A. COURSE DESCRIPTION
Discuss individually the concepts, terminology and techniques of Evoked Potential (EP) recording with testing modalities of visual, auditory and somatosensory systems. An overview of computers and EP instrumentation will be discussed, as well as the application of EP testing in the operating room, and the computation and collection of normative data.

B. COURSE GOALS & OBJECTIVES
By the end of this course the student will be able to:

- Demonstrate understanding of basic computer applications to EP Technology
- Describe theoretical basis of evoked potentials
- Demonstrate the ability to perform evoked potentials in the modalities Visual, Auditory Brainstem, and Somatosensory studies
- Demonstrate knowledge of the theoretical basis of EP waveform generation
- Demonstrate knowledge of the anatomy and physiology of the related test procedures
- Identify and measure important data from EP waveforms
- Recognize and remedy artifacts on the EP
- Utilize the appropriate stimulus for each modality
- Have an understanding of published normative data for comparison and evaluation of normal versus abnormal

UNIT 1 OBJECTIVES

- Relate terminology used in EP testing
- Demonstrate knowledge of computer operation as it relates to EP testing
- Relate signal averaging as it relates to EP data collection

UNIT 2 OBJECTIVES

- Apply principles and concepts of EP instrumentation to the recording by understanding analog to digital conversion, including
- Amplitude resolution
- Sampling rate, analysis time
- Sampling interval (dwell time)
- Relate the effects of stimulus and recording parameters on EP waveforms
- Relate the difference in equipment protocols for each of the modalities
- Set-up EP equipment to the desired protocols for each modality

UNIT 3 OBJECTIVES

- Relate the anatomy, physiology and pathology of the auditory system, nerves and nerve pathways.
- Relate the principles of measuring waveforms in brainstem auditory evoked potential studies
- Relate the criteria for significant changes occurring during brainstem auditory evoked potential recordings
- Relate the effects of medications and other physiological variables on test results
- State the clinical correlations of brainstem auditory evoked potential abnormalities
- Describe artifacts encountered during brainstem auditory evoked potential studies and basic techniques for trouble shooting
- Identify absolute and interpeak latencies of BAEP waveforms and state how they are used

**UNIT 4 OBJECTIVES**
- Relate the anatomy, physiology and pathology of visual system, nerves and nerve pathways
- Relate principles of measuring waveforms and distances used in visual evoked potential studies
- Relate the criteria for significant changes occurring during visual evoked potential recordings
- Relate the effects of medications and other physiological variables on test results
- State the clinical correlations of visual evoked potential abnormalities
- Describe artifacts encountered during visual evoked potential studies and basic techniques for trouble shooting
- Identify absolute latencies of VEP waveforms and how they are used

**UNIT 5 OBJECTIVES**
- Relate the anatomy, physiology and pathology of the somatosensory, nerves and nerve pathways
- Relate the principles of measuring waveforms and distances used in somatosensory evoked potential studies
- Relate the criteria for significant changes occurring during somatosensory evoked potential recordings
- Relate the effects of medications and other physiological variables on test results
- State the clinical correlations of somatosensory evoked potential abnormalities
- Describe artifacts encountered during somatosensory evoked potential studies and basic techniques for trouble shooting
- Identify absolute latencies and amplitudes of SEP waveforms and how they are used

**UNIT 6 OBJECTIVES**
- Relate the principles of measuring waveforms and distances used in intraoperative evoked potential studies
- Relate the criteria for significant changes occurring during intraoperative evoked potential recordings
- Relate the effects of medications and other physiological variables on IOM test results
- Describe artifacts encountered during evoked potential studies and basic techniques for trouble shooting during intraoperative monitoring

**C. PRE-REQUISITE COURSES**
- ENDT 1350
- ENDT 1345
- PSGT 1310
- ENDT 1463

**D. TEXTBOOK INFORMATION**
For information on the textbook and other course materials, including details about how to order your book online and have it delivered to you, visit the ACC College Store website.

**E. COMMUNICATING WITH YOUR INSTRUCTOR**
The preferred method of communicating with your instructor is through the ACC email or you may call me at 281-756-5644. Please leave your first and last name, a phone number or an e-mail address where I can
contact you and explain what you need to discuss with me. I will normally respond within 24 hours Monday-Thursday and by the next business day on Friday-Sunday.

