Spring, 1988
Volume 42
Number 1

Education Special—Featuring ABC Accredited Programs

Orthotics and Prosthetics

Journal of the American Orthotic and Prosthetic Association

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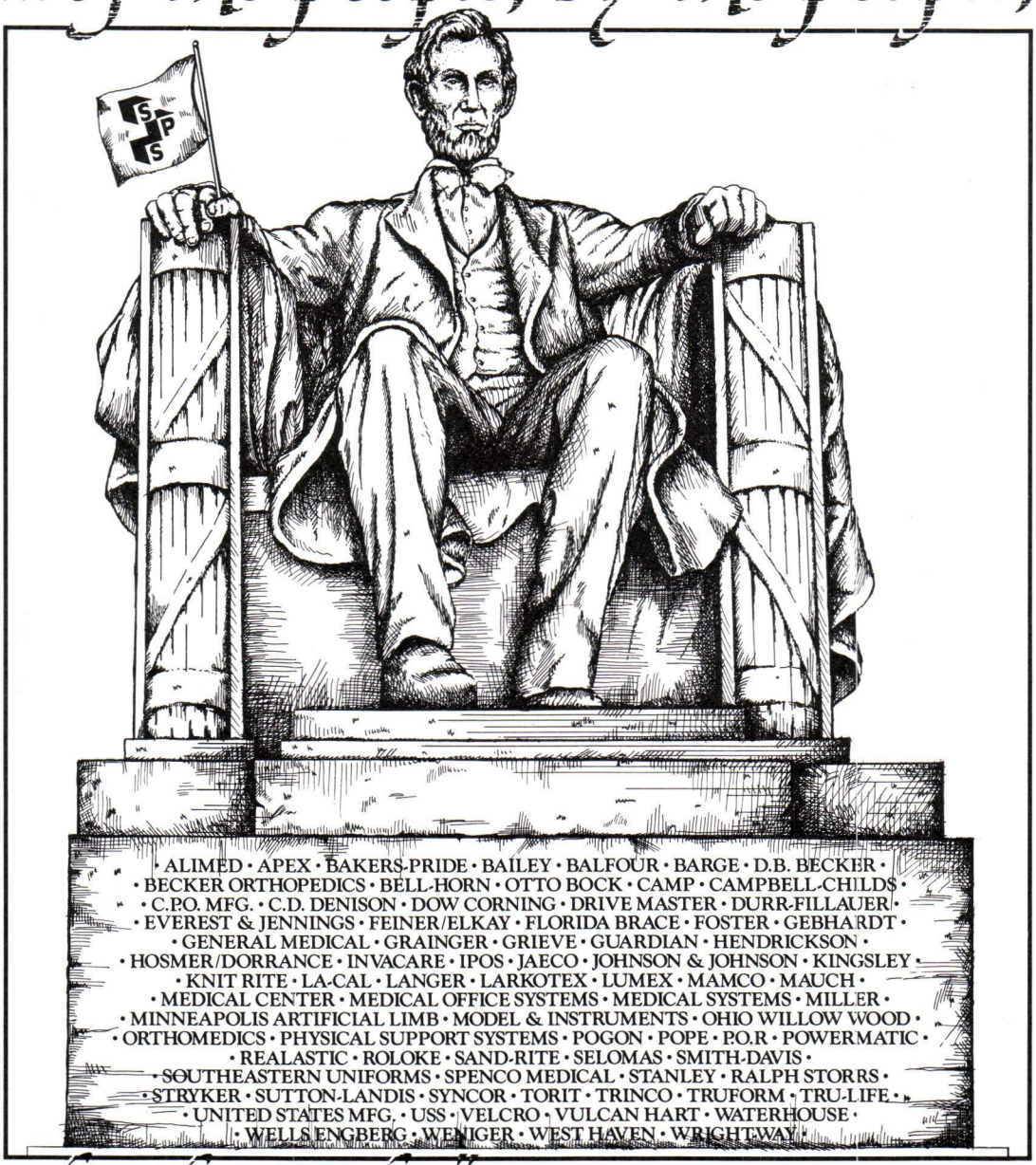

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Orthotics and Prosthetics

Volume 42, Number 1

CONTENTS

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Meetings and Events

Please notify the National Office immediately concerning all meeting dates. It is important to submit meeting notices as early as possible. In the case of Regional Meetings, you must check with the National Office prior to confirming dates to avoid conflicts in scheduling.

1988

May 1–2, ABC Board of Director's Meeting, Memphis, Tennessee. Contact: ABC National Office, (703) 836-7114.

May 2–3, AOPA Cost Accounting Seminar, Airport Marriott Hotel, Kansas City, Missouri. For more information, contact: Bill Fancher, (703) 836-7116.

May 4, 5, 6, AFI-ENDOLITE Prosthetic Certificate Course, "Endolite High Technology Prosthesis," Miami Lakes Inn & Country Club, Miami, Florida. Contact: Karen Hewitt, Registrar, AFI-ENDOLITE, 2480 West 82 Street, Hialeah, Florida 33016; (305) 823-8200.

May 4, 5, 6, "Anatomical Design Socket and Advanced Prosthetic Techniques," Certificate CEC Course. Flexible AK/BK & Narrow ML (CAT-CAM/NSNA equivalent). Contact: DAW Industries, 5360 A Eastgate Mall, San Diego, California 92121; 800-824-7192.

May 6–7, 6th Annual Prosthetics-Orthotics Course, Clarion Hotel, Sacramento, California. Sponsored by the Office of Continuing Medical Education, School of Medicine, University of California, Davis. For more information, contact: Office of Continuing Medical Education, UC Davis, School of Medicine, 2701 Stockton Blvd., Sacramento, California 95817; (916) 453-5390.

May 10–13, International Trade Fair and Congress for Orthopaedics and Rehabilitation Technology. Contact: NMA Nurnberg Messe- und, Ausstellungsgesellschaft mbH, Objektleitung, Messezentrum, D-8500, Nurnberg 50, West Germany.

