

University of Florida
College of Public Health & Health Professions Syllabus
Course Number: SPA 6581 Anatomy and Physiology of Balance (1 credit hours)
Class Time: Wed (8:30 – 10:25 am)
Class Location: HPNP G-111



Semester: Fall 2023

Delivery Format: On-Campus

Course Website: All information for this course will be made available on the e-learning site, which can be accessed at <http://elearning.courses.ufl.edu>. Gatorlink username and password is required to access site.

Instructor Name: Shinichi Someya, PhD, Associate Professor

Room Number: MG-43, Medical Science Building

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Teaching Assistant: Shion Simms, Undergraduate Student (senior, CSD)

Room Number: M2-230

Email Address: ssimms@ufl.edu

Office Hours: Wednesday 11:30 am – 4:00 pm or by appointment

Preferred Course Communications: email

Prerequisites: none

PURPOSE AND OUTCOME

Course Overview: The goal of this course is to provide students with an understanding of the anatomical structures involved in balance and the functions they serve to support an understanding of the nature of balance disorders.

Relation to Program Outcomes and Clinical Certification Standards: *This course addresses program outcomes that pertain to the following Clinical Certification Standards.*

Standard #	Standard
IV-B	Demonstrates knowledge of basic human communication processes, including the appropriate biological, neurological, acoustic, psychological, developmental, and linguistic and cultural bases.

Course Objectives and/or Goals

1. Knowledge Objectives and/or Goals

- 1) Correctly identify key structures in the inner ear (IV-a1)
- 2) Describe the contribution of the sensory systems involved in balance (IV-c2&6)
- 3) Correctly identify the oculo-motor muscles and their functional pairings (IV-c2&6)
- 4) Describe the function of the vestibulospinal pathways (IVc2&6)
- 5) Summarize embryology and evolution of the inner ear (IV-a1)

*- Parenthetical notations refer to audiology knowledge standards from the CAA of ASHA.

Instructional Methods: On-Campus

DESCRIPTION OF COURSE CONTENT

Topical Outline/Course Schedule: (Tentative and subject to change)

Week	Date	Topic(s)	Exams	Readings
1	8/23	<ul style="list-style-type: none"> Introduction Inner Ear & Vesicular Organs Overview 		
2	8/30	<ul style="list-style-type: none"> Semicircular Canals & Otolithic Organs 		
3	9/6	<ul style="list-style-type: none"> Otolithic Organs Quiz 1 	Quiz 1	
4	9/13	<ul style="list-style-type: none"> Mechanotransduction 		Nakashima et al Nature Review
5	9/20	<ul style="list-style-type: none"> Genetics of the Vestibular Disorders: Usher syndromes 		
6	9/27	<ul style="list-style-type: none"> Genetics of the Vestibular Disorders: Meniere's disease 	Quiz 2	
7	10/4	<ul style="list-style-type: none"> Quiz 2 Midterm Exam Review 		
8	10/11	<ul style="list-style-type: none"> Midterm Exam 	Exam	
9	10/18	<ul style="list-style-type: none"> Group discussion 		
10	10/25	<ul style="list-style-type: none"> Semicircular Canals 		
11	11/1	<ul style="list-style-type: none"> Otolithic Organs Quiz 3 	Quiz 3	
12	11/8	<ul style="list-style-type: none"> Central pathways for stabilizing gaze, head, and posture 		
13	11/15	<ul style="list-style-type: none"> ASHA No Class Meeting 	Quiz 4	Class time allotted to work on paper + quiz
14	11/22	<ul style="list-style-type: none"> Thanksgiving Holiday 		
15	11/29	<ul style="list-style-type: none"> Final Exam 	Exam	
16	12/6	<ul style="list-style-type: none"> TBA 		

Course Materials and Technology:

There is no text. All readings will be provided by the instructor through the Canvas site.

The information in the following textbooks is coordinated with the in-class discussions. The textbooks are not required, but chapters from the books will be used for reading, presentation and discussion material.

For technical support for this class, please contact the UF Help Desk at:

- Learning-support@ufl.edu
- (352) 392-HELP - select option 2
- <https://lss.at.ufl.edu/help.shtml>

Additional Academic Resources:

- Career Connections Center: Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.
- Library Support: Various ways to receive assistance with respect to using the libraries or finding resources.
- Teaching Center: Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring.
- Writing Studio: 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.
- Student Complaints On-Campus: Visit the Student Honor Code and Student Conduct Code webpage for more information.
- On-Line Students Complaints: View the Distance Learning Student Complaint Process.

ACADEMIC REQUIREMENTS AND GRADING

Assignments:

Reading assignments will be discussed during the scheduled class times. Students should prepare by reading materials in advanced in order to fully engage in class discussions. Supplementary materials are to be used as study aids for particular topics. There will be 4 Quizzes, 2 Paper Presentations, 1 Midterm Exam, and 1 Final Exam.

