# Orthotic & Prosthetic Technician Continuing Education Course

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## OCTOBER 14 and 15, 2016

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Community Colleges of Spokane

Spokane Falls Community College

# O&P CONTINUING EDUCATION FOR TECHNICIANS

This program has been approved for **15.25 CE** credits by the American Board for Certification in Orthotics, Prosthetics & Pedorthics (ABC) and the Board of Certification (BOC), and for **12 MCE** by Orthotics Prosthetics Canada (OPC).

| FRIDAY, OCTOBER 14 | SPEAKER | COURSE TITLE |
|---|---|---|
| 7:30 – 8:30 am | Cathy Carter | Opportunities and Challenges for the O&P Profession |
| 8:30 – 9:30 am | Steve Hill | Fabrication of the "CROW" Boot |
| 8:30 – 9:30 am | Jack Richmond | Alignment & Socket Fabrication for Posterior Mount Feet |
| 9:15 –9:30 am | Break/Refreshments | |
| 9:30 – Noon | Craig Born | Carbon Infusion Technology for Orthotics and Lab Demo for ProComp |
| 9:45 – 11:45 am | Ronnie Graves | Laminating with E-R Epoxy Resin |
| Noon – 12:30 pm | BREAK | LUNCH |
| 12:30 – 1:30 pm | Greg Mattson | Creating a Formal Quality Process System |
| 12:30 – 1:30 pm | Alex Brett | Fabrication of a Custom 40 Durometer Urethane Partial Foot |
| 1:30 – 3:00 pm | Vince Decataldo | Falls, Fab, and Fit |
| 2:00 – 2:30 pm | Break/Refreshments | |
| 2:30 – 4:00 pm | Ronnie Graves | Removing Laminated Sockets & Finishing Transferred Lamination |
| 4:00 – 5:30 pm | Chad Eberhart and Techs | Forum —Tricks and Tips from the Techs |
| 5:30 – 7:00 pm | Reception | |
| **SATURDAY, OCTOBER 15** | | |
| 7:30 – 8:30 am | Brad O'Connell | Building a Better O&P Technician |
| 7:30 – 8:30 am | Clint Accinni | Advanced Elevated Vacuum Socket Design |
| 8:30 – 9:30 am | Katya Madden | Making a Leather AFO with Seamless Inner in One Day |
| 9:30 – 11:00 am | Matt Perkins | Creation and Use of Flexible Laminated Sockets |
| 10:30 – Noon | Break/Refreshments | |
| 11:00 – Noon | Warren Matthews | Standardization of Fabrication Techniques |
| Noon – 1:00 pm | George Garcia | Pulling Plastic Over a Foam Model |
| Noon – 2:00 pm | Steve Hill | Becker Orthopedic Modular Systems |
| 1:00 – 2:00 pm | Darrin Vincent | Maximizing the O&P Clinician and Technician Alliance |
| 2:00 pm | Adjourn | Evaluation Forms/Thank You – Clay Wright and Bernard Hewey |

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

# COURSE PRESENTATIONS – DESCRIPTIONS

### Clint Accinni • Advanced Elevated Vacuum Socket Design

This lecture covers advanced techniques for fabricating vacuum sockets in transfemoral applications. Single stage and duel stage socket systems will be demonstrated utilizing sub-atmospheric technology in flexible and adjustable sockets such as LIM and BOA applications. Training will include an introduction to the ZeroPuck and VaporPuck vacuum pumps.

### Craig Born • Carbon Infusion Technology for Orthotics

Polypropylene has been the material of choice in the fabrication of lower extremity orthoses since the late 1960s. Various thermoplastic and thermoset resin alternative materials have been explored with no displacement to the ubiquitous choice of polypropylene. Currently, a new proprietary material that utilizes discontinuous carbon fiber as a discrete layer within the body of a polypropylene sheet has entered the O&P market.

### Part 2 • Lab Demo for ProComp

ProComp is compatible with industrial grade vacuum thermoforming as practiced by many O&P labs in the United States. The carbon-infused polypropylene sheet offers an alternative that has an upgrade in strength, fabrication melt sag strength, and the same finishing protocols as homopolymer polypropylene. The material is also supported by a standard addition L code.

### Alexander Brett • Fabrication of a Custom 40 Durometer Urethane Partial Foot

This presentation will describe the process and walking through the steps necessary to fabricate a Custom 40 Durometer Urethane Partial Foot. The topics covered will include safety, design, material selection, and fabrication. Also included are tips and tricks on the art of mold making drawn from challenging fabrication experiences.

