“Preparing Professionals for Changing Educational Contexts”

Department of Special Education
College of Education, University of Nevada, Las Vegas

Prefix and Number: ESP 755
Title: Central Nervous System and other Medically Related Aspects of Handicapping Conditions
Credit: 3
Semester: Summer II, 2004
Instructor: Dr. Sherri Strawser.
Office Location: CEB 122
Class Location: CEB 218
Class Times: M, T, & W 4:15-6:45 pm
Telephone: 895-1109 office fax: 895-0984
Email: strawser@unlv.nevada.edu
Office Hours By appointment in summer session
Prerequisites: ESP 701 or equivalent

Course description: Overview of central nervous system and medical bases of normal development, learning, disabilities, and threats to development. Emphasis on basic knowledge and skills that allow teachers, school psychologists, and other educational personnel to more adequately assess and instruct students with disabilities in educational environments.

NASP Standards Addressed:
• Values as a Program Foundation (1.0)
  Understanding and responsiveness to human diversity (1.1)
  Service delivery that is sensitive to needs of systems and organizations, and effectively promotes mental health and the acquisition of competencies (1.2)
• Knowledge Base, Training Philosophy, Goals & Objectives (2.0)
  Biological Bases of Behavior (2.2)

CEC Standards Addressed:
Standard 1 Philosophical, Historical, and Legal Foundations of Special Education
Standard 2 Characteristics of Learners
Standard 4. MR/DD Instructional Content and Practice
Standard 7. MR/DD Communication and Collaborative Partnerships
Standard 8 MR/DD Professionalism and Ethical Practices

Course goals/objectives

Knowledge Upon completion of this course, the student will have acquired knowledge related to:
1. Major perspectives from medicine, psychology, behavior, and education on the definitions and etiologies of individuals with disabilities (NASP: 1.1, 2.2; CEC: GC 1.2)
2. Laws, regulations, and policies related to the provision of specialized health care in the educational setting (NASP 1.1, 1.2; CEC: GC 1.7)
3. Physical, development, physical disabilities, and health impairments as they relate to the development and behavior of individuals with disabilities (NASP: 1.1, 2.2; CEC: GC 2.1)
4. Various etiologies and medical aspects of conditions affecting individuals with disabilities (NASP: 1.1, 2.2; CEC: GC 2.3).
5. Effects of various medications on the educational, cognitive, physical, social and emotional behavior
of individuals with exceptionalities (NASP: 1.1, 2.2; CEC: CC 2.6)
6. Types and transmission routes of infectious disease (NASP: 1.1, 2.2; CEC: GC 8.3).
7. Causes and theories of intellectual disabilities and implications for prevention (NASP: 1.1, 2.2; CEC: MR/DD 2.1)
8. Medical aspects of disabilities and their implications for learning (NASP: 1.1, 2.2; CEC: MR/DD 2.2)
9. Medical complications and implications for student support needs (NASP: 1.1, 2.2; CEC: MR/DD 2.3)
10. Sources of specialized materials for students with disabilities (NASP: 1.1, 1.2, 2.2; CEC: GC 4.1, MR/DD 4.1)
11. Types and use of assistive technology that can aid students with medical and physical support needs (NASP: 1.1, 1.2, 2.2; CEC: GC 5.3, MR/DD 4.2)
12. Common environmental and personal barriers that hinder accessibility and acceptance of individuals with disabilities (NASP: 1.1, 1.2, 2.2; CEC: GC 5.3)
13. Sources of unique services, networks, and organizations for students/individuals with disabilities (NASP: 1.1, 1.2, 2.2; CEC: GC 7.1, MR/DD 7.1, 8.1)
14. Types and importance of information generally available from families, school officials, legal system, community service agencies (NASP: 1.1, 1.2, 2.2; CEC: GC 7.4)
15. Roles and responsibilities of school-based medical and related services personnel, professional groups, and community organizations in identifying, assessing, and providing services to individuals with disabilities (NASP: 1.1, 1.2, 2.2; CEC: GC 7.5).

