NURSING 202: ADVANCED CONCEPTS OF NURSING
UNIT IV: THE PATIENT EXPERIENCING NEUROTRAUMA

UNIT OBJECTIVES
AT THE COMPLETION OF THE UNIT, THE STUDENT:

1. Discusses pathophysiology of the patient with spinal cord trauma.
2. Relates management principles for the patient with spinal cord injury.
3. Explains critical care/transitional care for the patient with spinal cord injury.
4. Discusses mechanism of injury for the patient with a traumatic brain injury.
5. Relates management principles for the patient with a traumatic brain injury.
6. Describes nursing care of the patient with traumatic brain injury.
7. Analyzes the impact of control of cerebral perfusion pressure.
8. Identifies complications associated with a traumatic brain injury.
9. Discusses rehabilitation and resource utilization for optimal patient outcomes with a traumatic brain injury.
10. Discuss types and nursing care associated with intracranial surgery.
11. Identifies options for and nursing responsibilities associated with organ donation.
12. Identify resources for collaborative care for patients at end of life.
13. Discuss symptom management for patients at end of life.
14. Discuss Palliative care goals and principles of care.
15. Applies evidence-based practice/best practice standards related to care of the neurotrauma patient.

CONTENT/ HOURS	TEACHING STRATEGIES	SUPPORTING ACTIVITIES	EVALUATION METHODS
Unit IV Neurotrauma: **Theory Hours- 12 hours** **Clinical Hours- 0** **SLP- 0** I. Palliative Care II. Organ Donation III. Spinal Cord Injuries A. A & P Review B. Background C. Mechanism of injury i. Flexion ii. Flexion- rotation iii. Hyperextension iv. Vertical compression v. Extension-rotation vi. Penetrating D. Types of injury i. Vertebral column injury without SCI ii. Vertebral column injury with SCI iii. Spinal cord injury with intact vertebral column iv. Vertebral 1. Simple 2. Compression 3. Comminuted 4. Dislocation v. Complete vs. incomplete vi. Cervical Fractures/ Dislocations 1. Jefferson 2. Atlanto- Occipital 3. Odontoid (Dens) 4. Hangman vii. Incomplete Injuries	Interactive Lecture Interactive Lecture: Guest Speaker- Gift of Life Case study analysis: Case Scenario – Group Discussion Research-based learning: Article - Buffalo Bills Football Player	Clinical Observations Pre/Post Conference Class Prep: Palliative Care Case Studies Class Prep: SCI	Class Preparation Clinical Evaluation Simulation Pre/Post Conference

CONTENT/ HOURS	TEACHING STRATEGIES	SUPPORTING ACTIVITIES	EVALUATION METHODS
1. Brown- Sequard Syndrome 2. Anterior Cord Syndrome 3. Cauda Equina Syndrome 4. Central Cord Syndrome 5. Conus Medullaris Syndrome viii. Levels of Injury E. Primary Injury F. Secondary Injury G. Spinal Shock H. Neurogenic Shock I. Diagnostics J. Emergency Management Principles i. Pre-hospital ii. Acute Care iii. Priorities of Care K. Affects to Each System i. Respiratory ii. Cardiovascular iii. Urinary iv. Gastrointestinal v. Integumentary vi. Musculoskeletal vii. Pain viii. Metabolic Needs ix. Psychological x. Sexuality L. Treatment Measures i. Traction ii. Surgical M. Phenomenas of SCI i. Autonomic Dysreflexia ii. Horner's Syndrome N. Rehabilitation O. Spinal Cord Abscesses & Vascular Disorders	Role-play: Log rolling, maintaining neutral alignment Interactive Lecture: "Anthony Green's Life Changer Video" Visual-based active learning: YouTube- Brock Mealer video		

CONTENT/ HOURS	TEACHING STRATEGIES	SUPPORTING ACTIVITIES	EVALUATION METHODS
IV. Traumatic Brain Injury (TBI) A. Neuro Overview B. Diagnostics C. Mechanism of Injury D. Specific injuries: Pathophysiology, Signs & Symptoms, & Treatment i. Lacerations ii. Contusions iii. Skull fractures iv. Hematomas v. Concussion vi. Diffuse axonal injury (DAI) vii. Coup- Countercoup viii. Diagnostics E. Secondary Injury i. Pathophysiology 1. Cerebral dynamics 2. Cerebral blood flow (CBF) 3. Cerebral blood volume (CBV) ii. Intracranial pressure 1. Factors influencing ICP 2. Measurement of ICP 3. Assessment of ICP iii. Cerebral perfusion pressure (CPP) iv. Herniation F. Neurological Assessments i. Levels of consciousness ii. Assessments iii. Glasgow Coma Scale (GCS) G. Management of ICP i. Clinical Manifestations ii. Complications iii. Measurement of ICP iv. Interprofessional Care	Visual-based active learning: Post-Concussion Syndrome- YouTube Video 1. What is PCS? 2. Risk Factors Cooperative & collaborative learning: Group Activity: EBP – Return to activity/sports post concussion Community-based learning: NFL Concussion Protocol Visual-based active learning: You Tube- ICP Review Visual-based active learning: You Tube- CPP Review (2)	Interactive Lecture: Ed Puzzle – Intro to TBI	

CONTENT/ HOURS	TEACHING STRATEGIES	SUPPORTING ACTIVITIES	EVALUATION METHODS
1. Drug Therapy 2. Nutritional 3. Abnormal Respiratory Patterns v. Nursing Considerations H. Planning Care i. Primary Prevention ii. Nursing Considerations I. Intracranial Surgery i. Definitions ii. Indications iii. Preoperative management iv. Intraoperative management v. Surgical approach vi. Postoperative management J. Rehabilitation i. Recovery from coma ii. Recovery from TBI iii. Rehabilitation iv. Long term effects v. Psychosocial consideration	Visual-based active learning: You Tube- Cheyne-Stokes Breathing Case study analysis: Unfolding Case Study		**Quiz** **Exam #5**