May 13–14, Academy Continuing Education Conference 2-88 and New York State Chapter Combined Meeting, "Current Clinical and Technical Concepts in Lower Limb Prosthetics," Albany Marriott Hotel, Albany, New York. Contact: Academy National Headquarters, (703) 836-7118.

May 13–14, Charleston Bending Brace Seminar, Park Suite Hotel. Contact: Melissa Wetherell, P.O. Box 1070, Apopka, Florida 32704-1070; 1-800-327-0073.

May 13–15, AOPA Region IX, COPA, and the California Chapters of the Academy Combined Annual Meeting, Mission Hills Resort, Rancho Mirage, California. Contact: Lynn F. Crotto, (415) 621-4244.

May 16–20, "Fitting Procedures for Utah Artificial Arm and Hand System," 916 Vo-Tech, White Bear Lake, Minnesota. Contact: Harold Sears, Ph.D., 95 South Eliot, #105, Chapel Hill, North Carolina 27514; (919) 968-8492, or 1-800-621-3347.

May 18, "Graph-Lite Orthotics," Daw Industries Advanced Continuing Education Seminar, Certificate, CEC course. Contact: Daw Industries, 5360 A Eastgate Mall, San Diego, California 92121; 1-800-824-7192.

May 18, 19, 20, AFI ENDOLITE Prosthetic Certificate Course, "Endolite High Technology Prosthesis," Miami Lakes Inn & Country Club, Miami, Florida. Contact: Karen Hewitt, Registrar, AFI-ENDOLITE, 2480 West 82 Street, Hialeah, Florida 33016; (305) 823-8300.

May 19, 20, 21, "Anatomical Design Socket and Advanced Prosthetics Techniques," Certificate CEC course. Flexible AK/BK & Narrow ML (CAT-CAM/NSNA equivalent). Contact: DAW Industries, 5360 A Eastgate Mall, San Diego, California 92121; 800-824-7192.

May 20–21, Freeman Orthotic Fitters Training Workshop, Daytona Beach, Florida. For more information, write: Freeman, Drawer J, Sturgis, Michigan, or call Cameron Brown, 800-253-2091.

May 23–24, AOPA Cost Accounting Seminar, Logan Airport Hotel, Boston, Massachusetts. For more information, contact: Bill Fancher, (703) 836-7116.

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U.S. Constant Friction

Product Number: 128-008-

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Product Number: 128-007-

May 24–26, HIBCC '88: The Health Industry Electronic Communications Conference, Hyatt Regency Chicago, 151 East Wacker Drive, Chicago, Illinois 60611. Contact: Health Industry Business Communications Council, 70 West Hubbard, Suite 202, Chicago, Illinois 60610; (312) 644-2623.

June 1, 2, 3, AFI-ENDOLITE Prosthetic Certificate Course, "Endolite High Technology Prosthesis," Miami Lakes Inn & Country Club, Miami, Florida. Contact: Karen Hewitt, Registrar, AFI-ENDOLITE, 2480 West 82 Street, Hialeah, Florida 33016; (305) 823-8300.

June 8–11, AOPA Regions II and III Combined Annual Meeting, Trump Plaza Hotel and Casino on the Boardwalk, Atlantic City, New Jersey.

June 12–17, "Matchmaker" Trade Delegation to Belgium and the Netherlands. Sponsored by the Commerce Department and co-sponsored by the Small Business Administration. For more information, contact: Denis Csizmadia, Project Manager, US&FCS, Room 2118, Washington, D.C. 20230; (202) 377-8433/34.

June 14–18, AOPA Regions VII, VIII, X, and XI Combined Annual Meeting, Westin Hotel, Seattle, Washington. Contact: Steve Colwell, (206) 526-7944.

June 15, 16, 17, AFI-ENDOLITE Prosthetic Certificate Course, "Endolite High Technology Prosthesis," Miami Lakes Inn & Country Club, Miami, Florida. Contact: Karen Hewitt, Registrar, AFI-ENDOLITE, 2480 West 82 Street, Hialeah, Florida 33016; (305) 823-8300.

June 22–25, Convention of the Canadian Association of Prosthetists and Orthotists (CAPO), Queen Elizabeth Hotel, Montreal, Quebec, Canada. Contact: C.A.P.O. Convention '88, 5713 Cote des Neiges, Montreal, Quebec H3S 1Y7, Canada; (514) 731-3378.

June 23–27, AOPA Regions V and VI and the Academy Midwest Chapter Joint Education Seminar, Pheasant Run, St. Charles, Illinois. Contact: Kathi Ensweiler, CO, (219) 836-2251.

June 25–30, International Conference of the Association for the Advancement of Rehabilitation Technology, Palais des Congres, Montreal, Quebec, Canada. Contact: International Conference, 3631 Rue St. Denis, Montreal, Quebec H2X 3L6, Canada; (514) 849-9847.

July 13, 14, 15, AFI-ENDOLITE Prosthetic Certificate Course, "Endolite High Technology Prosthesis," Miami Lakes Inn & Country Club, Miami, Florida. Contact: Karen Hewitt, Registrar, AFI-ENDOLITE, 2480 West 82 Street, Hialeah, Florida 33016; (305) 823-8300.

July 15–16, Academy Continuing Education Conference 3-88, "Clinical Practice Management—Ethical and Legal Considerations," Vanderbilt Plaza Hotel, Nashville, Tennessee. Contact: Academy National Headquarters, (703) 836-7118.

July 16–17, ABC Board of Director's Meeting, Washington, D.C. Contact: ABC National Office, (703) 836-7114.

July 16, 17, 18, AFI-ENDOLITE Prosthetic Certificate Course, "Endolite High Technology Prosthesis," Miami Lakes Inn & Country Club, Miami, Florida. Contact: Karen Hewitt, Registrar, AFI-ENDOLITE, 2480 West 82 Street, Hialeah, Florida 33016; (305) 823-8300.

July 27–29, Hosmer Electric Systems Workshop, University of Washington, Seattle, Washington. Contact: Catherine Wooten, Hosmer Dorrance Corporation, 561 Division Street, Campbell, California 95008; (408) 379-5151 or (800) 538-7748.

