

Combining Technologies: Driving Functional Neuroplasticity



Course Description:

Therapists and educators now have at their finger tips a wealth of technological advances that are providing both positive outcomes and valuable insights. One of these tools is the Interactive Metronome Program, which is rapidly becoming established in its contributions to assessing and treating time perception or an individual's 'internal clock' critical for speech and language, cognitive abilities like focus, memory, reading, and learning, and motor coordination. Alongside IM, additional tools have been adopted to develop auditory frequency reception and expression. Arguably, the most fundamental feature to which the auditory system is attuned is frequency. Several researchers have developed the idea that frequency is the auditory analogue of space in vision, in part because of the way in which sensory transduction occurs; whereas the retina and primary visual cortex are organized spatiotopically, the cochlea and primary auditory cortex are organized tonotopically. Frequency, along with time, are the two "indispensable attributes" of audition, whereas space and time are the two indispensable attributes of vision. (Kubovy and Van Valkenburg, 2001). In the presentation, providers will further analyze the components of each frequency reception with time perception, their neurological constructs and influence upon development, recovery and performance. Participants will be able to identify key components of each construct and apply such principles to overall treatment planning. We are now armed with more information about these new technologies and how they alone fit into the treatment picture, but do you ever wonder how best to combine these interventions. Following this presentation, you will be better equipped to formulate sound clinical rationales for the use of these technologies in combination to promote maximum brain potential. Come to this presentation with specific cases in mind and share in this cross-disciplinary multi-media discussion. *This course is not offered for contact hours/CEUs.*

Target Audience:

- Speech and Language Pathologist
- Speech and Language Pathology Assistant
- Audiologist
- Occupational Therapist
- Occupational Therapy Assistant
- Physical Therapist
- Physical Therapy Assistant
- Athletic Trainer
- Licensed Medical, Rehabilitation or Mental Health Professional
- Music Therapist
- Educator

Learning Outcomes:

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

- Discern between frequency and pitch perception systems;
- Identify tools within one's clinical practice to address timing and listening skills;
- Design treatment plans, taking into consideration the technology or technologies that are best suited to meet the client's specific needs as well as how to best sequence them;
- Grade treatment programs using sound clinical reasoning in order to address timing and pitch perception across the lifespan.

**Note: This course covers information that pertains to licensed therapists and therapy assistants. OTA and PTA professionals must practice IM under the supervision of a licensed OT or PT.*

Specific Learning Outcomes for Speech-Language Pathologists & Audiologists:

- Discern between frequency and pitch perception systems and how each influences auditory processing;
- Identify tools within one's clinical practice to address timing and perceptual aspects of auditory processing in order to improve functional communication skills;
- Design treatment plans, taking into consideration the technology or technologies that are best suited to meet the client's specific needs as well as how to best sequence them in the treatment of communication disorders;
- Grade treatment programs using sound clinical reasoning in order to address timing and pitch perception across the lifespan.

**Note: This course covers information that pertains to licensed therapists and therapy assistants. SLPA professionals must practice IM under the supervision of a licensed SLP.*

Instructor:

Mary Jones, OTR/L, LMT, CIMT graduated from St. Loe's School of Occupational Therapy (UK) in 1986. Has been an Occupational Therapist for 20 (+) years and has been practicing in the USA since 1993. Additional training has included a BS in Healthcare and Social Welfare from Manchester University in 1992, Massage Therapy License in 1996, NDT certification in 1994. Mary has worked in a variety of healthcare settings in both the USA and the UK. These include home health in the inner-city (London), orthopedics, geriatric psychiatry, outpatient rehab, brain injury specialty (adult and pediatric) and pediatric outpatient therapy. Clinical advanced training includes NDT advanced courses, infant massage certification, cranio-sacral therapy, myofascial release techniques, motor control and the development of motor learning, Therapeutic Listening Program, Integrated Listening Systems, Brain Gym, Pilates, Active Isolated Stretching Techniques, Visual-motor Training, Vestibular Training, Beckman Oral Motor Assessment and Intervention, Handwriting Without Tears, ADHD and Nutrition Interventions, Aromatherapy, Aquatic Therapy, Sensory Integration assessment and interventions, Autism assessment and interventions, Interactive Metronome Certification and Development of Best Practice Strategies with IM. Mary owns her own pediatric practice "Sensational Kids LLC", based out of Bradenton, FL. Mary has lectured extensively in her field at a local and national level.