**Performance (Skills)**
Upon completion of this course, the student will be able to:
16. Describe and define general developmental, academic, social, and functional characteristics of individuals with mental retardation/developmental disabilities as they relate to levels of support needed (NASP: 1.1, 2.2; CEC: GC 2.1, MR/DD 2.1)
17. Discuss effective, research-based instructional strategies and practices that can meet the needs of individuals with disabilities (NASP: 1.1, 1.2, 2.2; CEC: GC 4.1)
18. Identify sensory stimulation programs for individuals with extensive needs (NASP: 1.1, 1.2, 2.2; CEC: MR/DD 4.2)
19. Identify appropriate physical management techniques, including positioning, handling, lifting, relaxation, and range of motion (NASP: 1.1, 1.2, 2.2; CEC: MR/DD 4.8).
20. Identify orthotic, prosthetic, adaptive equipment and technology that may be used with individuals with disabilities (NASP: 1.1, 1.2, 2.2; CEC: MR/DD 4.9; (GC 4.21).
21. Describe curriculum and instructional strategies for medical self-management necessary for students with specialized health care needs (NASP: 1.1, 1.2, 2.2; CEC: GC 4.24)
22. Effectively communicate with other professionals and students with disabilities to support the development, learning, and well-being of individuals with disabilities (NASP: 1.1, 1.2, 2.2)

**Disposition(s)**
Upon completion of the course, the student will display the following dispositions.
23. Promotion and maintenance of a high level of competence and integrity in the practice of the profession. (NASP: 1.1, 1.2; CEC: CEC-CC8-S3)
24. Objective professional judgment in the practice of the profession. (NASP: 1.1, 1.2; CEC: CEC-CC8-S4)

**Suggested Resources:**
**Required Text / Readings**

**Supplemental sources:**


### Performance Indicators:

<table>
<thead>
<tr>
<th>Competencies</th>
<th>Activities</th>
<th>Evaluation</th>
<th>% of grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 24</td>
<td>Participation in discussions and activities</td>
<td>Evaluation will be judged by the student’s record as well as subjective judgment by the instructor of the thoroughness and thoughtfulness of questions posed and responses in discussions.</td>
<td>10%</td>
</tr>
<tr>
<td>1 – 24</td>
<td>Content evaluation assignments:</td>
<td>accuracy of responses</td>
<td>30%</td>
</tr>
<tr>
<td>3, 4, 8, 9, 16</td>
<td>Terminology acquisition</td>
<td>meeting the passing criteria for the terminology cards</td>
<td>15%</td>
</tr>
<tr>
<td>1 – 17</td>
<td>Final project: Health Fair project and report</td>
<td>Evaluation will be judged on inclusion of the required components and the project-grading rubric attached.</td>
<td>45%</td>
</tr>
</tbody>
</table>

### Specific guidelines addressing performance indicators:

#### Course Requirements and Grading Policy

- *Actively participate in class discussion and activities.* Because of the intense schedule of the course, attendance and participation in is essential. Class discussion is encouraged and expected during the discussion section classes. However, in rare cases, points will be deducted for individuals who excessively contribute personal narratives that do not add clarification to the discussion. Absences from scheduled class meetings will result in a loss of points. If absence is necessary, students must arrange to obtain a record of the lecture and discussion from another class member.
• **Readings and evaluation activities.** Students will be responsible for completing assigned readings in advance of each meeting and completing the activities on time.

• **Content evaluation:** Each week (by Thursday morning; beginning the first week of class) the instructor will post questions / points for discussion on the website. Students are to access the posting and respond to the posting. A hard copy of your responses are due in the next physical class meeting. Although persons may study together or discuss points of the issues or questions posted, it is required that each student develops and writes their own responses to turn in. Some of the content evaluation assignments will cover material that will not be fully discussed in class because of limited time and extensive content.

• **Terminology:** Each student will be required to make a card set for the terminology that is used in the study of the medical and neurological components of disability. A list of terms is attached to the syllabus. The criterion for mastery is correct identification of 40 with no more than 3 errors in 5 minutes. A time to “pass the cards” is to be individually scheduled with the instructor. Students may take as many times to reach criterion as necessary.

• **Final project:** A Health Fair: Each student will work with a group to research a specific health-related disability. On the final two days of class, we will have a “health fair” during which each group will share their report with the class. The report must include the following information:
  a. Overview of the medical issue (basic information, resources, etc.)
  b. A summary information page with information about resources in the community. Brochures from agencies are encouraged.
  c. A page of information for educators, parents, or other related-services personnel for the purpose of sharing critical information about the disability.
  d. Two lesson plans/interventions/supports and/or services etc. for professionals who may have students with the target disability in their classroom.
  e. An evaluation form for your presentation (completed at the end of the presentation by the students listening)

The final project will be evaluated according to the attached rubric and all group participants will receive the same grade (unless there are reported difficulties in group participation and/or work commitment).