July 27, 28, 29, AFI-ENDOLITE Prosthetic Certificate Course, "Endolite High Technology Prosthesis," Miami Lakes Inn & Country Club, Miami, Florida. Contact: Karen Hewitt, Registrar, AFI-ENDOLITE, 2480 West 82 Street, Hialeah, Florida 33016; (305) 823-8300.

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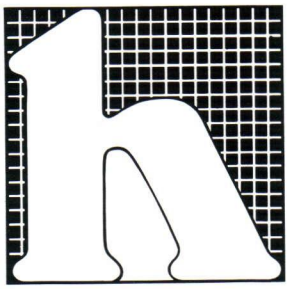

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August 8–21, ABC CPM Examination, University of Texas, Dallas, Texas. Contact: ABC National Office, (703) 836-7114.

August 10, 11, 12, AFI-ENDOLITE Prosthetic Certificate Course, "Endolite High Technology Prosthesis," Miami Lakes Inn & Country Club, Miami, Florida. Contact: Karen Hewitt, Registrar, AFI-ENDOLITE, 2480 West 82 Street, Hialeah, Florida 33016; (305) 823-8300.

August 13, 14, 15, AFI-ENDOLITE Prosthetic Certificate Course, "Endolite High Technology Prosthesis," Miami Lakes Inn & Country Club, Miami, Florida. Contact: Karen Hewitt, Registrar, AFI-ENDOLITE, 2480 West 82 Street, Hialeah, Florida 33016; (305) 823-8300.

August 15, ABC Technician Examination application deadline. Contact: ABC National Office, (703) 836-7114.

August 24, 25, 26, AFI-ENDOLITE Prosthetic Certificate Course, "Endolite High Technology Prosthesis," Miami Lakes Inn & Country Club, Miami, Florida. Contact: Karen Hewitt, Registrar, AFI-ENDOLITE, 2480 West 82 Street, Hialeah, Florida 33016; (305) 823-8300.

September 3, 4, 5, AFI-ENDOLITE Prosthetic Certificate Course, "Endolite High Technology Prosthesis," Miami Lakes Inn & Country Club, Miami, Florida. Contact: Karen Hewitt, Registrar, AFI-ENDOLITE, 2480 West 82 Street, Hialeah, Florida 33016; (305) 823-8300.

September 5–9, 16th World Congress of Rehabilitation International, Keio Plaza Inter-Continental Hotel, Shinjuku, Tokyo, Japan. Contact: Secretary General, 16th World Congress of Rehabilitation International, c/o the Japanese Society for Rehabilitation of the Disabled, 3-13-15, Higashi Ikebukuro, Toshima-Ku, Tokyo 170, Japan.

September 9–10, Annual Fall Meeting of the Ohio Orthotics and Prosthetics Association, Radisson Hotel, Columbus, Ohio. Contact: O.O.P.A. and Ohio A.A.O.P. State Office, 4355 N. High Street, #208, Columbus, Ohio 43214; (614) 267-1121.

September 14–16, Hosmer Dorrance Systems Workshop, Tulane University, New Orleans, Louisiana. Contact: Catherine Wooten, Hosmer Dorrance Corporation, 561 Division Street, Campbell, California 95008; (408) 379-5151 or (800) 538-7748.

September 14, 15, 16, AFI-ENDOLITE Prosthetic Certificate Course, "Endolite High Technology Prosthesis," Miami Lakes Inn & Country Club, Miami, Florida. Contact: Karen Hewitt, Registrar, AFI-ENDOLITE, 2480 West 82 Street, Hialeah, Florida 33016; (305) 823-8300.

September 15, ABC Written/Visual and CPM Examination application deadline. Contact: ABC National Office, (703) 836-7114.

September 15–16, ABC Technician Examination, Spokane Falls, Washington. Contact: ABC National Office, (703) 836-7114.

September 23–24, Academy Continuing Education Conference 4-88, "Spinal Orthotics and Seating," Holiday Inn at Kansas City Airport, Kansas City, Missouri. Contact: Academy National Headquarters, (703) 836-7118.

September 23–24, Academy Continuing Education Conference 5-88 and Northern California Chapter Combined Meeting, "Current Clinical and Technical Concepts in Lower Limb Prosthetics and Orthotics," San Francisco Airport Hilton, San Francisco International Airport. Contact: Academy National Headquarters, (703) 836-7118.

September 23–24, Freeman Orthotic Fitters Training Workshop, Seattle, Washington. For more information, write: Freeman, Drawer J, Sturgis, Michigan, or call Cameron Brown, 800-253-2091.

September 24, Academy Northern California Chapter Seminar, San Francisco, California. Contact: Robert A. Bangham, CO, c/o Hittenbergers, 1117 Market Street, San Francisco, California 94103.

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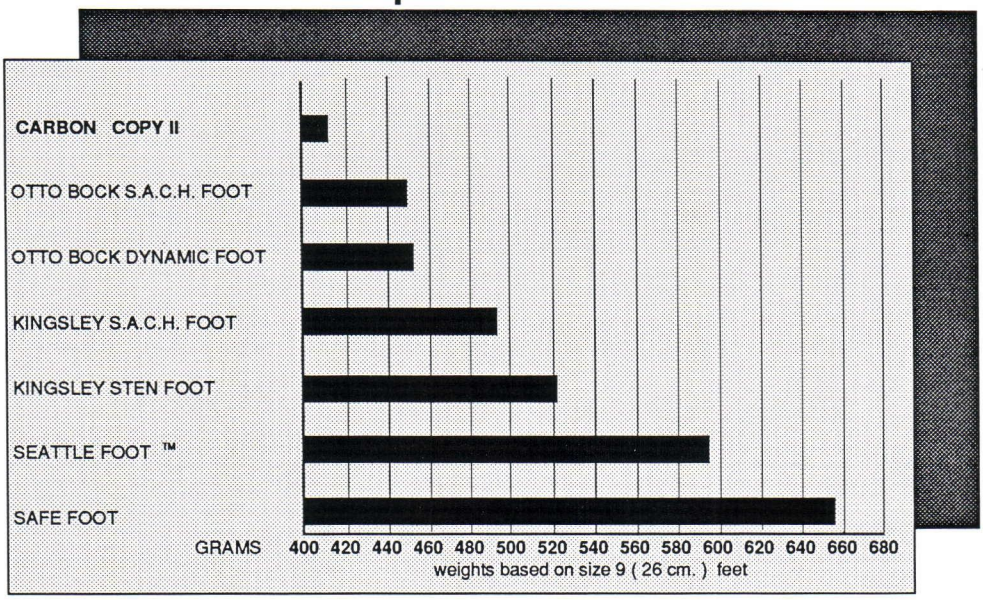

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September 24–25, Northwest Chapter of Academy Meeting, Red Lion Hotel, Janzen Beach, Portland, Oregon. Contact: Glenn Kays, CPO, (503) 287-0459.

