SLHS 588B
Assessment and Rehabilitation of the Balance System
588B M & W 8:00 - 9:15 AM

Description of Course:
This course is designed to provide the student with an understanding of the structure and
function of the balance system and the evaluation and diagnosis of vestibular dysfunction. We will study the anatomy and physiology of the vestibular system, consider links among several sensory systems that enable us to maintain our orientation and posture, and learn about ways of evaluating those systems. Students will develop basic skills associated with evaluation and treatment of patients with balance disorders. The course is organized around lectures, demonstrations and practical laboratory exercises during which participants will practice evaluation techniques.

Instructor and Contact Information
Instructor: David S. Velenovsky, RM 524 SLHS, 5th floor,
Meeting times: W 8:00-10:30 AM, SLHS 203
Tel: 626-9507   email: dsv@email.arizona.edu

Course Objectives and Expected Learning Outcomes
Learning outcomes: Participants will be able to describe
1. The anatomy & physiology of the vestibular system
2. Contributions of visual, somatosensory & vestibular systems to maintenance of orientation
3. Symptoms of common vestibular disorders
4. The procedures involved in electronystagmography
5. The principles and methods employed in dynamic posturography & rotary chair stimulation
6. The principles and methods employed in Vestibular Evoked Myogenic Responses (VEMP)
7. The principles and methods employed in Video Head Impulse Testing (vHIT)
8. Intervention strategies

Participants completing the laboratory exercises will be able to conduct a basic electronystagmography examination on a cooperating adult volunteer.

Absence and Class Participation Policy
This is a graduate course, you are expected to attend class sessions. If you are unable to attend class, then you must notify the instructor. If you miss class material, then it is your responsibility to obtain the information from your classmates. Students who miss class due to illness or emergency are required to bring documentation from their health-care provider or other relevant, professional third parties. Failure to submit third-party documentation will result in unexcused absences.

The UA’s policy concerning Class Attendance, Participation, and Administrative Drops is available at: http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop

The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable, http://policy.arizona.edu/human-resources/religious-accommodation-policy.
Absences pre-approved by the UA Dean of Students (or Dean Designee) will be honored. See: https://deanofstudents.arizona.edu/absences

Course Communications
Notifications regarding course policies, schedule changes or assignments will be made through email and/or notification on the course D2L website.

Required Texts or Readings

Textbook:

Optional texts:

Extracurricular Activities
Students will have the opportunity to “shadow” audiologists and other therapists for a half day at St. Jo Balance clinic. This will be arranged as the semester progresses. We will also take a “field trip” to Mayo Scottsdale to see the vestibular research facilities there if this can be arranged. This will be later in the semester. We may need to schedule this trip during spring break.

Assignments and Examinations: Schedule/Due Dates
There will be two examinations. The first examination will be held on Wednesday, March 1st. The 2nd (and final) examination will be held Wednesday May 11th, 8:00 to 10:00. All exams will be in class, no notes.

Final Examination or Project
The final exam will be cumulative and is scheduled for Wednesday, May 11th from 8 am to 10 am. Exam Regulations, https://www.registrar.arizona.edu/courses/final-examination-regulations-and-information, and Final Exam Schedule, http://www.registrar.arizona.edu/schedules/finals.htm

Grading Scale and Policies
Grading: The first examination will have a value of 50 points. The second examination will have a value of 100 points.

Course letter grades will be assigned as follows:

A = 90% of high score  
B = 80-89% of high score  
C = 70-79% of high score  
D = 60-69% of high score  
E = < 60%

University policy regarding grades and grading systems is available at http://catalog.arizona.edu/policy/grades-and-grading-system

Requests for incomplete (I) or withdrawal (W) must be made in accordance with University policies, which are available at http://catalog.arizona.edu/policy/grades-and-grading-system#incomplete and http://catalog.arizona.edu/policy/grades-and-grading-system#Withdrawal respectively.

Dispute of Grade Policy Students will have 7 days from the time the exam grades are posted to dispute a grade.
Scheduled Topics/Activities
List topics in logical units in a weekly/daily schedule, including assignment due dates and exam dates.