### Catherine Carter • Opportunities and Challenges for the O&P Profession

The orthotic and prosthetic profession touches thousands of lives each day, helping people attain new levels of freedom of movement. What are the opportunities and challenges that affect our ability to positively affect others? How will the profession react to these situations? Recent research has shown that the need for qualified technicians is essential to the O&P practice of the future—how will technicians be affected? This session will explore the challenges and opportunities facing today's technician and the O&P workplace.

### Vince Decataldo • Falls, Fab, and Fit

In this course, the fabrication and alignment of Transmetatarsal, Lisfranc, Chopart and Symes prostheses will be reviewed. The fabrication process will include incorporating tibial tubercle height and Dynamic Carbon Composite AFO (BlueRocker) with a toe filler, and will show the procedure for creating a biomechanical toe filler specifically designed for use with a BlueRocker. The various ways to optimize performance, comfort and longevity of the AFO through an 8-step customization process, incorporating simple biomechanical techniques such as wedging, posting and trimming is included. A review includes how to interpret a CPOs' adjustment notes and application to a composite orthosis.

### Chad Eberhart • Tricks and Tips from the Techs

This presentation is designed to provide innovative ideas, easy to add solutions, and humorous ways to resolve the seemingly unsolvable problem. Chad will MC the presentation and the techs who are joining him will offer comments and critiques. Members of the audience are encouraged to describe challenging, impossible problems to the panel for discussion and resolution.

### George Garcia • Pulling Plastic Over a Foam Model

One of the challenges with thermoforming over foam models is that there are a lot of different techniques being used. Since there is no one "approved" way to accomplish this goal and many methods may be used, this presentation will offer technicians the opportunity to gather information while sharing ideas and experiences.

### Ronnie Graves • Laminating with E-R Epoxy Resin

This 2-hour session will include laminating a rigid socket frame using E-R (Epoxy Resin) over a flexible inner socket. This will be followed by a demonstration of laminating a one-shot socket incorporating bench alignment. A demonstration of an alignment transfer is also provided.

### Part 2 • Removing Laminated Sockets and Finishing Transferred Lamination

In this session, the laminated sockets will be removed and some edges will be finished-out including the transferred lamination socket. Discussion of ways to determine the costs of lamination will be provided along with ideas and ways to save and lower expenses.

### Steve Hill • Fabrication of the "CROW" Boot

With the rising popularity in the use of the Charcot Restraint Orthotic Walking Boot, or CROW Boot, every orthotic technician will see one come across his or her bench from time to time. This lecture describes, in detail, an excellent method for making the thermoformed type and attendees will be shown step-by-step instructions for its fabrication. Upon completion, attendees will understand the indications for the CROW, the steps required for its fabrication, and the overall fitting considerations.

### Steve Hill • Becker Orthopedic Modular Systems

This two-hour talk will cover, in depth, the many different types of modular knee and ankle joints now available from Becker Orthopedic. With an 80 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. Naturally, fabrication protocols have changed for the modular components and these changes will be discussed in detail. The fabrication portion will include manufacturers guidelines for the FullStride stance control system, a mechanical, swing phase knee joint that offers unparalleled ease of assembly and use.

### Katya Madden • Making a Leather AFO with Seamless Inner in one day

A demonstration of the techniques required to make a basic leather ankle gauntlet with a seamless wet, stretched inner leather portion for patient comfort. Several plaster models, from various stages of the process, will be used to demonstrate the overall process. The main focus of the presentation is showing how to stretch the leather, set it up to dry in an oven, and make the brace, on average in less than three hours, with no overnight drying.

### Warren Matthews • Standardization of Fabrication Techniques

This presentation, will discuss some of the fabrication standards that have been implemented within the Glenrose Rehabilitation Hospital and the benefits provided for patients and team members. The importance of implementing and maintaining standards within the prosthetic and orthotic industry will also be covered. Attendees who have implemented standards in their facilities will be invited to share experiences at the end of the presentation.

### Greg Mattson • Creating a Formal Quality Process System

In this presentation, you will learn the steps necessary to create a functioning quality system that will continually review, evaluate and modify your manufacturing operations so that your abilities may be verified and improved on an ongoing basis.

### Brad O'Connell • Building a Better O&P Technician

An overview describing how a wandering career through varied occupations has lead and benefitted talents for an O&P technician. Work as a machinist and welder has imparted building skills for custom tooling and equipment. Experience as a mechanic taught skills to maintain all of the machines and how to modify them to better fit practice needs. On the flip side, the O&P industry has taught how to work with materials like carbon fiber, leather, and thermoplastic, and how to use these materials in hobbies and personal activities. Discussion time will allow attendees to share similar experiences helping new techs understand how to maximize individual talents and values to a prospective employer.