September 28, 29, 30, AFI-ENDOLITE Prosthetic Certificate Course, "Endolite High Technology Prosthesis," Miami Lakes Inn & Country Club, Miami, Florida. Contact: Karen Hewitt, Registrar, AFI-ENDOLITE, 2480 West 82 Street, Hialeah, Florida 33016; (305) 823-8300.

October 7–8, Academy New York State Chapter Scientific Seminar, Long Island, New York. Contact: Marty Mandelbaum, CPO, 5225-21 Nesconset Highway, Port Jefferson Station, New York 11776; (516) 473-8668.

October 12, 13, 14, AFI-ENDOLITE Prosthetic Certificate Course, "Endolite High Technology Prosthesis," Miami Lakes Inn & Country Club, Miami, Florida. Contact: Karen Hewitt, Registrar, AFI-ENDOLITE, 2480 West 82 Street, Hialeah, Florida 33016; (305) 823-8300.

October 15–16, ABC Written/Visual Examination. Contact: ABC National Office for locations, (703) 836-7114.

October 15, 16, 17, AFI-ENDOLITE Prosthetic Certificate Course, "Endolite High Technology Prosthesis," Miami Lakes Inn & Country Club, Miami, Florida. Contact: Karen Hewitt, Registrar, AFI-ENDOLITE, 2480 West 82 Street, Hialeah, Florida 33016; (305) 823-8300.

October 19, 20, 21, AFI-ENDOLITE Prosthetic Certificate Course, "Endolite High Technology Prosthesis," Miami Lakes Inn & Country Club, Miami, Florida. Contact: Karen Hewitt, Registrar, AFI-ENDOLITE, 2480 West 82 Street, Hialeah, Florida 33016; (305) 823-8300.

October 22–24, Prescription Footwear Association's 1988 Symposium, Mayflower Hotel, Washington, D.C. The theme of the symposium will be "Pedorthic Management of Diabetic Foot Disorders." For exhibiting or registration information, contact Robert S. Schwartz, CP, Symposium Chairman, Prescription Footwear Association, 9861 Broken Land Parkway, Columbia, Maryland 21046; (301) 381-7278.

October 25–30, AOPA Annual National Assembly, Sheraton Washington Hotel, Washington, D.C. Contact: Katie Register, AOPA National Headquarters, (703) 836-7116.

October 27–28, ABC Board of Director's Meeting, Washington, D.C. Contact: ABC National Office, (703) 836-7116.

November 2–4, Fourth Annual Conference, "Computer Technology/Special Education/Rehabilitation." Contact: Dr. Harry J. Murphy, California State University, Northridge, 18111 Nordhoff Street, Northridge, California 91330; (818) 885-2578.

November 2, 3, 4, AFI-ENDOLITE Prosthetic Certificate Course, "Endolite High Technology Prosthesis," Miami Lakes Inn & Country Club, Miami, Florida. Contact: Karen Hewitt, Registrar, AFI-ENDOLITE, 2480 West 82 Street, Hialeah, Florida 33016; (305) 823-8300.

November 12, Midwest Chapter of the American Academy of Orthotists and Prosthetists Fall Scientific Seminar, Northwestern University, Chicago, Illinois. Contact: Arnel Hope Dobrin, Northwestern University's Prosthetic-Orthotic Center, 345 E. Superior Street, 17th Floor, Chicago, Illinois 60611; (312) 908-8006.

November 12, 13, 14, AFI-ENDOLITE Prosthetic Certificate Course, "Endolite High Technology Prosthesis," Miami Lakes Inn & Country Club, Miami, Florida. Contact: Karen Hewitt, Registrar, AFI-ENDOLITE, 2480 West 82 Street, Hialeah, Florida 33016; (305) 823-8300.

November 16, 17, 18, AFI-ENDOLITE Prosthetic Certificate Course, "Endolite High Technology Prosthesis," Miami Lakes Inn & Country Club, Miami, Florida. Contact: Karen Hewitt, Registrar, AFI-ENDOLITE, 2480 West 82 Street, Hialeah, Florida 33016; (305) 823-8300.

