END-2940: END DIRECTED PRACTICE III

Cuyahoga Community College

Viewing: END-2940 : END Directed Practice III

Board of Trustees:
January 2026

Academic Term:
Fall 2026

Subject Code
END - Electroneurodiagnostic

Course Number:
2940

Title:
END Directed Practice III

Catalog Description:
Clinical neurodiagnostic experience in a selected lab in a health care facility or physician office under direct supervision of an END technologist. Focus on overnight polysomnograms, long term EEG monitoring, or critical care units. Additionally, subject to experience in other END modalities studied in the curriculum, including but not limited to NCS testing, or intraoperative monitoring.

Credit Hour(s):
2

Lecture Hour(s):
1

Lab Hour(s):
0

Other Hour(s):
112

Other Hour Details:
Directed Practice: 112 hours at a Clinical Site per semester

Requisites

Prerequisite and Corequisite
END-2911 END Directed Practice II, END-2510 Principles of Polysomnography, and END-2402 Intraoperative Monitoring for END technologists; or departmental approval.

Outcomes

Course Outcome(s):
Demonstrate work setting preparedness in clinical setting.

Objective(s):
1. Prepare outpatient lab prior to patient entry and between patients.
2. Demonstrate knowledge of location of supplies and linen in clinical setting.
3. Establish a routine of workspace setup in various clinical settings.
4. Demonstrate knowledge of clean vs. soiled areas.

Course Outcome(s):
Demonstrate effective patient interaction.

Objective(s):

1. Demonstrate strategies for accurate verification of patient identity.
2. Demonstrate professional introduction of self and the care team to the patient.
3. Demonstrate the ability to ask pertinent questions related to a patient's medical history.
4. Obtain a relevant patient history.
5. Demonstrate an assessment of a patient's level of consciousness and alertness.
6. Establish professional rapport with patient and/or patient's family using clear speech and appropriate language.
7. Demonstrate the ability of explaining the concept of testing using terms age and level of consciousness appropriate.
8. Demonstrate the ability of explaining all stimulation situations which apply to the test being performed.
9. Demonstrate appropriate and professional attention to a patient's needs.

Course Outcome(s):

Demonstrate proficiency in mechanics of test acquisition in particular END modalities and situations.

Objective(s):

1. Measure the head using the International 10-20 system.
2. Prepare patient's skin for electrode placement.
3. Verify that electrode impedances are balanced and below 5000 Ohms.
4. Complete the patient preparation by applying electrodes and/or sensors in an accurate, secure and neat fashion with collodion or electrolyte paste.
5. Recognize professional limitations and inform supervisors or physicians of such when assigned tasks that are not commensurate with knowledge or skills.
6. Apply previously achieved END principles in advanced clinical settings.
7. Demonstrate ability to customize recording/ situation by applying additional electrodes or sensors to localize abnormal activity and recognizing ECG rhythms to monitor abnormality.
8. Demonstrate understanding of various technical criteria and ability to perform specific types of testing and procedures.
9. Consistently pass set-up verification sheets within tolerance limits.
10. Recognize normal awake and asleep patterns, abnormal awake and asleep patterns, EEG patterns for level of consciousness, and clinical seizure patterns.
11. Identify and eliminate or reduce artifacts that contaminate waveforms.

Course Outcome(s):

Exhibit provision of a safe recording environment.

Objective(s):

1. Demonstrate use of standard precautions and other proper disinfection precautions for infection prevention.
2. Demonstrate proper cleaning and disinfection of electrodes or proper discard after each procedure.
3. Demonstrate proper and safe removal of electrodes from patient's scalp.
4. Demonstrate understanding of skin safety measures.
5. Demonstrate recognition and response to life-threatening situations.
6. Obtain and maintain certification for cardiopulmonary resuscitation.
7. Demonstrate compliance with hospital/lab protocols for emergency and disaster situations.
8. Demonstrate proper maintenance of instrumentation and equipment in good working order.
9. Demonstrate the practice of proper electrical safety and equipment/ patient grounding.
10. Participate in the effort to reduce patient falls.