• **Grading Procedures:** You will be graded according to the following scale. All work will be evaluated for correct writing mechanics, person-first language, and APA-style for the formal, written material such as the Health Fair report. Students will lose points for assignments turned in late, and/or for missing more than three class sessions.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>94-100%</td>
</tr>
<tr>
<td>B+</td>
<td>87-89%</td>
</tr>
<tr>
<td>C+</td>
<td>77-79%</td>
</tr>
<tr>
<td>D</td>
<td>65-69%</td>
</tr>
<tr>
<td>A-</td>
<td>90-93%</td>
</tr>
<tr>
<td>B</td>
<td>83-86%</td>
</tr>
<tr>
<td>C</td>
<td>74-76%</td>
</tr>
<tr>
<td>F</td>
<td>0-64%</td>
</tr>
</tbody>
</table>

**Instructional Methods**
A variety of instructional methods will be utilized in this course. Included among them are lecture, discussion, small group and independent content-application activities, and case study analysis.

**Class Schedule (includes date, topics, and assignment schedule)**

<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Topics</th>
<th>Reading Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>June 7 - 9</td>
<td>Introduction, course overview, definitions, prenatal, perinatal issues, Brain 101</td>
<td>Chapters 1 – 6, 13</td>
</tr>
<tr>
<td>2</td>
<td>June 14 - 16</td>
<td>The developing child and developmental disabilities</td>
<td>Chapters 9 – 12, 15 – 18 (skim)</td>
</tr>
</tbody>
</table>
3 June 21 - 23 Disabilities related to inborn errors, diseases, and abnormal development Chapters 19- 21, 23 – 25

4 June 28- 30 Disabilities related to acquired injuries and threats to development; interventions and outcomes Chapters 7, 8, 26, 29- 32, 35-38

5 July 6, 7 Group Health Fair presentations (no class July 5)

Disability Resource Center
The Americans with Disabilities Act mandates accessibility in all aspects of the learning environment. “If you have a documented disability that may require assistance, you will need to contact the Disability Resource Center (DRC) for coordination in your academic accommodations. The Disability Resource Center is located in the Reynolds Student Services Complex, room 137. The DRC phone number is 895-0866 or TDD 895-0652.”

Academic Integrity Statement
UNLV and its College of Education demand a high level of scholarly behavior and academic honesty on the part of students. Violations by students exhibiting honesty while carrying out academic assignments and procedural steps for dealing with academic integrity are delineated in the Handbook of Regulations Governing Probation and Suspension Within The College of Education. This publication may be found in the curriculum Materials Library (CML – CEB 101), the Department of Educational Leadership (CEB 320), or the Office of the Dean of the College Education (CEB 301).

Religious Holidays
It is UNLV’s policy to give students who miss class because of observance of religious holidays the opportunity to make up missed work. Students are responsible for notifying the instructor no later than the last day of registration for the semester or summer term of plans to observe the holiday.

NOTE: COLLECTION OF STUDENT ASSIGNMENTS FOR ACCREDITATION PURPOSES
Assignments completed for this course may be used as evidence of candidate learning in national, regional and state accreditation reports of College of Education (COE) programs. Names and other identifying elements of all assignments will be removed before being included in any report. Your participation and cooperation in the review of COE programs is appreciated. If you do not wish to have your coursework used, it is your responsibility to let the professor know. Thank you.

TERMINOLOGY FOR CARD SET
a- or an- prefix meaning “without; loss of ”
abduction moving part of the body away from the midline (as in moving an arm from the side up toward the shoulder, while parallel to the torso)
acopia An inability to copy figures or characters
adduction moving part of the body toward the midline (as in moving an arm from the shoulder level down toward the torso, while parallel to the torso)
agnosia general term for an input disorder; failure to recognize familiar objects or stimuli perceived by the senses
anomia impairment in the ability to name objects and to understand the nominal
significance of words

anosmia  impairment in the ability to smell
anterior  before or in front (relative position of body)
aphasia  general term for language disorders caused by CNS dysfunction, but not those caused by cognitive or sensory disorders, or paralysis of muscles essential for speech
apraxia  general term for an output disorder; inability to carry out on request a complex or skilled movement, not due to paralysis or deficits in understanding
ataxia  poor coordination of muscular movement; awkwardness of posture and gait (usually resulting from abnormalities in the cerebellum)
athetosis  term referring to slow, writhing, involuntary movements, especially in the hands
atonic  absence of normal muscle tone
autonomic nervous system  the part of the nervous system that regulates certain automatic functions of the body (e.g., heart rate, sweating, respiration)
bilateral  both sides of the body
cephal-  prefix meaning “pertaining to the head”
chorea  sudden jerky and purposeless movements
congenital  originating prior to birth
contra-  prefix meaning “against”
cranial  pertaining to the skull
demi- or hemi-  prefixes meaning “half”
distal  farthest from the center
dorsal  pertaining to the back (used in contradistinction to ventral)
dys-  prefix meaning “difficult; abnormal”
dysarthria  disturbance in expressive speech because of paresis of the muscles used in speaking
echolalia  person is able to repeat heard language but does not understand the words heard or produce spontaneous, appropriate language
encephal-  prefix meaning “pertaining to the brain”
epidemiological  pertaining to the study of factors determining the frequency and distribution of diseases (e.g., an outbreak of food poisoning)
extension  to straighten a part of the body at a joint
flexion  refers to the bending of a part of the body at a joint
hyper-  prefix meaning “in excess”
hypo-  prefix meaning “under; beneath; less than normal”
ideomotor apraxia  person cannot perform a given act correctly, although older habitual motor
acts can be performed spontaneously or repetitiously

