

Vestibular Rehabilitation: Theory, Evidence, and Practical Application



The Academy is the educational arm of Shirley Ryan AbilityLab (formerly RIC), a non-profit rehabilitation hospital in Chicago that has been ranked number one by *US News and World Report* since 1991. The Academy offers a wide range of accredited programs with the common goal of improving patient outcomes through clinical excellence. Our commitment to sharing the best evidence and rehabilitation practice with clinicians around the globe has always been an integral part of our mission.

The Academy is committed to creating an inclusive, authentic, and comfortable learning environment that celebrates and supports all learners. We are dedicated to providing the highest-quality teaching regardless of race, age, ethnicity, nationality, gender, sexual orientation/identity, ability, religion, language or culture. Above all, we believe that everyone should feel safe, respected, and welcomed when attending our programs at the hospital or online. We encourage the sharing of experiences and perspectives so we can learn from one another, and from our varied points of view.

## **Course Description**

This course will provide therapists with the foundational information needed to efficiently evaluate and effectively treat patients with peripheral and central vestibular disorders and with intermediate level clinical decision-making skills. Emphasis will be placed on evidence-based practice and understanding the physiologic rationale for therapeutic interventions. This will enhance the clinician's ability to evaluate the appropriateness and effectiveness of therapeutic interventions for common vestibular disorders. The course format will be lecture, demonstration with patient videos, and patient problem-solving sessions.

## **Location and Delivery Method**

This is an in-person course that will be held at the Shirley Ryan AbilityLab, 355 East Erie Street, Chicago IL, 60611. Self-study (prework) will be completed on-demand using the Academy Learning Portal. The conference site is wheelchair accessible. Accessible materials, sign language interpretation and personal assistance are available with at least 45-days advance notice.

## **Successful Completion**

Participants will complete 5.5 hours of on-demand didactic self-study modules, and 4 hours of readings in advance of this three-day course (earning 22.50 contact hours + 9.5 contact hours.) These self-study activities for the course will consist of readings and an exercise to better understand content necessary to the fundamentals of the course. Participants will fill out an assessment of this material prior to the live course. During the on-site portion of the course, participants must sign in and complete an online evaluation. All sessions, self-study work and online evaluations must be completed by **March 18**, **2024** in order to receive full credit.

#### **Who Should Attend**

Physical Therapists, Physical Therapist Assistants, Occupational Therapists, Occupational Therapy Assistants, and Athletic Trainers (no BOC CEUs)

#### **Learner Outcomes**

Upon completion of this course, participants will be able to:

- Describe the normal anatomy and physiology of the vestibular and related systems.
- **Discuss** the pathophysiology and medical management of common vestibular disorders.
- Select and interpret the findings of appropriate outcome measures for use with common vestibular disorders.
- **Demonstrate** an oculomotor examination and positional testing.
- Interpret the findings from the history and physical examination to determine the diagnosis of common vestibular disorders.
- Develop an intervention program for common vestibular disorders based on examination findings and knowledge of the vestibular system.

## **Course Faculty (Listed Alphabetically)**



Robert Battista, MD

Assistant Professor of Clinical Otolaryngology in the Department of Otolaryngology, Northwestern University Medical School.

Dr. Battista is an otologist/neurotologist, which is a specialty devoted to the medical and surgical treatment of the ear, facial nerve and related structures. He has published over 20 articles or book chapters concerning various medical and surgical otologic/neurotologic topics.



Jonella Black, PT, MS
Private Practice

Former Program Coordinator for Vestibular Rehabilitation at a large healthcare system in northern Illinois. Jonella works in private practice doing vestibular rehab specializing in the treatment of patients with vestibular and neurological disorders.



Janet Odry Helminski, PT, Ph.D.

Professor in the Department of Physical Therapy, College of Health Professions, Rosalind Franklin University.