### Matt Perkins • Creation and Use of Flexible Laminated Sockets

This session will cover what led to the creation and use of more flexible laminated sockets, as well as the alternatives to carbon fiber that are used. This workshop will also have a more in-depth look at exactly how more flexible sockets are laminated, including vacuum and locking vacuum sockets and AFOs.

### Jack Richmond • Alignment and Socket Fabrication for Posterior Mount Feet

Recent developments in prosthetic foot designs have produced several new designs that require the pylon to be mounted on the posterior of the socket. While these designs add a new level of function and performance, they also add a new level of complexity to the fabrication and alignment process. This presentation will review standard transtibial alignment and discuss how higher performance feet and posterior mounts may affect the alignment process. The presentation will also demonstrate the alignment and fabrication process through video and hands-on demos with several partially finished and finished posterior-mount sockets and feet.

### Darrin Vincent • Maximizing the O&P Clinician and Technician Alliance

The O&P environment is rapidly changing. Increased operations expenses, eroding reimbursement margins and demand for clinical outcome measures have impacted the demand on clinicians to be more efficient with their time. This presentation will focus on the significance of the clinician technician alliance through highlighting the impact of redirecting, 'non-value add activities' from practitioners to an organized lab infrastructure. Additionally, we will quantify the cost of poor input, by reviewing good manufacturing practices providing a 'Blueprint for Success'.

# COURSE PRESENTERS

### Clint Accinni, CPO

Clint is the Co-Founder of 5280 Prosthetics and operates a specialty prosthetic practice in Littleton, Colorado. Clint is an Inventor of the SmartPuck® and is a U.S. Patent holder with four patents pending. He has 25 years of experience in the O&P field, with recent efforts in the development of smart socket technologies and 3D/computer-aided prosthetic design.

### Craig Born, Pacific Northwest Account Manager

Craig Born has worked within the orthotic and prosthetic industry for over 15 years. Prior to joining Cascade as the Pacific Northwest Account Manager, Craig managed the central fabrication for Becker Oregon. Over the years, Craig has observed the fabrication trends of a broad range of devices. Craig has made many valuable connections within the industry and currently manages a territory that includes Oregon, Washington, Montana, Idaho, Wyoming, Colorado, and Utah.

### Alexander Brett, RTPO

Alex is a registered prosthetic and orthotic technician from Myrdal Orthopedic Technologies Inc. (MOT Inc.) located in Winnipeg, Manitoba, Canada. His 12 years of experience have focused on cutting-edge materials and techniques and passions for fabricating with silicone and urethane, and specialty mold making. During his time with MOT Inc., Alex has helped develop and refine techniques that include Custom Silicone Liners, Distal End Pads, Urethane Partial Feet and Hands, Wrist and Ankle Orthoses, and more.

### Catherine A. Carter, Executive Director, ABC

Cathy Carter has served as the Executive Director of the American Board for Certification in Orthotics, Prosthetics and Pedorthics, Inc. since 2004. As such, she serves as the chief staff executive for ABC's activities on behalf of over 13,000 credentialed individuals and 4,000 accredited patient care and central fabrication facilities involved in providing orthotic and prosthetic care for persons who have experienced limb loss, or significant limb impairment as a result of a neuro-musculoskeletal disorders. Her responsibilities include strategic planning, leadership development, volunteer and staff management, and fiscal oversight.

### Vincent Decataldo, BOCPO, LPO

Vince has been actively involved in the O&P industry for 28 years. He is a practicing Orthotist-Prosthetist and the current manager/on-staff orthotist for Allard USA in Rockaway, New Jersey, and serves as a consulting orthotist for the NFL New York Giants football team. In prior professional experience, Vince was the consulting orthotist and prosthetist to numerous hospitals in northeastern New Jersey and consulting orthotist to St. Joseph Orthopedic Residency Program in Paterson, New Jersey. Vince received his certificate in O&P from the BOC in 2000 and the New Jersey PO license in 2003. He specializes in orthotic custom fabrication techniques and gait analysis of lower extremity composite orthosis.

### 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.

### George Garcia, CTO

George has worked in the O&P profession since 1981. He began his work at a small O&P practice in Tucson, Arizona and then moved to Phoenix in 1988 to work for Certified Orthopedic before bringing his skills and talents to the Hanger Clinic in Phoenix. In 2010, George began working for Arizona AFO in Mesa, Arizona and serves now as the Production Manager. In 2008 to 2011, George worked on the Technician Exam Team with the American Board for Certification.

