

CERTIFIED LOWER EXTREMITY SPECIALIST

Course Syllabus

Advanced clinical reasoning, gait and movement analysis, load management, return-to-activity decision-making, and specialist-level lower extremity care

Course Overview

The Certified Lower Extremity Specialist Course is an 8-week hybrid, specialist-level course designed to help clinicians move beyond isolated joint labels and routine exercise progressions to make stronger decisions in complex lower extremity cases. Lower extremity presentations are often load- and task-dependent: gait, hip-knee-foot/ankle mechanics, peripheral nerve involvement, tissue capacity, joint mobility, motor control, traumatic and non-traumatic pathology, pediatric considerations, plyometric demands, sport or work requirements, irritability, and patient expectations often interact. This course trains participants to synthesize the subjective examination, symptom behavior, medical and neurologic screening, gait and movement analysis, regional examination, functional testing, reassessment, and evidence-informed intervention strategies into a clear plan of care.

Course emphasis

This is not a protocol course, and it is not a general review of lower extremity diagnoses. It is an advanced reasoning and skill-development course focused on the decisions clinicians make when hip, knee, foot/ankle, gait, peripheral nerve, load-capacity, pediatric, traumatic, and return-to-sport presentations are layered, uncertain, or not responding as expected. Participants will practice identifying the most meaningful clinical driver, selecting tests and movement tasks that answer a specific question, matching intervention to patient presentation, and using reassessment to progress, regress, modify, refer, or pivot.

Course Details

Item	Details
Course format	Asynchronous lectures and readings, four live virtual discussions, case-based reasoning activities, and an in-person weekend intensive.
Virtual didactic course	July 6 - August 30
Live virtual discussions	July 15, July 29, August 12, and August 26 from 7:00-9:00 PM EST
In-person weekend intensive	August 29-August 30
Location	1 New London Ave, Cranston, RI 02920
Course materials	All assigned materials are available through the learning management system, Talent. Participants are responsible for reviewing materials before live sessions.

Course Instructors

Role	Instructor
Primary Instructor	Molly Douglass, PT, DPT, OCS, SCS mdouglass@highbarhealth.com
Faculty Adjunct	Brendan Boyle, PT, DPT, OCS bboyle@highbarhealth.com

Course Purpose

This course is designed to strengthen the clinician's ability to operate at a specialist level when evaluating and treating lower extremity conditions. By the end of the course, participants should be better prepared to:

- Develop a defensible working hypothesis from the subjective examination, symptom behavior, irritability, gait and movement findings, regional contribution, function, tissue capacity, age or developmental considerations, sport or work demands, and patient context.
- Prioritize examination procedures based on the clinical question they answer rather than relying on a memorized checklist or diagnosis-based routine.
- Differentiate competing hip, knee, foot/ankle, gait, neural, mobility, motor control, load-capacity, traumatic, non-traumatic, pediatric, sport-specific, and contextual drivers of lower extremity symptoms.
- Link examination findings to treatment decisions, reassessment markers, loading strategies, progression criteria, return-to-activity planning, referral criteria, and clear next steps.
- Use anatomy, biomechanics, pathophysiology, pain science, tissue healing, kinetic-chain relationships, gait mechanics, and evidence-informed practice as clinical context rather than rigid rules.
- Apply education, manual therapy, therapeutic exercise, gait retraining, load management, neuromuscular training, tendon loading, neural mobility, plyometric progression, activity modification, bracing or footwear considerations, and functional progression with greater specificity.
- Communicate clinical reasoning in a way that improves patient understanding, confidence, adherence, and self-management.

Course Learning Objectives

1. Integrate relevant anatomy, biomechanics, pathophysiology, pain science, tissue healing, gait mechanics, and clinical practice guidelines into lower extremity management.
2. Use patient history, symptom behavior, gait, movement analysis, and functional demands to generate, prioritize, and revise working hypotheses across hip, knee, foot/ankle, pediatric, peripheral nerve, and return-to-activity presentations.
3. Select objective tests based on the clinical decision each test is meant to inform.
4. Differentiate common and complex lower extremity presentations, including gait-related dysfunction, peripheral nerve entrapment, pediatric considerations, hip OA, intra- and extra-articular hip disorders, knee intra- and extra-articular conditions, traumatic and non-traumatic foot/ankle injuries, and plyometric or return-to-sport demands.
5. Interpret imaging, structural findings, diagnostic labels, and surgical history as clinical context rather than stand-alone explanations for pain or disability.
6. Apply evidence-informed treatment strategies with an appropriate match between suspected driver, patient goals, irritability, tissue capacity, gait or movement demands, sport or work demands, and response to care.
7. Use reassessment and symptom modification to determine whether to continue, progress, regress, modify, refer, or abandon a working hypothesis.
8. Communicate advanced clinical reasoning clearly to patients, peers, and faculty.