Course Outcome(s):

Demonstrate high level of professionalism in a clinical setting.

Objective(s):

1. Demonstrate professionalism through punctuality.
2. Demonstrate the relaying of accurate information to other health care professionals.

3. Demonstrate compliance with HIPAA regulations with emphasis on maintenance of patient privacy.
4. Demonstrate effective interaction with physicians using effective communication skills.

Methods of Evaluation:

1. Clinical site final evaluations
2. Preceptor observations
3. Written homework log sheets
4. 10-20 verification forms
5. Verifications of performed polysomnogram
6. Written physician interaction assignment
7. Online modules/ quizzes

Course Content Outline:

1. Clinical orientation activities
    a. Departmental orientation
        i. Meet medical director
        ii. Meet technical director
        iii. Classroom and meeting area
            1. Departmental reports
            2. Departmental in-services
            3. Procedural priorities
        iv. Parking facilities
        v. Equipment storage
        vi. Equipment handling
    b. Hospital orientation
        i. Knowledge of management of information
        ii. Admissions
        iii. Medical records
    c. Knowledge of environmental care standards
        i. Safety education/emergency procedures
        ii. Infection control policies
            1. Hospital reporting structures
            2. Usage of standard precautions (universal)
        iii. Equipment cleaning
            1. Disinfecting
            2. Sterilization
        iv. Soiled linen/clothing
            1. Technologist responsibilities
            2. Ordering of clean linens
            3. Disposal of soiled linens
            4. Environmental services responsibilities
            5. Contact with bodily fluids
            6. Infectious waste policies
        v. Use of disposable supplies
        vi. Personal protective equipment
        vii. Infectious waste policies
    d. Clinical orientation
        i. Safety
            1. Student responsibility
            2. Clinic's policies
            3. Patient safety
            4. Fire procedures
            5. Emergency procedure plans
                a. Active shooter
                b. Bomb threat
                c. Earthquake

d. Explosion
e. Fire
f. Medical emergency
g. Power outage
h. Suspicious item
i. Terrorism
j. Severe Weather

6. Equipment safety, performance testing, and maintenance
7. Collodion and acetone usage and storage
8. Safety Data Sheets (SDS)
9. Oxygen Precautions

ii. Medical emergencies
1. Definition
2. Safety of patient
3. Documentation
4. CPR training and certification
5. Seizure precautions and first aid
6. Psychiatric emergencies
a. Assessment of patient
b. Notification of security/medical personnel
c. Suicide precautions
d. Documentation
7. Cardiac/arrhythmia procedures
8. Respiratory arrest/arrhythmia procedures

iii. Patient charts
iv. Charting procedures
v. Review student notebook
vi. Procedures for calling in late or sick
vii. Attendance
viii. Lesson plans

2. Clinical proficiencies
a. Patient assessment
b. Electrical theory
c. Instrumentation
d. 10-20 set up
e. PSG set up
f. Other modalities as applicable

3. Clinical activities
a. Performing END tests
i. Explanation of procedure
ii. Set up/placement of electrodes/ sensors
iii. Calibrations/ Biocalibrations
iv. Monitoring protocols
v. Documentation
vi. Recognition of patterns/artifacts
vii. Troubleshooting
viii. Artifact
1. Physiological
2. Non-Physiological

b. Patient protection, safety, and environmental issues
i. Hazardous items
1. Collodion
2. Acetone
3. Needles and sharps

ii. Patient sedation
iii. Patient management
iv. Infection control

1. Bloodborne pathogens
2. Respiratory pathogens

v. Patient rights and confidentiality
vi. Electrical safety
1. Grounding
2. Leak current
3. Connections

vii. Cardiopulmonary resuscitation

c. Pharmacological issues
d. Time organization
e. Physician rounds
f. Procedural priorities
g. Patient transport
h. Equipment processing
i. Expand knowledge base
j. Development of professional, interpersonal, and communication skills