Disclosures:

Instructor Financial Disclosure(s): Mary is an active member of Interactive Metronome's Clinical Advisory Board and is Interactive Metronome's Occupational Therapy Consultant for the American Occupational Therapy Association (AOTA), for which she receives an annual honorarium from Interactive Metronome, Inc. She is the author/co-author of numerous courses & publications that focus on the clinical application of Interactive Metronome technology, for which she has received honoraria from Interactive Metronome, Inc. Mary does not receive royalties or any other form of compensation for the continued publication and use of educational materials she has authored/coauthored. Mary is an instructor for Interactive Metronome. She receives a fee for teaching each course and reimbursement of travel expenses from Interactive Metronome, Inc. Mary does not sell or receive compensation for the sale of Interactive Metronome products.

Instructor Nonfinancial Disclosure(s): Mary periodically contributes blog posts to www.interactivemetronome.com that are clinical in nature, although she does not receive compensation for this. Mary also owns a private practice in Bradenton, FL where Interactive Metronome is used with a variety of clients ranging in age from infancy to the elderly.

Course Content Disclosure:

The Interactive Metronome, Inc. has developed and patented a licensed technology trademarked as the Interactive Metronome®. (U.S. Patents #4,919,030; #5,529,498; #5,743,744; #6,719,690; other U.S. and foreign patents pending) Interactive Metronome, Inc. is the sole source of the following products: Interactive Metronome®, Gait Mate® and IM Home®. Because there are no other like-kind products available, course offerings will only cover information that pertains to the effective and safe use of the above-named products.

Time-Ordered Agenda					
TIME	CONTENT	DESCRIPTION	INSTRUCTIONAL PERSONNEL	INSTRUCTIONAL METHODOLOGIES	LEARNING RESOURCES
	Speaker introduction & disclosure				
1 hour	Rationale and theoretical platform for use of technologies to enhance therapeutic outcomes <ul style="list-style-type: none"> • <i>The Role of Technology in Rehabilitation & Scientific Basis</i> • <i>Technology as a Treatment Tool & Traditional Rehab Approaches</i> • <i>How Time Influences Our Perception & Comprehension</i> • <i>Effect of Disordered Timing on Speech & Language</i> 	This portion of the course will outline the therapeutic principles of time perception and pitch perception and their dynamic interface within a learning environment. The instructor will cover how to select appropriate technologies to enhance therapy outcomes, including how certain technologies complement each other or may be sequenced and integrated within the context of habilitation or rehabilitation of auditory processing and communication skills.	Mary L. Jones Occupational Therapist.	Powerpoint Media with rationale; commentary; empirical data expose in verbal and written format	<ul style="list-style-type: none"> • Visual Media and Auditory instruction available to archive. • Lengthy reference list. • Q&A to interact with students.

1 hour	Practical ideas and case examples related to combining Auditory Processing Technologies <ul style="list-style-type: none"> • <i>Rhythm: Impact on Sensory Awareness & Somatosensory Constructs</i> • <i>Use of Technology to Treat Auditory Processing & Communication Disorders</i> • <i>Teaching an Internal Sense of Timing & Rhythm</i> 	This portion of the course will cover case examples of the clinical rationale and application of technologies in the treatment of auditory processing and communication disorders.	Mary L. Jones Occupational Therapist.	Powerpoint Media with rationale; commentary; empirical data expose in verbal and written format	<ul style="list-style-type: none"> • Visual Media and Auditory instruction available to archive. • Lengthy reference list. • Q&A to interact with students.
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Contact Hours/CEUs:

This course is not offered for contact hours/CEUs.