### Ronnie Graves, CPO

Ronnie is licensed in the State of Florida and has worked for 37 years in the O&P field, and was the first technician in the O&P industry to chair an education committee for AAOP. For the past 18 years, Ronnie has worked as an animal orthotist and prosthetist on a wide variety of animals and has made front leg braces for many different horses. He is currently the President of the Florida Disaster Animal Response Team and managed all oiled wildlife transports for British Petroleum and the US Fish and Wildlife for Mississippi, Alabama, and Florida. Ronnie is the owner of Prosthetics Research Specialists in Bushnell, Florida and the founder of Veterinary Inclusive Prosthetics/Orthotics, an organization working to educate the animal industry about alternatives for animals with injured limbs.

### 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.

### Katya Madden, CTPO

After graduating in 2007 from the SFCC O&P Technology Programs, Katya has worked at Cornerstone P&O in Everett, Washington as the lead orthotic technician responsible for scheduling the production work for technicians. As an amputee, Katya spent countless hours at the prosthetist's office and began working part-time with her practitioner while still in high school. Before coming to Cornerstone, she worked at two O&P practices in Las Vegas, and over time has learned how to speed-up certain processes for different jobs in the daily work routine.

### Warren Matthews, RTPO

Warren has worked within the Orthotic and Prosthetic Industry for 30 years. Recognized in both orthotics and prosthetics, he has been very active in educational and national level events for more than a decade. Warren currently works for Orthotics Prosthetics Canada (OPC) where he serves as the Prosthetic Technical Representative and enjoys contributing his time to these professions.

### Greg Mattson, CTPO, CPA

Greg is President of Fabtech Systems LLC, an Industry leading Prosthetic Orthotic central fabricator, product manufacturing distributor and development company located in the Pacific Northwest. Greg has been actively involved in the P&O industry for the last 24 years since he graduated from Minnesota's Northwest Metro Technical College in 1992. For two years he served as treasurer of the AOPA Fabrication Sciences Society, and is an active member of OPTS, Vistage International, a CEO organization. Greg is a member of the O&P News Editorial Board and a member of the Everett CC (SBA) business accelerator program. Greg has published numerous technical articles and in 2015 he received the prestigious "O&P News 175 Innovators in Orthotics & Prosthetics" award. Since 2001, he has been participating in intensive Lean Manufacturing training working with Gemba Research, a Lean consulting company training both in the USA and Japan.

### Brad O'Connell, Production Manager

Brad has 11 years' experience in O&P manufacturing working for Cornerstone P&O in Everett, Washington. Starting as an O&P technician, he transitioned to department technical lead and three years ago accepted the position of production manager. Brad has developed a comprehensive knowledge base with standard O&P devices including many advanced systems, such as Click Medical BOA volume control devices, Monolithic and PDE dynamic bracing, EMS and HIFI socket technologies. With a machinist background, he is well versed in CAD systems, including Biosculptor, OWW, and Provel. He was part of the development team that created the prototype clinical trials of Fabtech System's PDE dynamic modular composite spring systems. Brad is active in providing technical and fabrication training presentations to the University of Washington clinical programs.

### Matt Perkins, CEO & President

Matt, a co-founder of Coyote Design, is also president and CEO of Coyote Design and its sister patient care company Rehab Systems. Formerly a Paralympic Alpine Ski Racer, and 5-time world triathlon champion, Matt has directed marketing and product development for Coyote Design. Since 2013, Matt has been overseeing both patient care offices and manufacturing operations. Coyote Design created a central fabrication service that began operating in the fall of 2015 in conjunction with new online educational offerings that will feature more in-depth hands-on options.

### Jack Richmond, CPOA, CFo

Jack is the Director of Sales for the Fillauer Companies headquartered in Chattanooga, Tennessee. In addition to his sales management duties, he also assists Fillauer with educational presentations, product development, and technical support. Jack is an ABC Certified Prosthetic/Orthotic Assistant and an experienced technician. He is the Amputee Coalition's Chairman of the Board and also chairs their Education Committee. Jack is a past President of the Orthotic and Prosthetic Activities Fund (OPAF) and the Barr Foundation for amputees, where he still serves as a grant advisor. While Jack has been an amputee since an accident in 1987, he has completed five 26-mile marathons and multiple cycling events since his amputation.

### Darrin Vincent, Market Fab Manager

Darrin has been an O&P technician for over three decades providing state-of-the-art devices for clinics throughout the Southern California area. For the last 18 years, he has led a clinical support team of technicians for SCOPe Orthotics and Prosthetics Inc, an innovative California company. Darrin is now part of the Hanger family and his team continues to lead the way with cutting-edge technology and fabrication services for Southern California and many other regions in the western US. In 2015, Darrin was one of ten technicians selected for the first Hanger Clinic National Technician's Advisory Council. Darrin's role within the Council is to serve as a voice for technicians throughout Hanger helping to impact and influence technical education programs within Hanger Clinics and to contribute to the development of future success.