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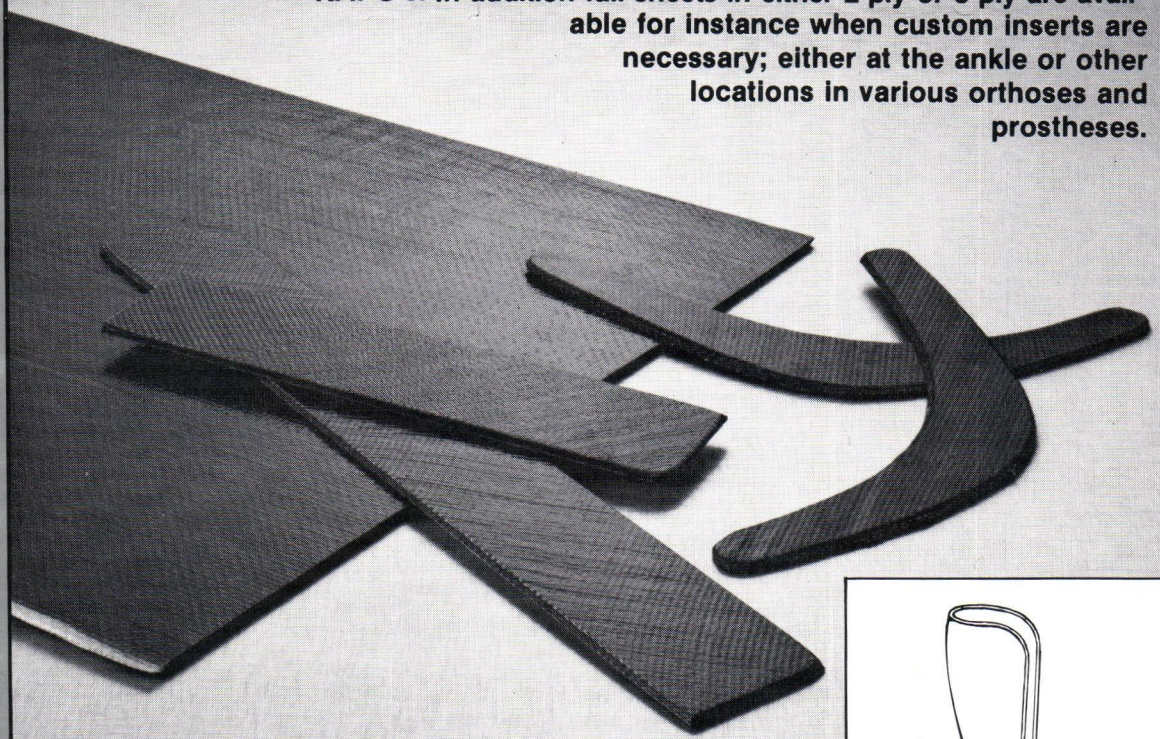

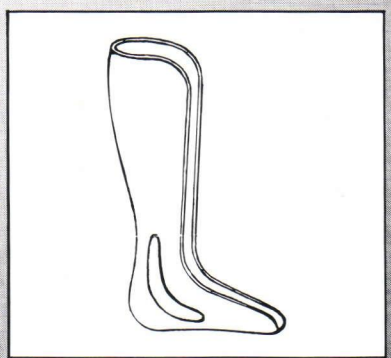

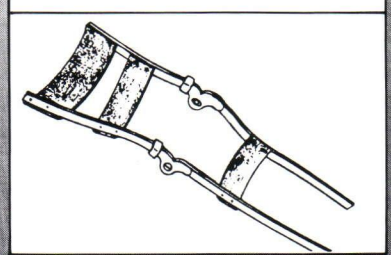

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November 21, Southern California Chapter of the Academy Fall Seminar, Marriott Hotel, Anaheim, California. Contact: Marmaduke Loke, 7910 Frost Street, San Diego, California 92123.

1989

January 31–February 5, Academy Annual Meeting and Scientific Symposium, Stouffer Orlando Resort, Orlando, Florida. Contact: Academy National Office, (703) 836-7118.

February 9–19, American Academy of Orthopaedic Surgeons Annual Meeting, Las Vegas, Nevada.

May 12–14, AOPA Region IX, COPA, and the California Chapters of the Academy Combined Annual Meeting.

May 18–20, AOPA Region V Annual Meeting, Hotel Sofitel, Toledo, Ohio.

May 18–20, The Second S.M. Dinsdale International Conference in Rehabilitation, "Visions and Controversies in Rehabilitation," hosted by the Royal Ottawa Regional Rehabilitation Centre, Ottawa, Ontario. Contact: Information Department, (613) 737-7350, ext. 602.

June 13–18, Regions VII, VIII, X, and XI Meeting, Embassy Suites Hotel, Downtown Denver, Colorado. Contact: Robert Schlesier, CPO, (303) 234-1756.

October 2–8, AOPA Annual National Assembly, Bally's Hotel, Reno, Nevada. Contact: AOPA National Headquarters, (703) 836-7116.

November 12–17, International Society for Prosthetics and Orthotics VI World Congress, Kobe Convention Center, Kobe, Japan. Contact: VI ISPO World Congress, Secretariat, c/o International Conference Organizers, Inc., 5A Calm Building, 4-7, Akasaka 8-chome, Minato-ku, Tokyo, 107 Japan.

1990

January 22–28, Academy Annual Meeting and Scientific Symposium, Hyatt Regency Hotel, Phoenix, Arizona. Contact: Academy National Office, (703) 836-7118.

February 8–13, American Academy of Orthopaedic Surgeons Annual Meeting, New Orleans, Louisiana.

May 11–13, AOPA Region IX, COPA, and the California Chapters of the Academy Combined Annual Meeting.

June 27–July 1, Region V and VI Combined Meeting, Amway Grand Plaza Hotel, Grand Rapids, Michigan. Contact: Bob Leimkuehler, CPO.

September 11–16, AOPA Annual National Assembly, Sheraton Boston Hotel, Boston, Massachusetts. Contact: Katie Register, AOPA National Headquarters, (703) 836-7116.

1991

March 21–24, Academy Annual Meeting and Scientific Symposium, Town and Country Hotel, San Diego, California. Contact: Academy National Office, (703) 836-7118.

October 21–26, AOPA Annual National Assembly, Disneyland Hotel, Anaheim, California. Contact: Katie Register, AOPA National Office, (703) 836-7116.

