to enter text.

E. Credit Hours: 4
   Lecture: 2 hour
   Laboratory: 5 hours

F. Prerequisites: PHTA1010, PHTA1040, PHTA1070
   Co-requisite: PHTA1090 (M)

G. Syllabus Effective Date: Fall, 2017

H. Textbook(s) Title:

   **Neurologic Interventions for Physical Therapy**
   - Authors: Martin and Kessler
   - Copyright Year: 2007
   - Edition: 2nd or latest
   - ISBN #: 0-7216-0427-7

   **Physical Rehabilitation - Assessment and Treatment**
   - Author: O’Sullivan and Schmitz
   - Copyright Year: 2007
   - Edition: Latest
   - ISBN #: 0803612471

I. Workbook(s) and/or Lab Manual: None

J. Course Description: This is a continuation of didactic and technical instruction for clinical practice. This course covers normal and abnormal motor development, pediatric conditions affecting motor development, and interventions to address infant and pediatric conditions leading to motor delays and adult neurological disorders affecting motor function and interventions to address the motor deficits of individuals with neurological motor dysfunction. Wheelchair prescription and use as well as various transfers for pediatric and neurologically impaired individuals will also be covered.
K. College-Wide Learning Outcomes:

<table>
<thead>
<tr>
<th>College-Wide Learning Outcome</th>
<th>Assessments - - How it is met &amp; When it is met</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication – Written</td>
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<tr>
<td>Communication – Speech</td>
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<tr>
<td>Intercultural Knowledge and Competence</td>
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<tr>
<td>Critical Thinking</td>
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<tr>
<td>Information Literacy</td>
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<tr>
<td>Quantitative Literacy</td>
<td></td>
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</tbody>
</table>

L. Course Outcomes and Assessment Methods:

Upon successful completion of this course, the student shall:

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Assessments – How it is met &amp; When it is met</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Demonstrate understanding of components of normal motor development.</td>
<td>Quizzes within first 8 weeks and Midterm exam</td>
</tr>
<tr>
<td>2. Demonstrate understanding of components of abnormal motor development.</td>
<td>Quizzes within first 8 weeks and Midterm exam</td>
</tr>
<tr>
<td>3. Identify normal gross and fine motor milestones for 1st 5 years.</td>
<td>Quizzes within first 8 weeks and Midterm exam</td>
</tr>
<tr>
<td>4. Demonstrate components of righting reactions and mature equilibrium reactions in various positions/movements.</td>
<td>Pediatric skills checklist and Midterm lab practical exam.</td>
</tr>
<tr>
<td>5. Identify risk factors for motor development and neurological impairment.</td>
<td>Written midterm and final exams; Oral presentation during term</td>
</tr>
<tr>
<td>6. Identify signs/symptoms of over stimulation for infant in NICU or at risk.</td>
<td>Midterm exam</td>
</tr>
<tr>
<td>7. Identify common pediatric and adult neurological disorders, and the symptoms, as well as indications and contraindications for physical therapy intervention.</td>
<td>Written midterm and final exams; final lab practical exam.</td>
</tr>
<tr>
<td>8. Implement treatment activities to address areas of concern listed on PT POC for pediatric and adult neurological patient.</td>
<td>Quizzes, Written midterm and final exams; Midterm and Final lab practical exams</td>
</tr>
<tr>
<td>9. Demonstrate positioning strategies, treatment strategies, and equipment usage to positively impact muscle tone, movement, and posture/alignment, skin integrity and function.</td>
<td>Midterm exam; Midterm Lab practical exam</td>
</tr>
<tr>
<td>10. Record simulated treatment in SOAP note format.</td>
<td>SOAP note assignment at midterm and final lab practical exam</td>
</tr>
<tr>
<td>11. Demonstrate simulated patient treatments in a technically correct manner.</td>
<td>Midterm and Final Lab practical exams</td>
</tr>
<tr>
<td>12. Synthesize information from patient .scenarios and PT plan of care to develop and carry out treatment activities which meet parameters of plan of care.</td>
<td>Midterm and Final lab practical exam Midterm and Final exams</td>
</tr>
<tr>
<td>13. Interpret patient response to treatment and adjust treatment accordingly.</td>
<td>Midterm and Final lab practical exam</td>
</tr>
<tr>
<td>14. Complete W/C measurement</td>
<td>Lab skills checklist</td>
</tr>
<tr>
<td>15. Compare and contrast components of Ranchos Los Amigo Cognition Scale and Glasgow Coma Scale.</td>
<td>Final exam</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Assessments – How it is met &amp; When it is met</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>17. Perform PNF patterns in technically correct manor.</td>
<td>Mini-lab test</td>
</tr>
</tbody>
</table>

