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PT 520.01: Motor Development Across the Life Space

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**PT 520: Motor Development Across the Life Space
Spring 2003**

I. Instructors: Carrie Gajdosik, M.S., P.T.
Ann K. Williams, Ph.D., P.T.

II. Meeting Time: Tu 1-3 PM

III. Credits: 2

IV. Contact hours: 30

V. Required Texts: Campbell, S.K. Physical Therapy for Children, W. B. Saunders.
Guccione, A. Geriatric Physical Therapy, 2nd Ed, C.V. Mosby, 2000.
Numerous resources will be made available for each problem.

VI. Course Description: This course is primarily taught in a process-based learning format (combination of problem-based learning and cooperative learning). This format is designed to help the student develop core professional skills for a life-long career in physical therapy. Discipline specific content includes: 1. Development across the life span emphasizing motor development and changes in infancy, early childhood, middle age, and old age, 2. Social and health services across the life span.

VII. Course Objectives: See Attached + objectives for each problem.

VIII. Course Requirements and Methods of Evaluation:

Group reports of four projects- 50%
Individual written exams - 50%
(Early development and Aging)

IX. Grading Scale:

70-79%	C
80-89%	B
90-100%	A

The class will be divided into groups that will turn in group reports on each of four cases/projects. In addition, each group and individual will assess individual participation and group processing. Certain content will be tested with individual written exams. The general content of the four group problems is:

- 1 - Case Study 1: The Premature Infant
- 2 - Case Study 2: Developmental Screening and Child Development
- 3 - Designing an Osteoporosis and Falls Risk Reduction Program
- 4 - The Continuum of Care for Elders in the Community

**PT 520: Motor Development Across the Life Span
Course Outline and Schedule**

Jan 28	Orientation to Course Start Case study 1; Lecture on premature infants
Feb 4	Continue with Case Study 1 Start Case Study 2: Developmental Screening and Child Development
Feb 11	Group work; Introduction to the Denver Developmental Screening Test LAB: Assessing balance and equilibrium reactions
Feb 18	Presentations and group work
Feb 25	Group work; Introduction to AIMS
Mar 4	Lecture on gross and fine motor development Finish preparation for Baby lab
Mar 11	Baby Lab using AIMS and Denver
Mar 18	Test #1 - Early development Lecture on Aging Research
Mar 25	Spring Break
Apr 1	Aging effects on various systems - Lecture, Application to Case Study
Apr 8	Begin Problem 3 - Development of an Osteoporosis & Falls Risk Reduction Program
Apr 15	Continue Problem 3 – Lecture on Medicare/Medicaid
Apr 22	Test #2 - Effects of Aging Finish Problem #3
Apr 29	Lecture on Medicare/Medicaid (Cont), Project 3 due Begin Project 4 - The Continuum of care for Elderly Persons in the Community - Community Visits
May 6	No class: use time for community visits
Final Wk finals	Final Presentations & report on Project 4 due, Final course evaluation, as per schedule

OVERVIEW OF PROCESS-BASED LEARNING

The format used in this course is designed to help you develop core professional skills necessary for a rapidly changing health care environment and profession. These include problem solving, critical thinking, collaborative skills, self-directed learning, and an appreciation for the importance of life-long learning. It utilizes cooperative and collaborative learning processes within a problem-based format to solve real world projects. The primary learning occurs in small teams. There will be limited lecture/presentations on some of the discipline specific content.

Why do this? Numerous studies have shown that passive learning has less retention and is only the first step in learning. The active learning in process-based learning results in greater retention, deeper understanding, and a higher level of learning. In addition, the projects and the team learning and achievement process is the way the “real world” works. The student simply must develop the skills to function in this environment. Specific content “facts” will change constantly over your career and are less critical than the skills and process.

Students are sometimes concerned if they are learning the “right facts”. Let us reassure you that the faculty are also concerned about this and will make sure that this happens through the chosen resources and input to the groups and project reports.

This process-based learning is more time consuming for both faculty and students, but the benefits have been shown to be worth the time. This extra time will be somewhat reduced by the faculty developed resources and a few selected lectures.

Student - Centered Learning - Team Approach

This will occur in two ways. Self-directed learning of certain basic content available in the resources is the individual student’s responsibility. Mere repetition of the material by the faculty in lecture is not a wise use of classroom time. Like any course, there will be readings for which you are responsible. These will be tested by written examination. In addition, much of the learning will occur in your groups. As you are assigned various learning objectives to investigate and report back to the team, you are responsible for your fellow student’s learning. You are responsible to report concisely and give your team members resources for their future reference. We suggest a summary/outline and bibliography for your team members.

PT 520 Motor Development Across the Life Span

Course Objectives:

- 1 - Knowledge and Comprehension
- 2 - Application
- 3 - Psychomotor
- 4 - Analysis, synthesis, and evaluation
- 5 - Affective

Content Areas designated by Capital letters.

As evidenced by group project reports, self and team assessments, and written examination, the student will with at least 70% accuracy:

- A. Core Professional Skills** - including problem-solving, critical thinking, collaborative interaction, self-directed learning, individual accountability, self-reflection, conflict resolution, and synthesis.
- 4.1 Given group projects, the students will demonstrate these skills as evaluated by the final project reports, team process evaluation, and peer and self-evaluation.
 - 4.2 Through project reports and written examinations the student will demonstrate the ability to read, reference, and utilize appropriate published studies and reports.