F. **CLASS ATTENDANCE POLICY**
   Attendance is mandatory. Students missing more than 2 classes will lose one letter grade for each day missed.

G. **ADDITIONAL MATERIALS**
   A. None

H. **COURSE SCHEDULE**
   The course schedule will be distributed during the first week of class.

I. **DISCLAIMER**
   The instructor reserves the right to modify this syllabus as needed and will notify the students of any changes using the ACC e-mail or MyBlackboard e-mail or announcements.

J. **LATE COURSE WORK POLICY**
   Ten points will be deducted for each day an assignment is late.

K. **EXAM POLICY**
   Three exams will be given during this course. All exams are 90 minutes in length and will only be given during the allotted time. Each exam is multiple choice. The final exam is comprehensive.

L. **GRADING SUMMARY**

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<tr>
<td>Assignments</td>
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<tr>
<td>Quizzes</td>
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<tr>
<td>Unit Exams</td>
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<td>Labs</td>
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<tr>
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<td><strong>Total</strong></td>
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<td>79-70%</td>
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<td>69-60%</td>
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Your grade is based on the points you received on all course assignments and activities. Always notify your instructor if you are concerned with your grades or your status in the class.

**I......Incomplete.** No Incompletes or “I” grades will be given except for extreme circumstances. If an “I” grade is assigned and the course work is not completed by the pre-arranged time limit, this grade will convert to an “F”.

**W......Withdrawal.** It is recommended that the student talk to the instructor before withdrawing. Current course withdrawal information can be found in the printed version of the ACC Schedule for this semester or online at [ACC Course WITHDRAWAL INSTRUCTIONS](#). Students who file withdrawal requests by the published deadline and have not exceeded the withdrawal maximum will receive a grade of W.

M. **CLASSROOM PROTOCOL**
   It is the right of each student to participate in his or her learning, and it is the responsibility of each student to not interfere with the learning of other students. Policies governing the classroom are provided in the ACC Student Handbook and students who repeatedly violate one or more of these policies will be subject to disciplinary action.
N. ACADeMIC SUCCESS AND SUPPORT SERVICES:

Americans with Disabilities Act
ACC complies with ADA and 504 Federal guidelines by affording equal access to individuals who are seeking an education. Students who have a disability and would like classroom accommodations must register with the Office of Disability Services, A 136, (281)756-3533. Instructors are not able to provide accommodations until the proper process has been followed.

Behavioral Intervention Team (BIT) – Letting someone know
The Behavioral Intervention Team (BIT) at Alvin Community College is committed to improving community safety. College faculty, staff, students and community members may communicate safety concerns to the BIT team by email, bitcore@alvincollege.edu or through an electronic reporting option located on the BIT page of the college website.

The ACC Learning Lab, http://www.alvincollege.edu/TutoringLearningLab.aspx, located upstairs in building A, provides students with a variety of services including tutoring (math, writing, and other disciplines); computers and printers; a testing facility; and tables/carrels for studying. Learning Lab hours are M-TH 8:00am – 9:00pm and F 8:00am – 4:00pm. Testing hours are M-TH 10:00am – 7:30pm (Tests must be completed by 8:30pm) and F 10:00am – 12:00pm (Tests must be completed by 1:00pm). *Closed on Fridays in the Summer. Call 281-756-3566 for more information.

The ACC Library website: http://www.alvincollege.edu/Library.aspx. The ACC Library is an excellent source of assistance for writing the required research paper.

MyBlackboard – Any technical problems or issues with MyBlackboard should be directed to the Distance Education Department at de@alvincollege.edu. Include your first and last name, student ID number and a description of the problem. Students will not be penalized if there is an interruption in MyBlackboard service and the instructor is notified of such an issue by the Distance Education Department.

WEBACCESS, Passwords or ACC Computer Lab Information – Help Desk Website or contact the IT Dept. Help Desk at 281-756-3544.

O. CODE OF ACADEMIC INTEGRITY AND HONESTY
Alvin Community College students are members of an institution dedicated to the pursuit of knowledge through a formalized program of instruction and learning. At the heart of this endeavor, lie the core values of academic integrity which include honesty, truth, and freedom from lies and fraud. Because personal integrity is important in all aspects of life, students at Alvin Community College are expected to conduct themselves with honesty and integrity both in and out of the classroom. Incidents of academic dishonesty will not be tolerated and students guilty of such conduct are subject to severe disciplinary measures.