**immunology**

a science dealing with the phenomena and causes of immunity (the ability to resist a particular disease)

**inferior**

down below (relative position of body)

**insult**
an attack on a body organ causing damage to it -- this may be physical, metabolic, immunological, or infectious

**-kinesis**
suffix meaning “motion”

**lateral**
to the side (relative position of body)

**lesion**

injury

**mal-**

prefix meaning “bad or ill”

**medial**
to the center (relative position of body)

**meninges**

the three membranes covering the brain and spinal cord

**metabolism**

the chemical changes in living cells by which energy is provided for vital processes and activities and new material is assimilated to repair the waste

**morbidity**

medical complication of an illness, procedure, or operation

**motor apraxia**

person knows the purpose of a movement, but execution is defective from a loss of the kinesthetic memory patterns necessary to the performance

**orthopedic**

relating to bones or joints

**paraphasia**

defect of expression in which a different word (perhaps a word of similar sound) is substituted for the exact word

**paresis**

partial weakness, short of paralysis (which is total)

**peripheral nervous system**

the parts of the nervous system that are outside the brain and spinal cord

**plasticity**

the ability of an organ or part of an organ to take over the function of another damaged organ

**-plegia**
suffix meaning “paralysis”

**posterior**

behind or in back (relative position of body)

**prone**

lying face downward

**proprioception**

ability to sense the position of the limbs and their movements, with the eyes closed

**proximal**

nearest to the point of attachment or center of the body

**pulmonary**

pertaining to the lungs

**quadri-**

prefix meaning “four”

**spastic**

increased muscle tone so that the muscles are stiff and movements are difficult

**superior**

above (relative position of body)

**supine**

lying face upward

**syndrome**

a set of symptoms occurring together that results in specific or probable
outcomes

ventral pertaining to the front or abdominal surface
# Rubric for Health Fair Presentation and Report

<table>
<thead>
<tr>
<th>Proficiency Levels</th>
<th>Accuracy</th>
<th>Thoroughness</th>
<th>Organization</th>
<th>Enthusiasm / Creativity</th>
</tr>
</thead>
</table>
| Exemplary          | • Explains content clearly and without errors  
|                    | • Demonstrates content components without errors  
|                    | 23-25 points | 23-25 points | 23-25 points | Uses voice to express enthusiasm  
|                    | • Includes a thorough review of topic content components  
|                    | • Provides detailed instruction to ensure student understanding  
|                    | • Uses advance organizers  
|                    | • Maintains lively instructional pace without unnecessary pauses  
|                    | • Gives post organizer / evaluation  
|                    | • Knows who does what when throughout the presentation  
|                    | 23-25 points | 23-25 points | 23-25 points | Uses visual displays or other media to enhance the presentation  
|                    | • Uses supplemental materials  
|                    | • Adds motivating activities to extend learning  
| Acceptable         | • Explains content with only 1 to 3 minor errors or requests for clarification  
|                    | • Demonstrates most content components adequately  
|                    | 20-22 points | 20-22 points | 20-22 points | Uses voice or body language to express enthusiasm  
|                    | • Includes most topic content components  
|                    | • Provides adequate instruction for most individuals  
|                    | • Refers to content script for the presentation  
|                    | • Knows who does what when throughout most of the lesson  
|                    | 20-22 points | 20-22 points | 20-22 points | Uses visual displays or supplemental materials or motivating activities  
| Unacceptable       | • Displays major misunderstandings or lacking content  
|                    | • Content left to observer to interpret  
|                    | < 20 points | < 20 points | < 20 points | Seems to lack confidence in topic  
|                    | • Limited content information  
|                    | • Provides insufficient detail for most students to understand the lesson content  
|                    | • Needs content script for the presentation  
|                    | • Demonstrates confusion regarding content components, presentation sequence and/or who does what when  
|                    | < 20 points | < 20 points | < 20 points | Facial expressions do little to enhance content  
|                    | • Limited or no visual displays or supplemental materials or motivating activities  
|                    | < 20 points | < 20 points | < 20 points |