She received her Ph.D. in Neurobiology and Physiology from Northwestern University's Institute of Neuroscience. Her current areas of research include management of atypical BPPV, differential diagnosis of acute vestibular syndrome, and uncompensated unilateral peripheral vestibular hypofunction. She lectures extensively on vestibular rehabilitation.



**Heather E.R. Kamath, Au.D.,CCC-A**Adjunct faculty at Northwestern University.

She received her Au.D. from Northwestern in 2006. Her current areas of technical expertise are in the areas of diagnostic testing including those of rotational chair testing, vestibular evoked myogenic potentials, and videonystagmography. Heather teaches clinically at Northwestern University, Rush University, Rosalind Franklin School of Medical Sciences, and Midwestern University. Heather has performed research in the area of Vestibular Evoked Myogenic Potentials and published it in the peer reviewed journal Otology and Neurotology.



**Tammie Ostrowski, PT** Senior Physical Therapist, Ascension St. Mary's Hospital, Kankakee IL.

Tammie works in the outpatient clinic specializing in the treatment of patients with vestibular and balance dysfunction. Her primary interest is BPPV.



Hannah Redd PT, DPT, NCS

Clinical Team Lead for the outpatient neurologic clinic at Shirley Ryan AbilityLab; Adjunct Faculty, Department of Physical Therapy and Human Movement Sciences, Northwestern University

Hannah received her doctorate from Georgia State University and pursued neurological specialty training through Emory University's Neurologic Residency program. Hannah began her career at Shepard Center in Atlanta, GA and later transitioned to full-time outpatient care at Shirley Ryan AbilityLab. Hannah now serves as the Clinical Team Lead for the outpatient neurologic clinic at Shirley Ryan AbilityLab where she co-leads the acute concussion clinic and specializes in providing patient care in the areas of vestibular dysfunction, concussion management, functional movement disorders, and neuromuscular disorders. Hannah has previously been a contract educator at Georgia State University and Emory University.

## **Pre-Course Work**

1	Anatomy and Physiolo Disease	ogy of the Vestibular and Oculomotor Systems in Health and with
	2.0 Hour VIDEO	Anatomy and Physiology of the Vestibular and Oculomotor Systems in Health and with Disease - Janet Helminski, PT, PhD
	ARTICLE	Schubert MC, Minor LB. Vestibulo-Ocular Physiology Underlying Vestibular Hypofunction. Physical Therapy 2004;84(4): 373-385.
		Strupp M, Kremmyda, O, Adamczyk C, Bottcher N, Muth C, Yip CW, Bremova T. Central Ocular Motor Disorders, Including Gaze Palsy
2	Evaluation of the Dizz	and Nystagmus. J Neurol 2014; 261: S542-S558.  Zy Patient – Part I: History, System Review, and Outcome Measures
		-, , , , , , , , , , , , , , , , , , ,
	1.0 Hour VIDEO	Evaluation of the Dizzy Patient – Part I: History, System Review, and Outcome Measures - Janet Helminski, PT, PhD
	ARTICLE	Newman-Toker DE, Edlow, JA. Titrate: A Novel, Evidence-Based Approach to Diagnosing Acute Dizziness and Vertigo. Neurol Clin 2015: 33:577-599
3	2015; 33:577-599.  Oculomotor Examination and Positional Testing	
	0.5 Hour VIDEO	How to perform an Oculomotor Examination and Positional Testing - Janet Helminski, PT, Ph.D.
	ARTICLE	
		Oculomotor Examination
		Strupp M, Kremmyda, O, Adamczyk C, Bottcher N, Muth C, Yip CWBremova T. Central Ocular Motor Disorders, Including Gaze Palsy and Nystagmus. J Neurol 2014; 261: S542-S558.
		Positional Testing
		Nuti D, Zee DS, Mandalà M. Benign Paroxysmal Positional Vertigo: What We Do and Do Not Know. Semin Neurol. 2020 Feb;40(1):49-58. doi 10.1055/s-0039-3402733. Epub 2020 Jan 14. PMID: 31935770
4	Translating Motor Le	arning to Treatment of Peripheral Vestibular Hypofunction
	0.5 Hour VIDEO	Translating Motor Learning to Treatment of Peripheral Vestibular Hypofunction – Janet Helminski, PT, Ph.D.

