Orthotic & Prosthetic Technician Continuing Education Course

SFCC

orthotic
prosthetic
technology

OCTOBER 12 and 13, 2018

SPONSORED BY:

THE NORTHWEST CHAPTER AMERICAN ACADEMY OF ORTHOTISTS AND PROSTHETISTS

Community Colleges of Spokane

Spokane Falls Community College

O&P CONTINUING EDUCATION FOR TECHNICIANS

This program has been approved for **15 CE credits** by the American Board for Certification in Orthotics, Prosthetics & Pedorthics (ABC) and for **16.5 CE credits** by the Board of Certification (BOC), and for **12 MCE** by Orthotics Prosthetics Canada (OPC).

FRIDAY, OCTOBER 12	SPEAKER	COURSE TITLE
7:30 – 8:30 am	Geza Kogler	An Instrumented AFO: An In-Clinic Diagnostic Assessment Tool
8:30 – 9:30 am	Peter Springs	Custom Clubfoot Night Bracing
9:30 – 9:45 am	**BREAK**	Refreshments
9:45 – 10:45 am	Fred Lanier	Spectracarb Fabrication Demo
10:45 – 11:45 am	Justi Appel & Steve Hughes	Custom Fabrication Techniques for Static and Dynamic Joints
11:45 – 12:15 pm	**BREAK**	LUNCH
12:15 – 1:15 pm	Steve Hill	Future Tech! Emerging Technologies in O&P 2018
1:15 – 2:15 pm	Jackie Valdez	It's Not Exo it's NEXO…The New Skeleton from Fillauer
2:15 – 2:30 pm	**BREAK**	Refreshments
2:30 – 3:30 pm	Chad Eberhart	Symes Fabrication and Variations
3:30 – 4:30 pm	Curt Bertram	The Central Fabrication Experience
4:30 – 5:30 pm	KT Treadwell	Partial Finger Amputations: Population, Impact, Technology
5:30 – 7:00 pm	Reception	Attendees, Vendors, Staff
SATURDAY, OCTOBER 13		
7:30 – 8:30 am	Andy Marsland	LimbLogic/SuctionOutcomes
8:30 – 9:30 am	Pam Hale	Taking Polypropylene to a New Level of Performance
9:30 – 10:30 am	Steve Hill	Becker Orthopedic Modular Systems
10:30 – 10:45 am	**BREAK**	Refreshments
10:45 – 11:45 am	Dan Kiesecker	Dynamic Creativity: Alternative Approaches to the Dynamic AFO
11:45 – 12:45 pm	Mary-Kate Ennis	The Technician's Impact on Patient Outcomes
12:45 – 1:45 pm	Russ Bartlett & Brad Davis	Dynamic Strut AFO Set-up & Finishing
1:45 – 2:00 pm	Adjourn	Evaluation Forms/Thank You

FOR INFORMATION: Ruthie Dearing, Program Manager – ruthie.dearing@sfcc.spokane.edu OR (509) 533-3231

PRESENTATION DESCRIPTIONS

An Instrumented AFO: An In-Clinic Diagnostic Assessment Tool – Geza Kogler

This presentation will describe the modular Instrumented Ankle Foot Orthosis (iAFO) with imbedded sensors and an adjustable orthotic ankle joint stiffness mechanism developed by Dr. Kogler and his team. The diagnostic iAFO system is capable of collecting clinically relevant diagnostic performance measures (e.g., ankle ROM, orthotic interface pressures and orthosis ankle joint torque) to determine the optimal AFO stiffness for a user. The iAFO system collects user performance data in-the-clinic, wirelessly, with the use of a computer tablet interface allowing the practitioner to monitor a user's response and prescribe an orthotic stiffness parameter specific to an individual's needs.

Custom Clubfoot Night Bracing – Peter Springs

This talk and demonstration will show utilization of multiple AFO features and design, as well as ultraflex joints to provide corrective forces on club foot patients. The talk will include explanation of club foot bracing as well as theory involved in the treatment. Features of the AFO design will be linked to the diagnosis and the patient physical presentation. Fabrication demonstration and discussion will be addressed following the initial talk.

Benefits of a Unique Stockinette – Fred Lanier

This presentation will focus on a unique tubular stockinette developed specifically for the O&P industry by Comfort Products. The stockinette is created by augmentation of a combination of spectra and carbon fibers. Pound-for-pound, it is ten times stronger than steel, and more durable than polyester. This presentation will provide a hands-on demonstration utilizing this unique stockinette in fabricating prosthetics and orthotics.