Religious Accommodation

Before reviewing the course schedule, students should carefully review the following religious accommodation policy and other required instructional policies:

Religious Accommodation:

Students seeking an accommodation for absences permitted under Ohio's Testing Your Faith Act must provide the instructor with written notice of the specific dates for which the student requires an accommodation and must do so not later than fourteen (14) days after the first day of instruction. Please submit requests for accommodations at this link: https://portal2.tri-c.edu/ReligiousAccommodation/ Religious Accommodation Form. Students with questions about their religious accommodations under Ohio's Testing Your Faith Act may contact the College's Office of General Counsel and Legal Services by phone at 216.987.4856 or via email at legal@tri-c.edu.

Other Required Instructional Policies:

https://www.tri-c.edu/student-resources/curriculum/documents/syllabus-part-b.pdf

Weekly Schedule

	Topics
Week 1	Clinical experience in an assigned health care facility
Week 2	Clinical experience in an assigned health care facility
Week 3	Clinical experience in an assigned health care facility
Week 4	Clinical experience in an assigned health care facility
Week 5	Clinical experience in an assigned health care facility
Week 6	Clinical experience in an assigned health care facility
Week 7	Clinical experience in an assigned health care facility
Week 8	Clinical experience in an assigned health care facility
Week 9	Clinical experience in an assigned health care facility
Week 10	Clinical experience in an assigned health care facility
Week 11	Clinical experience in an assigned health care facility
Week 12	Clinical experience in an assigned health care facility
Week 13	Clinical experience in an assigned health care facility
Week 14	Clinical experience in an assigned health care facility
Week 15	Clinical experience in an assigned health care facility
Week 16	Clinical experience in an assigned health care facility

The Course Schedule is subject to change due to pedagogical needs, instructor discretion, parts of term, and unexpected events.

Required/Recommended Readings

Reading will be from one of the below recommended textbooks, as selected by the individual instructors.

1. American Clinical Neurophysiology Society. Guidelines. https://www.acns.org/practice/guidelines
2. The AASM Manual for the Scoring of Sleep and Associated Events Rules, Terminology and Technical Specifications.

Resources for the Instructor

American Society of Electroneurodiagnostic Technologists. *EEG Recording Techniques and Instrumentation.* 2nd ed. ASET, 2000.

American Society of Electroneurodiagnostic Technologists. *EEG Electrodes, Application and Infection Control.* ASET, 2001.

American Society of Electroneurodiagnostic Technologists. *Neonatal EEG.* ASET, 1998.

American Society of Electroneurodiagnostic Technologists. *Pediatric EEG.* ASET, 1998.

American Society of Electroneurodiagnostic Technologists. *EEG Activation/Artifacts.* 2nd ed. ASET, 1999.

Spehlmann, R. *EEG Primer.* New York: Elsevier Biomedical Press, 1985.

Preston, David C. and Barbara E. Shapiro. *Electromyography Neuromuscular Disorders: Clinical-Electrophysiologic Correlations*. 2nd ed. Philadelphia, Elsevier, Butterworth, Heinemann, 2005.

Neal, Peggy J. and Basar Katurii. *Nerve Conduction Studies: Practical Guide Diagnostic Protocols*. Rochester American Association of Neuromuscular Electrodiagnostic Medicine, 2011.

Crout, B. and C. W. Flicek. *Nerve Conduction Studies from A to Z*. ASET, 1997.

Weiss, Lyn D., M.D., Jay M. Weiss, M.D., and Julie K. Silver, M.D. *Easy EMG: A Guide to Performing Nerve Conduction Studies and Electromyography*. 3rd ed. Elsevier, 2021.

Additional Resources for the Instructor

1. *American Journal of Electroneurodiagnostic Technology (AJET)* by the ASET; 4 issues annually; which reflects most recent changes and updates in the field.
2. ASET The Neurodiagnostic Society. 2022. https://www.aset.org/
3. American Clinical Neurophysiology Society. 2022. https://www.acns.org/
4. The Nerve Conduction Association. 2022. https://www.aaet.info/

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