	ARTICLE	Schubert MC, Minor LB. Vestibulo-Ocular Physiology Underlying Vestibular Hypofunction. Physical Therapy 2004;84(4): 373-385.	
5	Surgical Management o	Surgical Management of the Dizzy Patient: Part I	
	1.0 Hour VIDEO	Surgical Management of the Dizzy Patient: Part I – Robert Battista, MD	
	Q&A during the course	Post your questions for Dr. Battista to answer during Part II, his live Q&A session on Day 1 of the course.	
6	Vestibular Function Testing		
	0.5 Hour VIDEO	Heather E.R. Kamath, Au.D., CCC-A	

# Agenda (in CST)

## Wednesday, March 6, 2024

7:30 am	Registration 10 <sup>th</sup> floor Shirley Ryan AbilityLab
	Continental Breakfast in Auditorium
8:00	Welcome, Introduction to the course, Opening Remarks: Introductions to the Faculty, Plan for the Course Melissa Kolski, PT, DPT
8:15	Vestibular Anatomy and Physiology in Disease – Understanding the Clinical Exam and Intervention Janet Helminski, PT, Ph.D.& Tammie Ostrowski, PT
8:45	Classification of Balance Dysfunction – Clinical Findings Guide Intervention Hannah Redd, PT, DPT
9:30	Non-Otologic Causes of Dizziness Janet Helminski, PT, Ph.D.
10:00	Break
10:15	Classification of Vestibular Disorders – Diagnostic Criteria of Common Vestibular Disorders Janet Helminski, PT, Ph.D.
12:00	Lunch (on your own) - Optional 30 Minute Tours Available
1:00	<ul> <li>Evaluation of the Dizzy Patient – Part II. Lecture and Lab Breakout Session</li> <li>Performing the Oculomotor Examination</li> <li>Use of Evidence-Based Clinical Decision Rules</li> <li>Janet Helminski, PT, Ph.D.</li> </ul>
2:30	Break
2:45	Evaluation of the Dizzy Patient – Part II. Lecture and Lab Breakout Session (Continued) Janet Helminski, PT, Ph.D.
4:45	Surgical Management of the Dizzy Patient Part II: Question and Answer Session with Robert Battista, MD (Live Session)
5:00 pm	Adjourn

## Thursday, March 7, 2024

7:30 am	Continental Breakfast 10 <sup>th</sup> floor Auditorium Shirley Ryan AbilityLab
8:00	Review of Day 1: Oculomotor Examination and Use of Evidence-Based Clinical Decision Rules
8:15	Benign Paroxysmal Positional Vertigo (BPPV) Part I – Vertical Canals. (Lecture and Lab Breakout Session)
	<ul> <li>How to Perform and Interpret Findings on Positional Testing</li> <li>Implementation of a Canalith Repositioning Procedure.</li> <li>Janet Helminski, PT, Ph.D. and Faculty</li> </ul>
10:00	Break
10:15	BPPV: Part I - Vertical Canals. (Lecture and Lab Breakout Session Continued) Janet Helminski, PT, Ph.D. and Faculty
12:30 pm	Lunch (on your own)
1:30	BPPV: Part II - Lateral Canals. (Lecture and Lab Breakout Session Continued)
	<ul> <li>How to Perform and Interpret Findings on Positional Testing</li> <li>Implementation of a Canalith Repositioning Procedure</li> </ul>
2:45	Problem-Solving Session – Case-Based Evaluation of Common Vestibular Disorders (Breakout Session) Led by Course Faculty
	<ul> <li>Unilateral Peripheral Vestibular Hypofunction</li> <li>Bilateral Peripheral Vestibular Hypofunction</li> <li>Central Vestibular Hypofunction</li> <li>Benign Paroxysmal Positional Vertigo</li> </ul>
4:00	Break
4:15	Development and Implementation of a Vestibular Rehabilitation Program for Unilateral and Bilateral Peripheral Vestibular Hypofunction (An Overview)  Jonella Black, PT, MS
5:15	Adjourn