Custom Fabrication Techniques for Static and Dynamic Joints – Justina Appel and Steve Hughes

The presentation shows the steps for modifying and fabricating static and dynamic systems used primarily for the reduction of soft tissue contractures. This step-by-step demonstration will highlight plaster cast modification and the use of an alignment tool utilized in the fabrication of these devices. It will also explore the aspects of metal bending as needed for not only the initial steps of fabrication, but also for the final fitting criteria. The course will describe all the associated components used in custom fabrication of the orthosis/prosthesis and the choice of materials used for a custom fabricated contracture device.

Future Tech! Emerging Technologies in O&P 2018 Steve Hill

In this annually updated presentation, the speaker will discuss many of the latest emerging technologies today. While focusing on the technologies specific to O&P, an overview of other new technologies will be presented. This presentation will encourage discussion of ways to employ these technologies to benefit of your patients and your practice. This year's topics will include smart materials, flexible glass, brain implants, gene therapy as well as updated information on 3D printing. Participants will gain a new appreciation about these emerging technologies.

It's Not Exo it's NEXO…The New Skeleton from Fillauer – Jackie Valdez

Few significant changes have been made to body-power upper extremity prostheses in many years. Many patients complain of weight, appearance, stiffness, and alignment of the devices provided. Sometimes it is because what they are looking for is not available and sometimes it is because we just don't fit that many devices. This course will introduce a new system and materials for fabricating upper extremity devices that will significantly simplify fabrication and fitting, enabling the patient to benefit from a light-weight, adjustable, modern prosthesis.

Symes Fabrications and Variations – Chad Eberhart

This presentation will discuss all phases of fabrication of a Symes prosthesis from different test-socket designs to the finished device. The presentation will cover: modifications to positive models, different designs to allow donning including BOA system window, and lamination lay-ups.

The Central Fabrication Experience – Curt Bertram

This presentation will show a 'day in the life of a technician' working for a medium size C-Fab in the Midwest. As central fabrication grows in the profession, you need to ask yourself these questions: Is this a place for me? Do I have the knowledge and skills to compete? Am I prepared to succeed in this environment? The speaker will take an in-depth look at the processes, techniques and technology of this fast- paced and rewarding environment.

Partial Finger Amputations: Population, Impact, Technology – KT Treadwell

Traumatic finger loss is one of the most prevalent amputations in the United States, and historically the least served by prosthetic technology. Many of these injuries occur in the workplace in manual labor jobs, and more than half of these amputees are unable to continue in their previous vocations. There are many technical challenges to replacing a finger that have prevented a functional solution for decades. Recent technological advances have made it possible for O&P professionals to provide a robust functional replacement to individuals facing finger loss.

LimbLogic/Suction Outcomes – Andy Marsland

This presentation will provide an overview of the key aspects of the WillowWood ER lamination process. The presentation will give an overview of successful definitive socket fabrication and the use of ER resin to produce airtight vacuum (LimbLogic®) or suction outcomes. Attendees will also learn how WillowWood fabricates the One System – TT socket using this technique.

A New Take on Polypropylene – Pam Hale

ProComp, is an advanced engineered prepreg composite that has been infused with 1" discontinuous carbon fibers. The material yields a 25% increase in stiffness, zero carbon protrusion, superior fiber flow, and excellent finishing. The product also boasts an ancillary Lcode for the addition to lower extremity orthosis, increasing reimbursement for practitioners. ProComp is available in a variety of thicknesses suitable for various orthotic and prosthetic applications. Although the material performs similarly to a traditional polypropylene, participants will understand the advancements of ProComp technology, clinical benefits of the material, and identify use cases for this advanced composite.

Becker Orthopedic Modular Systems – Steve Hill

This one-hour talk will cover, in depth, many different types of modular knee and ankle joints available from Becker Orthopedic. With an 85 year history of manufacturing the highest quality orthotic components, Becker Orthopedic is proud to introduce modular ankle and knee joints with the same functionality as the traditional, riveted line of components. The presentation will cover in detail changes to fabrication protocols for modular components with abbreviated demos, and manufacturer's guidelines for the FullStride stance control system, a mechanical, swing phase knee joint that offers unparalleled ease of assembly and use.

Dynamic Creativity: Alternative Approaches to the Dynamic AFO – Dan Kiesecker

This presentation will begin with an overview of the basic fabrication process for the Posterior-Dynamic-Element (PDE) style AFO and finish with a discussion on several alternative methods and designs to meet a variety of orthotic needs. A number of tips and tricks for rapid fabrication will be shared, along with subtle finishing techniques. Class participation in the discussion is encouraged!