Course Structure

The course is organized into four two-week learning blocks. Each block integrates assigned lectures, required readings, case-based discussion, clinical reasoning activities, and knowledge checks or assignments as directed by faculty.

Learning component	Primary role	Expected learner focus
Asynchronous lectures and readings	Build advanced foundation	Develop shared language, regional anatomy, screening principles, gait and movement analysis, hip-knee-foot/ankle examination logic, evidence-informed concepts, and a framework for specialist-level reasoning.
Live virtual discussions	Pressure-test reasoning	Think through cases, explain decisions, support clinical priorities, and revise hypotheses as new information emerges.
Case-based activities and knowledge checks	Reinforce application	Use course concepts to make clinical decisions rather than simply recall diagnoses, special tests, gait deviations, exercise categories, or technique names.
In-person weekend intensive	Convert reasoning into skill	Practice examination, gait and movement analysis, symptom modification, treatment selection, manual techniques, loading strategies, exercise progression, reassessment, and real-time clinical adaptation.

The weekend intensive is designed to help participants apply the reasoning process in a hands-on environment, where gait and movement findings, regional examination, symptom modification, manual techniques, loading strategies, exercise selection, task demands, patient response, and reassessment all inform the next clinical decision.

Expected Preparation

- Complete assigned lectures and readings before each live virtual discussion.
- Come prepared to discuss cases, support clinical decisions, and consider alternative hypotheses.
- Participate actively in breakout groups and discussion activities.
- Practice clinical reasoning rather than simply naming diagnoses or special tests.
- State uncertainty, commit to a working hypothesis, and revise that hypothesis when new information does not fit.

Virtual Discussion Expectations

Live virtual discussions are designed for application, not lecture review. Participants should expect to work through cases, think out loud, support clinical priorities, and refine their plan as the case evolves.

- Identify a working hypothesis and the history features that support it.
- Interpret symptom behavior, irritability, gait, movement quality, functional limitations, regional contributions, sport or work demands, and neurologic or medical screening considerations.
- Explain how imaging, diagnostic labels, surgical history, tissue healing, age or developmental considerations, or contextual information influences reasoning without allowing it to replace the clinical exam.
- Choose a first test, marker task, movement analysis priority, or symptom modification strategy and explain why it earns priority.
- Link test findings to a treatment decision and a clear reassessment marker.
- Identify what would trigger a progression, regression, modification, referral, or pivot in the plan of care.

The expectation is not perfect certainty.

Specialist-level reasoning does not mean having the perfect answer immediately. It means making a reasonable decision, explaining your rationale, listening to alternative viewpoints, and updating your thinking when the findings, gait or movement response, tissue capacity, task demands, or patient goals require it.

Attendance and Make-Up Policy

Participants are expected to attend all live virtual discussions and the in-person weekend intensive.

If a participant is unable to attend a virtual discussion, they must review the recorded session and complete the assigned make-up reflection or activity within one week of the missed session.

To maintain course credit, participants may not miss more than one virtual discussion per management course unless otherwise approved by faculty.

Assessment and Completion Requirements

Assessment is intended to reinforce advanced clinical reasoning and application. Participants may be evaluated through open-book knowledge checks, case-based reasoning activities, reflective assignments, virtual discussion participation, lab participation, and practical application.

- Knowledge checks: Each block may include a short open-book/notes knowledge check covering assigned lectures and readings. Unless otherwise directed, knowledge checks are due by 11:59 PM EST on Sunday of the block's second week.
- Course completion: Participants must complete assigned asynchronous materials, attend required sessions or approved make-up work, participate in the weekend intensive, and demonstrate professional engagement.

Professional Expectations

- Engage respectfully with faculty and peers.
- Come prepared for discussion and lab activities.
- Use evidence and clinical reasoning to support decisions.
- Participate actively in breakout groups and lab practice.
- Remain open to feedback and clinical uncertainty.
- Communicate professionally during all course activities.

Course Materials

All course materials will be posted in Talent. Participants are responsible for downloading and reviewing assigned materials before each learning block, virtual discussion, and lab session.

Clinical Reasoning Standard

How strong performance is demonstrated

Strong specialist-level performance is demonstrated by forming a defensible working hypothesis, choosing tests and movement tasks that matter, connecting findings to treatment decisions, reassessing honestly, and changing course when the patient's presentation, gait or movement response, tissue capacity, or task demands require it. The strongest clinicians can explain what they think, why they think it, what would change their mind, and how the next step serves the patient.

Course Takeaway

By the end of this course, participants should not simply know more about lower extremity conditions. They should be better able to reason through overlapping presentations, identify what matters most, choose interventions with intent, and adapt care based on meaningful reassessment. The goal is clearer rehab, better clinical decisions, and more confident specialist-level management of the lower extremity patients clinicians see every day.