<table>
<thead>
<tr>
<th>Week of</th>
<th>Topic</th>
<th>Reading (Chapters)</th>
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<tbody>
<tr>
<td>1/11/2017</td>
<td>Introduction and course overview + Anat. &amp; Phys of Vest system</td>
<td>1 &amp; 2</td>
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<tr>
<td>1/18/2017</td>
<td>Anatomy and physiology of the vestibular system (Cont)</td>
<td>1 &amp; 2</td>
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<tr>
<td>1/23/2017</td>
<td>Integration of sensory &amp; motor systems</td>
<td>1 &amp; 2</td>
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<tr>
<td>1/30/2017</td>
<td>History and symptoms of vestibular disorders, informal tests</td>
<td>6 thru 8</td>
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<tr>
<td>2/6/2017</td>
<td>The vestibular lab - technical aspects</td>
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<tr>
<td>2/13/2017</td>
<td>The test battery - Oculomotor, positioning, positional, caloric</td>
<td>9 thru 11</td>
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<tr>
<td>2/20/2017</td>
<td>BPPV &amp; Spontaneous nystagmus</td>
<td>11 &amp; 26</td>
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<tr>
<td>2/27/2017</td>
<td>Positional tests/<em>EXAM 1, WEDNESDAY, MARCH 1st</em></td>
<td>11</td>
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<tr>
<td>3/6/2017</td>
<td>Test outcomes overview</td>
<td></td>
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<tr>
<td>3/13/2017</td>
<td>SPRING BREAK NO CLASS!</td>
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<tr>
<td>3/20/2017</td>
<td>Caloric Evaluation</td>
<td>12 &amp; 13</td>
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<tr>
<td>3/27/2017</td>
<td>Posturography, Rotary Chair</td>
<td>14, 15, 17 &amp; 19</td>
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<td>4/3/2017</td>
<td>Unilateral vestibular loss, Complete vestibular loss</td>
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<td>4/10/2017</td>
<td>Problems of Nonvestibular Origin</td>
<td>29 &amp; 30</td>
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<td>4/17/2017</td>
<td>Vestibular dx &amp; management in the aging population</td>
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<td>4/24/2017</td>
<td>Peeking at the otolithic system VEMP</td>
<td>21</td>
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<tr>
<td>5/1/2017</td>
<td>vHIT &amp; Review</td>
<td>16</td>
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<tr>
<td>5/10/2017</td>
<td><strong>FINAL EXAM Wednesday 8:00am - 10:00am</strong></td>
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Classroom Behavior Policy
To foster a positive learning environment, students and instructors have a shared responsibility. We want a safe, welcoming, and inclusive environment where all of us feel comfortable with each other and where we can challenge ourselves to succeed. To that end, our focus is on the tasks at hand and not on extraneous activities (e.g., texting, chatting, reading a newspaper, making phone calls, web surfing, etc.).

Students are asked to refrain from disruptive conversations with people sitting around them during lecture. Students observed engaging in disruptive activity will be asked to cease this behavior. Those who continue to disrupt the class will be asked to leave lecture or discussion and may be reported to the Dean of Students.

Threatening Behavior Policy
The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself. See [http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students](http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students).

Accessibility and Accommodations
Our goal in this classroom is that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, please let me know immediately so that we can discuss options. You are also welcome to contact the Disability Resource Center (520-621-3268) to establish reasonable accommodations. For additional
information on the Disability Resource Center and reasonable accommodations, please visit http://drc.arizona.edu.

If you have reasonable accommodations, please plan to meet with me by appointment or during office hours to discuss accommodations and how my course requirements and activities may impact your ability to fully participate.

Please be aware that the accessible table and chairs in this room should remain available for students who find that standard classroom seating is not usable.

**Code of Academic Integrity**

Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog. See: http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity.

The University Libraries have some excellent tips for avoiding plagiarism, available at http://www.library.arizona.edu/help/tutorials/plagiarism/index.html.

* **Selling class notes and/or other course materials to other students or to a third party for resale is not permitted.** Violations to this and other course rules are subject to the Code of Academic Integrity and may result in course sanctions. Additionally, students who use D2L or UA e-mail to sell or buy these copyrighted materials are subject to Code of Conduct Violations for misuse of student e-mail addresses. This conduct may also constitute copyright infringement.

**UA Nondiscrimination and Anti-harassment Policy**

The University is committed to creating and maintaining an environment free of discrimination; see http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy

Our classroom is a place where everyone is encouraged to express well-formed opinions and their reasons for those opinions. We also want to create a tolerant and open environment where such opinions can be expressed without resorting to bullying or discrimination of others.

**Additional Resources for Students**

UA Academic policies and procedures are available at http://catalog.arizona.edu/policies

Student Assistance and Advocacy information is available at http://deanofstudents.arizona.edu/student-assistance/students/student-assistance

**Confidentiality of Student Records**


**Subject to Change Statement**

Information contained in the course syllabus, other than the grade and absence policy, may be subject to change with advance notice, as deemed appropriate by the instructor.