Class Attendance Policy: Attendance to classes is required.

Grading

Requirement	Date	Points or % of final grade	Clinical Standard(s) Being Assessed
Quiz 1	TBA	10%	IV-B
Quiz 2	TBA	10%	IV-B
Quiz 3	TBA	10%	IV-B
Quiz 4	TBA	10%	IV-B
Presentation	TBA	10%	
Midterm Exam	10/6	25%	IV-B
Final Exam	12/8	25%	IV-B
Total		100%	

Point system used (i.e., how do course points translate into letter grades).

Points earned	95-100	90-94	87-89	83-86	80-82	77-79	73-76	70-72	67-69	63-66	60-62	<60
Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E

Please be aware that a C- is not an acceptable grade for graduate students. A grade of C counts toward a graduate degree only if an equal number of credits in courses numbered 5000 or higher have been earned with an A. In addition, the Bachelor of Health Science Program does not use C- grades.

You must include the letter grade to grade point conversion table below. Letter grade to grade point conversions are fixed by UF and cannot be changed.

Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E	WF	I	NG	S-U
Grade Points	4.0	3.67	3.33	3.0	2.67	2.33	2.0	1.67	1.33	1.0	0.67	0.0	0.0	0.0	0.0	0.0

For greater detail on the meaning of letter grades and university policies related to them, see the Registrar's Grade Policy regulations at:

<http://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Exam Policy:

Missed Exam Policy. If you have an emergency or become sick and cannot attend class during the exam, you must contact me prior to the class time on the day that you will miss the exam or you will not be able to make-up the exam. You are responsible for scheduling when you will make-up the missed exam.

Policy Related to Required Class Attendance:

You are expected to attend every class scheduled.

All faculty are bound by the UF policy for excused absences. For information regarding the UF Attendance Policy see the Registrar website for additional details:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

STUDENT EXPECTATIONS, ROLES, AND OPPORTUNITIES FOR INPUT**Expectations Regarding Course Behavior:**

Academic Honesty: The UF student Honor Code states: "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity." On all work submitted for credit by students at the university, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment."

UF's Academic Honesty Policy can be found at <http://regulations.ufl.edu/chapter4/4017.pdf>.

Communication Guidelines:

Office Hours: Wednesdays 2:00 pm -4:00 pm or by appointment.

Academic Integrity:

Students are expected to act in accordance with the University of Florida policy on academic integrity. As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge:

"We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity."

You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied:

"On my honor, I have neither given nor received unauthorized aid in doing this assignment."

It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For additional information regarding Academic Integrity, please see Student Conduct and Honor Code or the Graduate Student Website for additional details:

<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>

<http://gradschool.ufl.edu/students/introduction.html>

Please remember cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior.

Online Faculty Course Evaluation Process:

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at

<https://evaluations.ufl.edu/results/>.

Professionalism and COVID:

As students pursuing a path in the health professions or public health, it is crucial to demonstrate professional behaviors that reflect integrity and commitment to the health of patients, fellow health professionals, and to populations we serve. To accomplish this, a strong responsibility for the well-being of others must be evident in our decisions, along with accountability for our actions. Professionalism in the health disciplines requires adherence to high standards of conduct that begin long before graduation. This is particularly true during

times of health emergencies such as the COVID pandemic, given our professional habits can have a direct impact upon the health of persons entrusted to us.

If you are not vaccinated, get vaccinated. Vaccines are readily available at no cost and have been demonstrated to be safe and effective against the COVID-19 virus. Visit this link for details on where to get your shot, including options that do not require an appointment:

<https://coronavirus.uflhealth.org/vaccinations/vaccine-availability/>. Students who receive the first dose of the vaccine somewhere off-campus and/or outside of Gainesville can still receive their second dose on campus. In response to COVID-19, the following professional practices are in place to maintain your learning environment, to enhance the safety of our in-classroom interactions, and to protect the health and safety of ourselves, our patients, our neighbors, and our loved ones.

- You are required to wear approved face coverings at all times while in Health Science Center classrooms and within Health Science Center buildings even if you are vaccinated.
- If you are sick, stay home and self-quarantine. Please visit the UF Health Screen, Test & Protect website about next steps, retake the questionnaire and schedule your test for no sooner than 24 hours after your symptoms began. Please call your primary care provider if you are ill and need immediate care or the UF Student Health Care Center at 352-392-1161 (or email covid@shcc.ufl.edu) to be evaluated for testing and to receive further instructions about returning to campus. UF Health Screen, Test & Protect offers guidance when you are sick, have been exposed to someone who has tested positive or have tested positive yourself. Visit the UF Health Screen, Test & Protect website for more information.
- Continue to follow healthy habits, including best practices like frequent hand washing.
- Avoid crowded places (including gatherings/parties with more than 10 people)
- Sanitizing supplies are available in the classroom if you wish to wipe down your desks prior to sitting down and at the end of the class. Hand sanitizing stations will be located in every classroom.

Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work. If you are withheld from campus by the Department of Health through Screen, Test & Protect you are not permitted to use any on campus facilities. Students attempting to attend campus activities when withheld from campus will be referred to the Dean of Students Office.

Continue to regularly visit coronavirus.UFHealth.org and coronavirus.ufl.edu for up-to-date information about COVID-19 and vaccination.

COVID-19 Symptoms:

See <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html> for information about COVID-19 symptoms, which may include fever, cough, shortness of breath or difficulty breathing, fatigue, chills, muscle or body aches, headache, sore throat, congestion or runny nose, nausea or vomiting, diarrhea, and loss of taste or smell.

Recording Within the Course:

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons),

including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

Policy Related to Guests Attending Class:

Only registered students are permitted to attend class. However, we recognize that students who are caretakers may face occasional unexpected challenges creating attendance barriers. Therefore, by exception, a department chair or his or her designee (e.g., instructors) may grant a student permission to bring a guest(s) for a total of two class sessions per semester. This is two sessions total across all courses. No further extensions will be granted. Please note that guests are not permitted to attend either cadaver or wet labs. Students are responsible for course material regardless of attendance. For additional information, please review the Classroom Guests of Students policy in its entirety. Link to full policy: <http://facstaff.php.ufl.edu/services/resourceguide/getstarted.htm>

Online Faculty Course Evaluation Process

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.ua.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.ua.ufl.edu/public-results/>.

SUPPORT SERVICES

Accommodations for Students with Disabilities:

If you require classroom accommodation because of a disability, it is strongly recommended you register with the Dean of Students Office <http://www.dso.ufl.edu> within the first week of class or as soon as you believe you might be eligible for accommodations. The Dean of Students Office will provide documentation of accommodations to you, which you must then give to me as the instructor of the course to receive accommodations. Please do this as soon as possible after you receive the letter. Students with disabilities should follow this procedure as early as possible in the semester. The College is committed to providing reasonable accommodations to assist students in their coursework.

Counseling and Student Health:

Students sometimes experience stress from academic expectations and/or personal and interpersonal issues that may interfere with their academic performance. If you find yourself facing issues that have the potential to or are already negatively affecting your coursework, you are encouraged to talk with an instructor and/or seek help through University resources available to you.

The Counseling and Wellness Center 352-392-1575 offers a variety of support services such as psychological assessment and intervention and assistance for math and test anxiety. Visit their web site for more information: <http://www.counseling.ufl.edu>. On line and in person assistance is available.

U Matter We Care website: <http://www.umatter.ufl.edu/>. If you are feeling overwhelmed or stressed, you can reach out for help through the You Matter We Care website, which is staffed by Dean of Students and Counseling Center personnel.

The Student Health Care Center at Shands is a satellite clinic of the main Student Health Care Center located on Fletcher Drive on campus. Student Health at Shands offers a variety of clinical services. The clinic is located on the second floor of the Dental Tower in the Health Science Center. For more information, contact the clinic at 392-0627 or check out the web site at: <https://shcc.ufl.edu/>

Crisis intervention is always available 24/7 from: Alachua County Crisis Center: (352) 264-6789
<http://www.alachuacounty.us/DEPTS/CSS/CRISISCENTER/Pages/CrisisCenter.aspx>

University Police Department: Visit UF Police Department website or call 352-392-1111 (or 9-1-1 for emergencies).

UF Health Shands Emergency Room / Trauma Center: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; Visit the UF Health Emergency Room and Trauma Center website.

Do not wait until you reach a crisis to come in and talk with us. We have helped many students through stressful situations impacting their academic performance. You are not alone so do not be afraid to ask for assistance.

Inclusive Learning Environment:

Public health and health professions are based on the belief in human dignity and on respect for the individual. As we share our personal beliefs inside or outside of the classroom, it is always with the understanding that we value and respect diversity of background, experience, and opinion, where every individual feels valued. We believe in, and promote, openness and tolerance of differences in ethnicity and culture, and we respect differing personal, spiritual, religious and political values. We further believe that celebrating such diversity enriches the quality of the educational experiences we provide our students and enhances our own personal and professional relationships. We embrace The University of Florida's Non-Discrimination Policy, which reads, "The University shall actively promote equal opportunity policies and practices conforming to laws against discrimination. The University is committed to non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information and veteran status as protected under the Vietnam Era Veterans' Readjustment Assistance Act." If you have questions or concerns about your rights and responsibilities for inclusive learning environment, please see your instructor or refer to the Office of Multicultural & Diversity Affairs website: www.multicultural.ufl.edu