The Technicians Impact on Patient Outcomes – Mary-Kate Ennis

This presentation will focus on how O&P designs translate into patient outcomes. Nearly 25 years ago, a consensus conference on the orthotic management of CP concluded, "The existing body of literature on the effects of orthotic intervention in cerebral palsy is, for the most part, seriously scientifically and experimentally flawed." The presentation will briefly review the impact of product output variation on outcome studies and patient results concentrating on how an O&P technician can influence positive patient outcomes through implementing 'best-in-class' product standardization and principles of lean manufacturing.

Dynamic Strut AFO Set-up & Finishing – Russ Bartlett & Brad Davis

This presentation discusses and describes how to set up a Dynamic Strut AFO. The speakers will demonstrate how to modify and mount the plates to the cast using a PowerPoint Presentation about the Dynamic Strut AFO and its function.

COURSE PRESENTERS

Justina Appel, PhD, CO, BOCP, FAAOP

Justi is employed with Allard USA as Director of Education & Clinical Support, where she assists with the development and the enhancement of Allard's continuing education programs and provides clinical support and expertise for Allard's client base of practitioners and technicians. With more than 30 years of experience in O&P, Appel is the former director of O&P for Shriners Hospital for Children in Shreveport, Louisiana specializing in pediatric O&P services including work on RGO (reciprocating gate orthosis) systems. Appel has also conducted seminars and workshops and authored/co-authored research and journal articles. She is the current president of the Louisiana Association of O&P.

Russell Bartlett, CPOA

Russ is the Manager at Coyote Design Central Fabrication. Russ started working for Coyote Design's sister company Rehab Systems in 1998 as a technician and assisted Coyote Design in product development. Russ became a full time Coyote Design employee in 2014.

Curt A. Bertram, CPO, FAAOP

Curt is a certified orthotist/prosthetist and a fellow of the American Academy of Orthotists and Prosthetist. He earned his undergraduate degree in Mechanical Engineering from Northern Arizona University and his post graduate certificates in orthotics and prosthetics from Northwestern University and the University of Hartford respectively. Curt is a past president of the American Board for Certification in Orthotics, Prosthetics and Pedorthics and sits on several committees for exam development and testing. He is currently employed with Midwest Orthotic Services out of South Bend, IN as their Chief Operating Officer and has been working in the O&P profession for over 28 years.

Bradley Davis CTP, CPA

Bradley is the Assistant Manager at Coyote Design Central Fabrication. He has fifteen years of experience as an Orthotics and Prosthetics technician. He is also a congenital amputee. Bradley joined the Coyote Design team in July 2014.

Chad Eberhart, CPOA, CTPO

Chad is a certified O and P assistant with dual certification as a technician in Prosthetics and Orthotics. Chad has been an O&P technician since 1999. He owns and operates Independent Tech Service, LLC (ITS) which is a Fabrication Center in Sumner, Washington that opened in 2002. Chad serves on the board of directors for the Western and Mid-Western Orthotics and Prosthetics Association.

Mary-Kate Ennis, MBA, CO

Mary-Kate is a licensed Orthotist and board eligible Prosthetist. She is the clinical and marketing leader for the Hanger Fabrication Network. Her responsibilities include product development/standardization, product portfolio management, and training/support. Mary-Kate is a certified six sigma green belt focusing on lean manufacturing in O&P and has lectured worldwide on advancing clinical outcomes through emerging technologies including functional electrical stimulation (FES). Prior to joining Hanger she had 12 years of clinical practice with a concentration in lower extremity pediatric management.

Steve Hill, BOCO, CO

Steve Hill was employed by a major central fab for 25 years where he received much of his training in orthotic fabrication. Starting out as a technician, he worked his way up to a managerial position and then became certified as an orthotist by BOC in 1996 and by ABC in 2001. For the past ten years, Steve has owned the orthotic consulting firm, Delphi Ortho, has written dozens of articles for every major O&P publication, and has been lecturing for over twenty years. Steve has served on the Item Writing Committee at BOC and currently serves as Vice President and a founding member of the OPTA (Orthotic Prosthetic Technological Association). He is also on the O&P News Advisory Board, O&P Almanac's Advisory Board, serves as a Facility Accreditation Surveyor and acts as a consultant to both manufacturers and patient care facilities alike.