M. Topical Timeline (Subject to Change):

Week 1: Normal Motor Development/Movement Analysis
Week 2: Abnormal Development/Intro to NDT
Week 3: Developmental Transitions/Handling for High/Low Tone
Week 4: NICU/Sensory Integration therapy
Week 5: W/C Prescription
Week 6: Pediatric Conditions
Week 7: Pediatric Conditions
Week 8: Midterm Exam
Week 9: CVA/TBI
Week 10: SCI
Week 11: Facilitation/Inhibition
Week 12: Balance/Coordination/Vestibular
Week 13: PNF
Week 14: Adult Neuro Conditions
Week 15: Adult Neuro Conditions
Week 16: Final Exam

N. Course Assignments:

1. Midterm Lab practical exam 15%
2. Final Lab practical exam 15%
3. Mini-lab tests 10%
4. Oral Presentations 10%
5. Quizzes 10%
6. SOAP note assignment 5%
7. Written midterm exam 15%
8. Written final exam 20%

O. Recommended Grading Scale:

<table>
<thead>
<tr>
<th>NUMERIC</th>
<th>GRADE</th>
<th>POINTS</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>93–100</td>
<td>A</td>
<td>4.00</td>
<td>Superior</td>
</tr>
<tr>
<td>90–92</td>
<td>A-</td>
<td>3.67</td>
<td>Superior</td>
</tr>
<tr>
<td>87–89</td>
<td>B+</td>
<td>3.33</td>
<td>Above Average</td>
</tr>
<tr>
<td>83–86</td>
<td>B</td>
<td>3.00</td>
<td>Above Average</td>
</tr>
<tr>
<td>80–82</td>
<td>B-</td>
<td>2.67</td>
<td>Above Average</td>
</tr>
<tr>
<td>77–79</td>
<td>C+</td>
<td>2.33</td>
<td>Average</td>
</tr>
<tr>
<td>73–76</td>
<td>C</td>
<td>2.00</td>
<td>Average</td>
</tr>
<tr>
<td>70–72</td>
<td>C-</td>
<td>1.67</td>
<td>Below Average</td>
</tr>
<tr>
<td>67–69</td>
<td>D+</td>
<td>1.33</td>
<td>Below Average</td>
</tr>
<tr>
<td>63–66</td>
<td>D</td>
<td>1.00</td>
<td>Below Average</td>
</tr>
<tr>
<td>60–62</td>
<td>D-</td>
<td>0.67</td>
<td>Poor</td>
</tr>
<tr>
<td>00-59</td>
<td>F</td>
<td>0.00</td>
<td>Failure</td>
</tr>
</tbody>
</table>
P. **Grading and Testing Guidelines:**

This is a lecture/lab course which requires a passing grade of 77% in both the lecture and lab component. Lecture is worth 60% of the total grade and lab is worth 40% of the total grade. Once each component has been passed with a 77% grade the two components will be averaged for the final course grade. Students falling below 77% in either component will have failed to meet the requirements to continue in the PTA program.

Q. **Examination Policy:**

A student who misses a quiz for any reason must notify the instructor and make arrangements for making up the quiz. The student will have three school days from the quiz date to make it up.

A student who must miss an examination for any reason is responsible for notifying the instructor prior to the exam, if possible, or within 24 hours of missed exam, and to make arrangements for making up the examination. The student will have a maximum of five school days from the date of the examination in which to make it up. If the instructor is not notified regarding a missed exam, the student will receive an automatic "0" on the exam.

Final exams will be held as scheduled. Requests to take a final exam earlier should be made only under unusual and extenuating circumstances. These requests are to be submitted, in writing, no later than one week prior to the last class day of the term to the Program Director's office.

R. **Class Attendance and Homework Make-Up Policy:**

The PTA program is a series of sequential courses developed to build from one class session and course to the next. It is imperative that the student attend all class and laboratory sessions based on the progressive sequence and amount of educational material to be presented in six semesters. All instructors will maintain attendance records and will follow college attendance guidelines and policies.

It will be the responsibility of the student to obtain lecture notes and to make up laboratory sessions. Any student missing two or more classes will be required to meet with the Program Director. Students have a primary responsibility for notifying their instructors about anticipated or planned absences.

S. **Classroom Expectations:**

Students are expected to attend every class session and listen attentively and interact and behave in a professional manner conducive to learning. If a student is found to be disrupting a class session he/or she may be asked to leave the classroom upon the discretion of the instructor and then be required to meet with the Program Director discuss professional behavior and expectations.

T. **College Procedures/Policies:**

**Attendance Requirements:** All students are required to attend all scheduled classes and examinations. Each faculty member has the right to establish regulations regarding attendance that he/she considers necessary for successful study.