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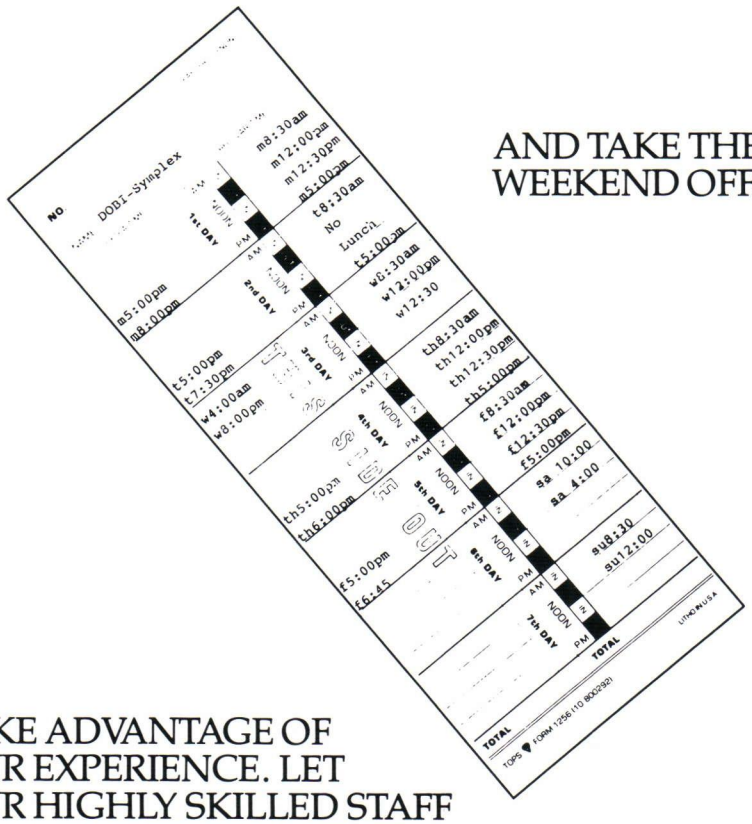

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Letter to the Editor

Dear Editor,

I have just had an opportunity to reread the Northwestern University Knee Orthotic System articles, Part I and Part II, published in *Orthotics and Prosthetics,* Volume 41, Number 4. The articles were brought to my attention along with previous articles published in your journal in 1984, Volumes 37 and 38. I feel the current articles contain material similar to the previous articles, for which credit has not been given. I have thoroughly reviewed both of the 1988 articles; the vast majority of the material contained in the 1988 articles is contained in the 1984 articles and, in fact, the writing is almost verbatim.

In addition, the graph on page 21 of the 1984 article is the same graph that appears on page 35 of the 1988 article. The date presented in 1984 was accurate for the brace that had been tested, but the data given in 1988 leaves the impression that the current brace is being discussed and does not reference, at all, the fact that the article refers to the older brace utilized in the 1984 study.

My name is on the article because I was one of the original clinical investigators using the Northwestern Knee Orthosis. I felt that the Northwestern Knee Orthosis was an excellent device and helped stabilize a knee that had been previously injured. I still use the knee orthosis; therefore, I felt there was merit in publishing an article about it.

At the time I was asked to review the current articles, prior to their submission to your journal, I was completely unaware of the content of the previous articles, and assumed, now wrongfully, the material was original. One of my faculty members was one of the authors of the 1984 articles, but I had not read them. Therefore, I was unaware that the 1984 articles had been incorporated without, in my opinion, appropriate references into the current articles.

I have contacted the senior author of the 1984 articles and discussed the recent articles with him. This had just been brought to his attention, and he was chagrined to see that the majority of the material that was published in 1984 reappeared in the 1988 articles.

Because the majority of the material in the 1988 articles is a rehash of the 1984 articles, I feel that this is inappropriate and I would ask that the 1988 articles be retracted.

I regret that my name is noted as the first author, but I hope that the journal will publish my comments and retract the 1988 article. I cannot speak for the other co-authors, but I am troubled, embarrassed, and sorry that we have put *Orthotics and Prosthetics* in this position.

Sincerely,
Michael F. Schafer, M.D.
Ryerson Professor and Chairman

Dear Dr. Schafer,

As Editor of *Orthotics and Prosthetics,* I would like to explain the position of the journal with respect to the articles you referred to in your letter. It was the position of the editorial board and myself, that the Northwestern University Knee Orthotics System articles published in the Winter, 1988 issue of the journal, while being a reiteration of the previous material published in 1984, also presented some new material and designs which differ from the earlier "prototype."

Because the articles referred to the identical research grant in 1988 as was in place in 1984, we accepted that the material would rely heavily on the previously researched material. If you are familiar with the world of grants, I'm sure that you're aware that in spite of new information being acquired, and new designs being developed, that much of the original work, which is relevant, is maintained and incorporated into the new "improved" proposal.

The knee joints, which are pictured in the more recent articles, further speak towards the changes this design has undergone. What appears in the more recent article is a more refined version, which has stood the test of time. While the 1988 version has maintained a general resemblance to its 1984 predecessor, it shows some well thought out changes. These points, combined with the acknowledgment to previous researchers, provided justification in publishing the updated version of the article.

