

**Neural Repair and Rehabilitation
Written Examination
Content Outline**

REV 10/12/11

The UCNS Neural Repair and Rehabilitation examination was established to determine the level of competence for Neural Repair and Rehabilitation specialists.

The following content outline is provided to examination candidates interested in the certification examination. The content outline consists of five primary categories followed by subcategories. A complete description of the core content required of Neural Repair and Rehabilitation specialists can be found in the Neural Repair and Rehabilitation Core Curriculum at: <http://www.ucns.org/go/subspecialty/neuralrepair/certification>.

The written examination consists of 200 multiple choice questions.

Content Area	Percentage of Questions
I. Basic Mechanisms of Recovery from Neural Injury	20%
II. Neurorehabilitation for Specific Disorders	20%
III. Neurorehabilitation for Symptoms and Syndromes	20%
IV. Interaction with multidisciplinary rehabilitation team (Including understanding assessments by other disciplines)	20%
V. Medical Rehabilitative Management	20%

I. Basic mechanisms of recovery from neural injury

1. Neuroplasticity – synaptic, network
2. Neural Repair and regeneration
3. Learning, behavioral adaptation and compensation
4. Muscle plasticity and Exercise

II. Neurorehabilitation for Specific Disorders

1. Cerebrovascular disease and stroke (including specific stroke syndromes)
2. Brain injury – traumatic, anoxic, other non-traumatic causes

3. Spinal cord injury and dysfunction
4. Multiple Sclerosis
5. Neuromuscular disorders and Motor Neuron diseases
6. Parkinson's disease and other movement disorders
7. Alzheimer's disease, other degenerative disorders and aging
8. Pediatric neurorehabilitative disorders
9. Congenital and acquired developmental brain disorders (e.g. Cerebral palsy and Autism spectrum disorders).

III. Neurorehabilitation for Symptoms and syndromes

1. Cognitive Disorders – including attention, memory, visuospatial and executive function disorders
2. Speech and language disorders
3. Disorders of consciousness
4. Pain
5. Weakness and Spasticity
6. Movement disorders
7. Sensory impairment
8. Vision and hearing impairments and other special senses
9. Autonomic disorders
10. Neurogenic bladder
11. Dysphagia
12. Balance and gait disorders
13. Vestibular and visual-oculomotor problems
14. Psychological issues
15. Sexual dysfunction
16. Fatigue, deconditioning, energy expenditure problems
17. Sleep disorders

IV. Interaction with multidisciplinary rehabilitation team (including understanding assessments by other disciplines)

1. Physical Medicine and Rehabilitation
2. Neurology
3. Internal medicine and other primary care
4. Physician extenders (nurse practitioners, physician assistants)
5. Other medical specialties
6. Optometry and low vision rehab
7. Physical therapy
8. Occupational therapy
9. Speech / language therapy
10. Other therapy specialties – e.g. recreation, music, art
11. Case management
12. Rehabilitation Nursing
13. Rehabilitation psychology
14. Neuropsychology

15. Vocational rehabilitation
16. Orthotist
17. Prosthetist
18. Social Services
19. Legal, ethical services, clergy
20. Team structure and functioning
21. Patient and family education
22. Rehabilitation administration
23. Rehabilitation settings: acute hospital, chronic hospital, inpatient rehabilitation facility, skilled nursing facility, outpatient facilities, residential facilities, in-home rehabilitation

V. Medical Rehabilitative Management

1. Pharmacologic treatments
2. Neuromuscular blocks
3. Intrathecal baclofen
4. Deep vein thrombosis prevention
5. Skin protection and breakdown
6. Bladder and bowel dysfunction
7. Electrodiagnostics – EMG, EEG, EPs
8. Neuroimaging – structural and functional
9. Newer technologies and treatments – e.g., deep brain stimulation, cell transplants, ablation procedures
10. Other Rehabilitative Methods
 - a. Outcome measurement and assessments
 - b. Orthotics and prosthetics
 - c. Bracing
 - d. Casting and splinting
 - e. Wheelchairs and adaptive equipment
 - f. Augmentative communication and environmental control technologies
 - g. Emerging and investigational technologies (e.g., robotics, TMS and direct current electrical stimulation, functional electrical stimulation, cognitive rehabilitation, brain-behavior interfaces, virtual reality)