## Friday, March 8, 2024

7:30 am	Continental Breakfast 10 <sup>th</sup> floor Auditorium Shirley Ryan AbilityLab
8:00	Review of Cases: BPPV Janet Helminski, PT, Ph.D.
8:30	Problem-Solving Session – Vestibular Rehabilitation for Peripheral Vestibular Hypofunction (NEW Breakout Session) Led by Course Faculty
	Motor Learning of the VOR - Conventional & Vergence Enhanced Gaze     Stabilization
	<ul> <li>Motor Learning of the VOR – Times Two Viewing; Desensitization of Visual Motion Sensitivity</li> </ul>
	<ul> <li>Bilateral Peripheral Vestibular Function – Substitution for loss and Postural Control</li> </ul>
	Cognitive Factors in Balance Postural Control – Dual Task & Spatial Navigation
10:00	Break
10:15	Identification of and Interventions for Central Vestibular Dysfunction Tammie Ostrowski, PT
11:15	<ul> <li>Problem-Solving Session – Case-Based Intervention (Breakout Session)</li> <li>Unilateral Peripheral Vestibular Hypofunction</li> <li>Bilateral Peripheral Vestibular Hypofunction</li> <li>Central Vestibular Hypofunction</li> <li>Benign Paroxysmal Positional Vertigo</li> <li>Course Faculty</li> </ul>
12:45	Lunch
1:45	Case Discussion: Interpretation of Clinical Decision-Making Rules and Application of Evidence-Based Interventions. Breakout Sessions [Acute]  Course Faculty
2:15	Case Discussion: Interpretation of Clinical Decision-Making Rules and Application of Evidence-Based Interventions. Breakout Sessions [Chronic] Course Faculty
2:45	Break
3:00	Clinical Reasoning and Problem-Solving: Case-Based Differential Diagnosis of Central and Peripheral Vestibular Dysfunction.  Janet Helminski, PT, Ph.D.

- 4:00 Putting it all Together
- 4:30 Course Debrief: How will you apply the Course Content
- 4:45 Adjourn

## **Cancellation Policy**

All cancellations must be requested by email at academy@sralab.org. Refunds less a 20% administrative charge will be given until 30 days before the start date of the course. If the cancellation notice is received less than 30 days from the start date of the course, a credit towards a future continuing education program would be applied for 1 year from the start date of the canceled course. The Academy reserves the right to cancel or change any programs for due cause. The cancellation of a program by the Academy will result in a full refund of tuition.

## **Important Registration Information**

Registrations will be taken in the order in which tuition checks or credit card information is received. We highly encourage you to register online as these are processed more quickly than mailed registrations. Full tuition must accompany the registration form to confirm your place in this course. Until you receive your confirmation letter, you are not officially registered for the course. For online registrations, you will receive email confirmation on the same day that you register. For registrations received by standard mail, the confirmation may take up to 3 weeks to process. If you do not receive confirmation within this period, please call 312-238-6042. One week prior to the course, only internet registrations that include an email will be accepted. Please note that once the course has reached its maximum enrollment, no additional spots will become available.

#### **Accommodations**

Shirley Ryan AbilityLab has a preferred rate at The Hyatt Centric Chicago Magnificent Mile which is located one block away. Hyatt Centric Chicago Magnificent Mile, 633 North St. Clair, Chicago, Illinois, 60611. You can reserve a room by clicking <u>HERE</u>. The daily rate for parking at the Hyatt Chicago is \$76.00/day with in and out privileges.