Discipline-Specific Knowledge and Skills

Pediatric Unit

This unit will prepare the student with the necessary skills to screen the development of a child between the ages of birth to six years with a standardized test. Through the use of case problems and group study, the student will learn about typical child development.

B. Administration of the DENVER II Test for screening of child development.

- 1.1 State the purpose of the DENVER II Test.
- 1.2 Explain how the DENVER II was normed and standardized.
- 2.1 Correctly score the results of a DENVER II test.
- 3.1 Administer the DENVER II to two children with typical development.
- 4.1 Given specific ages of children, identify which DENVER II test items would be appropriate to administer.
- 4.2 Correctly interpret the results of a DENVER II test.

C. Administration of the AIMS Test for examining child motor development.

- 1.1 State the purpose of the AIMS
- 1.2 Explain how the AIMS was normed and standardized.
- 2.1 Correctly score the results of a AIMS
- 3.1 Administer the AIMS during lab.
- 4.1 Correctly score the AIMS.

4.2 Correctly interpret the results of a AIMS test.

D. Issues of Prematurity

- 1.1 Discuss the pathology of medical complications of prematurity
- 1.2 State the difference among the three levels of the neonatal nurseries.
- 2.1 Explain the significance of Apgar scores.
- 4.1 Formulate the possible effects of a given medical history of prematurity on the child's development.

E. Child Development

- 1.1 State the purpose of testing infantile reflexes, equilibrium reactions.
- 1.2 Explain the procedure for testing infantile reflexes, equilibrium reactions, and protective responses.
- 1.3 Indicate the ages at which key developmental skills are attained.
- 1.4 Identify infant stability and stress cues.
- 2.1 Explain the three systems used by the body to maintain balance.
- 2.2 Discuss how the behavioral state of an infant can affect treatment intervention.
- 2.3 Discuss appropriate intervention strategies when an infant is in stress.
- 2.4 Given a child of a given age, identify the motor skills that will develop within the next few months.
- 3.1 Present and demonstrate infantile reflexes, equilibrium reactions, and protective responses to the class.
- 3.2 Demonstrate how to assess balance using standardized testing procedures
- 4.1 Given a case scenario, formulate methods of enhancing treatment intervention when one or more of the balance systems is impaired.
- 4.2 After interacting with parents and their children, explain how parent-child interaction changes from birth to five years of age.

Aging Unit

F. Changes associated with aging to include changes in the muscular, skeletal, vascular, cardiopulmonary, neurological, and integumentary systems.

- 1.1 Describe normal aging changes to the systems listed above.
- 4.1 Differentiate between normal aging, lifestyle, and pathology regarding the changes above. Apply this knowledge to developing prevention programs for older adults.
- 4.2 Given research results, critically analyze the strengths and weaknesses of aging research.
- 4.3 Given a case study, determine how the physical therapy treatment is affected by the patient's age and age related changes.

G. Osteoporosis, Osteopenia, Balance Examination & Intervention, Falls Risk Reduction.

- 1.1 Describe the effect of age on bone density and lifestyle factors for prevention of osteoporosis.
- 1.2 Describe common non-PT treatments for osteoporosis to include diet and

medications

- 1.2 Describe the components of PT assessment and intervention to include balance and falls risk evaluation and reduction and exercise programs.
- 4.1 Design a PT osteoporosis treatment program to include marketing, funding, and assessment and intervention plans.

H. Social and health services

- 1.1 Describe the components of the health and long-term care network for the elderly in the United States to include Medicaid, Medicare, assisted living, skilled facilities, and custodial care.
- 1.2 Describe the physical therapy services provided by Medicaid and Medicare.
- 1.3 Through class hand-outs and presentations, demonstrate beginning familiarity with the Medicare and Medicaid system, common abbreviations, regulations for physical therapy, and effects of policy changes (OBRA, DRG'S, PPS, BBA, etc.).
- 4.1 Given a case study, analyze the appropriateness of given community services.

I. Affective (as assessed by peer assessment and instructor observation):

- 5.1 Actively participate in group work and during labs
- 5.2 Dress and behave professionally during the baby lab and community visits.
- 5.3 Interact with children and their parents and community professionals in a professional and caring manner.

TODDLER PROPERTY LAWS

1. If I like it, it's mine.
2. If it's in my hand, it's mine.
3. If I can take it from you, it's mine.
4. If I had it a little while ago, it's mine.
5. If it's mine, it must never appear to be yours in any way.
6. If I'm doing or building something, all the pieces are mine.
7. If it looks just like mine, it's mine.

Groups for Motor Development

Gp 1

Michelle
Kelsey
Michael
Ryan

Gp 2

Eric
Teri
Jenn
Kate

Gp 3

Shawn
Melissa
Debbie
Amber

Gp 4

Natasha
Amy
Kelly

Gp 5

Angie
Robin
Dianne
Maureen

Gp 6

Trevor
Renee
Kaylene
Colleen

Gp 7

Kevin
Elisa
Tansy