Steve Hughes, BOCO, CFo, LO

Steve has 30 years' experience in the O&P industry where he has served as technical staff, product specialist, orthotist/fitter, and director of central fabrication. Steve is currently employed with Allard USA as a Consultant Product Specialist providing clinical support and expertise for practitioners and technicians on the fabrication of dynamic and static contracture management systems. Steve has also specialized in RGO's, stance control systems and carbon pre-preg materials. He has extensive experience in all areas of orthotic fabrication and has conducted lectures and workshops for over 20 years.

Daniel R. Kiesecker, CTPO

After graduating SFCC's O&P Technician Program in 2015, Dan was immediately hired as a full-time technician at Harborview Medical Center's Prosthetics & Orthotics Clinic. While at Harborview, Dan has developed several technical specialties including the Dynamic AFO. Dan's interest in O&P began with his own treatment at Shriners' Children's Hospital of Spokane, and is fueled by a lifelong passion for creative fabrication. In addition, Dan has a background in art education, rural youth outreach and cattle ranching.

Geza Kogler, PhD, CO

Dr. Kogler is the Director of the Master of Science in Prosthetic and Orthotics Program at Georgia Institute of Technology and Principal Investigator for the Clinical Biomechanics Laboratory. Geza received his baccalaureate degree in 1982 from Wayne State University, a post-graduate certificate in Orthotics from Northwestern University Prosthetics and Orthotics Center, in 1983, and his Ph.D. degree in bioengineering from the University of Strathclyde, Glasgow, Scotland, in 1998. His current research interests include: powered exoskeletal systems for rehabilitation, sensing applications for diagnostics and musculoskeletal health, foot ankle biomechanics, and plantar foot tissue mechanics. Geza has received grant funding from the National Institutes of Health, National Science Foundation, and the Department of Defense. He has received numerous awards for his research in foot ankle biomechanics from the American Society of Biomechanics, the International Society of Biomechanics and the International Society of Prosthetics and Orthotics.

Fred Lanier, Sales Manager

Fred has 18 years of experience in selling medical textiles to the O&P Community. His vast knowledge in medical textiles helps the practitioner in supplying the best possible interface to ensure the patient's comfort. Because of his hands-on experience with textiles used for orthotic and prosthetic manufacturing. Fred can assist in fabrication and help the technician in getting a positive outcome.

Andy Marsland LPO, BOCPO, CP

Andy began his prosthetic career in 1982 in Manchester, England. He subsequently graduated from Paddington College, London with an associate's bachelor degree in prosthetics and orthotics. In 1999, he moved to the USA and developed an interest in the education of O&P practitioners and associated Allied Health professionals. In 2007, he began an educational focus with WillowWood, where he is currently the Education and Support manager for the Sales and Marketing Department. Andy provides education and training around the world, in the use of O&P componentry, computer software and scanning techniques for shape capture, facility business strategy for reimbursements and is involved with educational development for clinical and technical students at O&P programs.

Pam Hale, CPO

Pam is the Clinical Educator at Cascade Orthopedic Supply. Pam has worked within the O&P industry for 25 years, practicing as a Clinician, business owner, and clinical educator. She has a wide breadth of knowledge in both orthotics and prosthetics and is interested in incorporating progressive technologies into clinical O&P care.

Peter Springs, L/CPO, Manager

Peter graduated from the University of Washington's O and P program in 2002. He did his residency in orthotics at the University of Michigan and his prosthetic residency at Boston Children's Hospital with NOPCO. Following his residencies, Peter worked at Shriners Hospitals for Children – Salt Lake City for seven years where he also learned how to fabricate and has been in Spokane for the same amount of time. For the last three years he has been managing the orthotics and prosthetics lab at Shriners Hospitals for Children – Spokane where he still spends some time fabricating!

KT Treadwell, VP Engineering

KT has a biomedical engineering degree from Texas A&M and a master's in mechanical engineering from the University of Washington with a focus on prosthetic engineering and biomechanics. Early in her career, KT worked on a grant from Otto Bock dedicated to amputation surgical education and developed outcome measures for lower limb prosthetic assessment including a clinical assessment of the Otto Bock C-Leg. She worked in the gait analysis lab at the Seattle VA working on prosthetic engineering after working for eight years at the FDA.

Jackie Valdez, CO, BOCP, FAAOP

Jackie has over 27 years of experience in the O&P Profession. She is certified by the ABC in Orthotics and by the BOC in Prosthetics. She is a Fellow of the Academy (FAAOP), a member of the Gait Society and an ABC Orthotic Examiner. Jackie attended Century College for O&P and trained at Gillette Children's Hospital in St. Paul, Minnesota. Jackie has a degree in Sport Medicine and is certified by the NATA as a Certified Athletic Trainer.