The W Chicago - Lakeshore is located 1 block from the Shirley Ryan AbilityLab. You can reserve a room with a discounted rate by clicking <u>HERE</u> and entering Shirley Ryan AbilityLab's corporate code: ROI. The daily rate for parking at the W Chicago Lakeshore is \$79.00/day with in and out privileges.

For a list of other available lodging options near the hospital, please click HERE.

<sup>\*</sup>Room and parking rates may fluctuate and are subject to change

## **Technology Requirements**

To participate, you will need access to a computer or device with an internet connection. Wi-fi will be available on site for in-person courses.

- Internet connection: broadband wired or wireless (3G or better)
- Web browser with latest stable version downloaded: Apple Safari, Google Chrome, Mozilla Firefox and Microsoft Edge
- JavaScript and Cookies enabled
- Speaker or headset to listen to audio files and participate in Zoom calls
- Do NOT use Internet Explorer, as it is not supported.

## **Accessibility**

Please contact the Academy if you require any special accommodation for this course.

## **Continuing Education Credit**

#### **Occupational Therapy**



Shirley Ryan AbilityLab is an AOTA Approved Provider of professional development. Course approval ID# 00842. This live course is offered at 32.0 contact hours, 3.20 CEUs [intermediate, OT Service

Delivery/Foundational Knowledge]. The assignment of AOTA CEUs does not imply endorsement of specific course content, products, or clinical procedures by AOTA.

#### **Physical Therapy**

This course has been approved by the Illinois Physical Therapy Board for 32.0 Contact Hours (9.5 Hours Self-Study 22.5 Live). Approval #216-000069

The Shirley Ryan AbilityLab is recognized by the California and New York State Education Department's State Board for Physical Therapy as an approved provider of physical therapy and physical therapist assistant continuing education. This course has been approved for 32.0 Contact Hours (9.5 Hours Self-Study 22.5 Live) on 2/9/2024.

The following states require continuing education units with no state-specific approval: CT, IA, and WA

## **Faculty Disclosures**

#### Course Director's and Planning Committee Members' Disclosure Information:

Melissa Kolski, PT, DPT

Has nothing to disclose.

Bruce Deviller

Has nothing to disclose.

#### Speakers, Moderators and Panelists' Disclosure Information:

Robert Battista, MD

Jonella Black, PT

Has nothing to disclose.

Janet Helminski, PT, Ph.D.

Has nothing to disclose.

Heather Rudisill Kamath, Au.D.,CCC-A

Has nothing to disclose.

Tammie Ostrowski, PT, DPT

Has nothing to disclose.

Hannah Redd, PT, DPT

Has nothing to disclose.

## **Vestibular Rehabilitation: Theory, Evidence, and Practical Application**

# Register online at <a href="https://www.sralab.org/academy">https://www.sralab.org/academy</a> or complete the form below and return with payment.

Mail to: Academy Shirley Ryan AbilityLab 355 E. Erie Street, Suite 12-West Chicago, Illinois 60611 Early Bird Registration Fee by January 16, 2024 \$ 700 Registration Fee After January 16, 2024 \$ 800 Questions? Contact Melissa Kolski at mkolski@sralab.org 312-238-7731 Please TYPE or PRINT your name and professional initials (MD, OT, PT, RN, etc.) as you would like them to appear on your continuing education certificate. First Name \_\_\_\_\_Last Name\_\_\_\_ Home Phone ( ) Prof. Initials Home Address State Zip Organization/Facility\_\_\_\_\_ Work Address City\_\_\_\_\_State\_\_\_\_Zip\_\_\_ Position Please note: registration will not be processed without full payment. Method of Payment: ☐ Check enclosed (Payable to: Shirley Ryan AbilityLab) ☐ Credit Card Credit Card Users Must Complete the Following Information: ■ MasterCard □ VISA ☐ American Express Expiration Date \_ \_ / \_ \_ CVV \_ \_ \_ \_ (security code on back of card) Name on Card City\_\_\_\_\_State\_\_\_\_\_Zip\_\_\_

Cardholder's Signature\_\_\_\_\_