Students who do not attend classes may be administratively withdrawn from those classes. However, failure to attend classes does not constitute withdrawal, and students are expected to process a formal withdrawal through the Student Records Office in Kee Hall.

**Student engagement requirements:**
Student engagement is based on the “active pursuit” of learning which can be measured by class attendance, class participation (in class or online), taking required quizzes/examinations, and submission of work assignments or papers. Student engagement consists of a student attending at least 60% of the class sessions (there should be attendance throughout the term) and/or completing 75% of the assignments listed
on the syllabus at the midpoint in the term. Exceptions can be made when there is on-going
communication between the student and faculty member. The communication must be documented and the
faculty member and student must be in agreement regarding the exception. Students not meeting the
expectation will be administratively withdrawn from class. If a student believes he/she was
administratively withdrawn in error, he/she may file an appeal. Being administratively withdrawn may
have program and financial aid implications.

**Academic Misconduct** is any activity that tends to compromise the academic integrity of the college, or
subvert the educational process. Examples of academic misconduct include, but are not limited to:

1. **Violation of course or program rules** as contained in the course syllabus or other information provided
to the student; violation of program requirements as established by departments and made available to
students.

2. **Plagiarism** including, but not limited to, submitting, without appropriate acknowledgment, any written,
visual or oral material that has been copied in whole or in part from the work of others (whether such
source is published or not) even if the material is completely paraphrased in one’s own words. This
includes another individual’s academic composition, compilation, or other product, or a commercially
prepared paper. Plagiarism also includes submitting work in which portions were substantially
produced by someone acting as a tutor or editor.

   Such practices constitute plagiarism regardless of motive. Those who deny deceitful intent, claim not
to have known that the act constituted plagiarism, or maintain that what they did was inadvertent are
nevertheless subject to penalties when plagiarism has been confirmed.

3. **Cheating** and dishonest practices in connection with examinations, papers and projects, including but
not limited to using unauthorized notes, study aids or information on an examination; obtaining help
from another student during an examination; taking an exam or doing work for another student;
providing one’s own work for another student to copy and submit as his/her own; or allowing another
student to do one’s work and then submitting the work as one’s own. Also included would be altering
a graded work after it has been returned, then submitting the work for re-grading; or submitting
identical or similar papers for credit in more than one course without prior permission from the course
instructors.

4. **Fabrication** including but not limited to falsifying or inventing any information, data or citation;
presenting data that were not gathered in accordance with defined appropriate guidelines, and failing to
include an accurate account of the method by which data were collected.

5. **Obtaining an Unfair Advantage** including, but not limited to stealing, reproducing, circulating, or
otherwise gaining access to examination materials prior to the time authorized by the instructor;
unauthorized collaborating on an academic assignment; taking, hiding or altering resource material; or
undertaking any activity with the purpose of creating or obtaining an unfair advantage over another
student’s academic work.

6. **Aiding and Abetting Academic Dishonesty** including, but not limited to providing material,
information or other assistance to another person with the knowledge that such aid could be used in
any of the violations stated above, or providing false information in connection with any inquiry
regarding academic integrity.

7. **Alteration of Grades or Marks** including but not limited to, action by the student in an effort to change
the earned credit or grade.

In addition, cases of academic dishonesty may involve photocopied materials. Materials used may fall
under the Copyright Act. Violations of said Act may subject the user and/or the College to sanctions.
Statement on Disabilities: Any student who requires reasonable accommodations related to a disability should inform the course instructor and the Coordinator of Specialized Services (Room 138 in Kee Hall; phone 419-755-4727).

Students who encounter difficulty in any of their courses are encouraged to visit the Tutoring Resource Center (Room 119 in Fallerius Technical Education Center) for tutoring assistance, and the Student Success Center (Room 136 in Kee Hall) for academic assistance, advising services, referrals for personal counseling and Learning Disability (LD) Testing.

Statement on Withdrawals: As a student, you are expected to attend class. If you are unable or choose not to attend class, or if for whatever reason you are unable to keep up with the requirements of a course, you need to officially drop the class at the Student Records Office. Refund dates and withdrawal dates will vary slightly from term to term. Contact the Student Records Office for applicable dates. Additionally these dates are posted on the academic calendar available on the college’s website, www.ncstatecollege.edu, under the Academics heading on the home page and are available at the Student Records Office in Kee Hall. Students should go to the Student Records Office (Room 142 in Kee Hall) to process their withdrawal from any class.

If you choose to walk away from your class without officially withdrawing from it, the faculty member teaching the class must grade your classroom performance on the material available to him or her. This normally results in an "F" grade. An "F" grade can lower your grade point average considerably depending on the total credits accumulated.