Lawrence R. Lange, CPO
Editor

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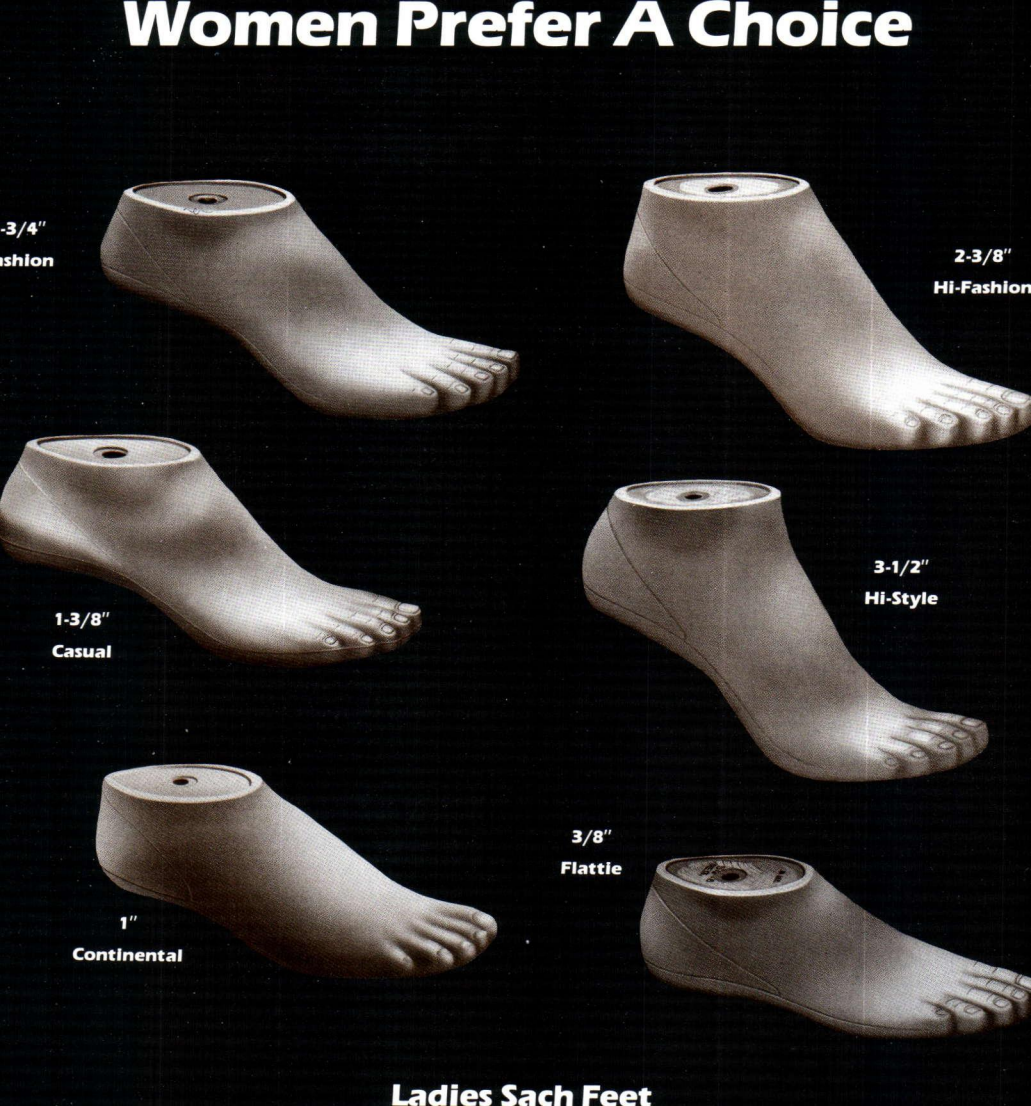
ADVERTISING INDEX AND HOTLINE

Advertisers are encouraged to submit the name of a contact person within their organization for inclusion in the Ad Index. *Orthotics and Prosthetics* is not liable for incorrect listings.

Women Prefer A Choice



Ladies Sach Feet

Orthotics and Prosthetics, Volume 42, Number 1, pp. 18–19.

The Orthotics and Prosthetics Profession

DEFINITIONS—ORTHOTIST AND PROSTHETIST

Orthotist is the term for the practitioner who provides care to patients with disabling conditions of the limb and spine by designing, fabricating and fitting the patient with an orthosis (brace or strengthening device). In providing the orthosis, the orthotist is responsible for formulating its design, including the selection of materials; making all necessary casts, measurements, model modifications, and layouts; performing fittings, including static and dynamic alignments; evaluating the orthosis on the patient; instructing the patient in its use; and maintaining patient records; all in conformity with the attending physician's prescription. At the request of, and in consultation with, the physician, the orthotist assists in the formulation of the prescription for the orthosis, and examines and evaluates the patient's orthotic needs.

The orthotist is expected to keep abreast of new developments concerning orthotic patient care. He is required to supervise the functions of support personnel and laboratory activities related to the development of the orthosis.

Prosthetist is the term for the practitioner who provides care to patients with partial or total absence of a limb by designing, fabricating, and fitting the patient with a prosthesis (artificial limb). In providing the prosthesis, the prosthetist is responsible for formulating its design, including selection of materials and components, making all necessary casts, measurements, and model modifications, including static and dynamic alignments; evaluating the prosthesis on the patient; instructing the patient in its use; and maintaining patient records; all in conformity with the attending physician's prescription. At the request of, and in consultation with, the physician, the prosthetist assists in the formulation of the prescription for the prosthesis, and examines and evaluates the patient's prosthetic needs.

The prosthetist is expected to keep abreast of new developments concerning prosthetic patient care. He is required to supervise the functions of support personnel and laboratory activities related to the development of the prosthesis.

THE REHABILITATION TEAM

The orthotist and prosthetist are members of the allied health care rehabilitation team. Together with the physician, surgeon, physical and occupational therapist, social worker and counselor, the orthotist and/or prosthetist determines the needs of the patient. In consultation with the physician, the orthotist/prosthetist designs, constructs, and fits the patient with an orthosis or prosthesis.

The responsibility of the trained orthotist and prosthetist begins with the evaluation of the patient. Once the medical prescription is prepared by the physician, the orthotist or prosthetist examines the patient and makes careful and accurate measurements of the patient's physical condition. Using that information, the orthotist/prosthetist designs a device that will meet that patient's individual needs and fabricates the device from various materials such as plastic, leather, wood, steel, and aluminum.

Once the patient has been fit with the prosthesis or orthosis, the prosthetist or orthotist provides the patient with basic instruction in its use and evaluates function, fit, and comfort. The physical therapist then takes over and works with the patient to help him/her adjust to the use of the device correctly. Depending on the extent of the disability, the device may need adjustment or replacement by the orthotist or prosthetist as the patient's age, physical condition, or life-style changes.

WHEN ORTHOTICS AND PROSTHETICS BEGAN

The years 1983–1992 have been proclaimed as the international "Decade of the Disabled," yet care for the disabled goes back to the 5th Egyptian Dynasty (2750–2625 B.C.), according to archeologists who unearthed the oldest known splint—a primitive brace. Likewise, the earliest known reference to an artificial limb was made about 500 B.C. by Herodotus, who wrote of a prisoner who escaped from the stocks by cutting off his foot—which he later replaced with a wooden substitute. History tells us that man has always had an urge to preserve himself in the best physical form possible. This urge has served as a constant stimulus to perfect and improve orthotic and prosthetic devices, and today technology and research have given us access to much more sophisticated orthoses and prostheses.

THE DEMAND FOR TRAINED PRACTITIONERS

Approximately 2,600 certified prosthetists and orthotists are on the rolls of the American Board for Certification in Orthotics and Prosthetics, but this is not enough to meet the needs of the disabled population. As the average age of the population increases, the demand for certified practitioners is expected to increase even more. As a result, the employment opportunities for prosthetists and orthotists in the United States and overseas are many.

Orthotists and prosthetists work in privately owned facilities, laboratories, hospitals, and government agencies such as the Veterans Administration. Depending on the size and scope of the facility, the orthotist's and prosthetist's duties will vary. In small organizations, the orthotist or prosthetist may measure the patient and design, fabricate, and fit the device. In larger facilities, the orthotist or prosthetist will employ one or more trainees or technicians to do the actual fabrication, while they remain responsible for measuring, designing, fitting, and adjusting the device.

TECHNOLOGY IN ORTHOTICS AND PROSTHETICS

Orthotic and prosthetic research includes the development of better materials, designs, and methods of fitting to meet the needs of individual patients. Essentially, the prosthetist or orthotist conducts research for each patient, because no two patients have the exact same needs.

Although constructing a brace for a polio patient is as equally important as constructing an artificial leg for an amputee, the technology involved in making artificial limbs is often more complex. As a result, a larger percentage of federal and private grants has been approved for prosthetic research than for orthotic research in recent years. Keep in mind, however, that this trend can change as all research is approved based on its relevance to the needs of the disabled population.

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Orthotics/Prosthetics Education—A Guide to this Issue

More formal education programs in orthotics and prosthetics exist in the United States now than at any time in history. Many new programs are being initiated, and established programs continue to change their curricula and priorities to meet the needs of today's society. Prospective students are often confused about which programs offer what. We hope that this issue of *Orthotics and Prosthetics* will help make decisions easier for the prospective O&P student.

The success of prosthetic and orthotic educational programs depends on how well they provide students with the insight and understanding required of practitioners and technicians today. The successful program should enable the student to meet the responsibilities of the profession. These responsibilities are reflected in the high standards of patient care required by the American Board for Certification in Orthotics and Prosthetics. Although the programs continue to progress, they have not lost sight of the basic responsibilities of the professional practitioner and technician:

- To provide prosthetic-orthotic service to the disabled population, including the application of necessary intellectual and manual skills (design, measure, cast, fit, and align) required to supply care of the highest quality.
- To serve as an equal member of the prosthetic-orthotic facility or clinic, provide consultative advice, participate in discussions, and share in decisions regarding prescription, evaluation, and formulation of the prosthetic-orthotic treatment program.
- To contribute to the progress and growth of the profession through research and development activities, contributing knowledge to the profession, exercising leadership, and recruiting and training new entrants into the field.

In order to meet these responsibilities, students should be trained in the following six areas of skill and knowledge: a) physical sciences and mathematics, b) biological sciences, c) psychological sciences, d) mechanical skills and crafts, e) communication skills, and f) personal and cultural qualifications. Each of these areas comprises a major portion of the formal education of the student of prosthetics and orthotics.

PRACTITIONER EDUCATION

Practitioner programs prepare the student for patient management responsibilities and for the American Board for Certification (ABC) Practitioner Certification Examination.

Practitioner programs usually result in a baccalaureate degree or have that degree as a prerequisite. More stress is placed on patient management, science, and communications than in technician courses, although technical skills are also taught in practitioner courses. Practitioner education programs must be approved by the Educational Accreditation Commission of the Orthotic and Prosthetic National Office.

The prospective student should also be aware that the formal and entrance requirements for the practitioner programs

vary widely from school to school. Some schools require the student to learn both orthotics and prosthetics, while other schools offer the option of learning either orthotics or prosthetics. One school may require a baccalaureate degree as a prerequisite, while another admits students at the junior level and awards a baccalaureate degree after two years of specialized education. Degree awarding programs teach orthotics and prosthetics as major courses taken with other electives. Certificate courses generally concentrate only on orthotics and prosthetics education.

PRACTITIONER CERTIFICATION

The American Board for Certification in Orthotics and Prosthetics, Incorporated (ABC) was established in 1948 to set standards in the field of orthotics and prosthetics. In order to qualify as a certified orthotist (C.O.), certified prosthetist (C.P.), or certified prosthetist-orthotist (C.P.O.) a student must successfully complete the ABC Practitioner Certification Examination in one or both disciplines.

ABC is a recognized class "A" member of the National Commission for Health Certifying Agencies (NCHCA). This membership testifies that ABC's credentialing effort is valid, that the testing procedures are fair and equitable, and that ABC offers various routes to achieve certification.

There are two basic routes an individual can follow to become eligible to sit for the American Board for Certification in Orthotics and Prosthetics (ABC) certification examination. They are as follows:

A. The candidate must (1) possess a Bachelor of Science degree in orthotics and prosthetics from a program accredited by the EAC, and (2) have acquired a minimum of one year of acceptable experience after completion of the degree. This experience must be obtained under an ABC certified practitioner in the discipline (i.e. orthotics or prosthetics) for which the candidate is applying, or

B. The candidate must (1) possess a bachelors degree in *any* field, (2) have successfully completed an EAC accredited certificate educational program in orthotics and/or prosthetics (these programs can be found under the list of colleges and universities) and (3) have acquired a minimum of one year acceptable experience after successful completion of the certificate program. As stated previously, this experience must be obtained under an ABC certified practitioner in the discipline for which the candidate is applying.

The above stated requirements can often be hard to understand. A flow chart on the following pages may help to better explain the methods of certification.

Individuals who do not meet the requirements explained above may be eligible to apply for the Practitioner Certification Program under the Unique Combination of Qualifications Clause. To apply under this clause, the applicant must possess qualifications which demonstrate a unique combination of education, clinical experience, and professional training. The education and experience must be at least equivalent to the qualifications defined in A and B above. Additional information about this clause may be obtained from the address below.

If you are interested in pursuing the profession of orthotics and/or prosthetics, don't hesitate to contact the credentialing coordinator at the ABC National Headquarters:

717 Pendleton Street
Alexandria, VA 22314
(703) 836-7114

TECHNICIAN TRAINING PROGRAMS

These programs prepare the student to assume important technical responsibilities in the fabrication of prostheses and orthoses. While the technician is not responsible for patient management, his duties require much knowledge and skill. Technicians may be registered by the American

Board for Certification if they pass a technician's examination.

The registered technician provides essential support to the orthotist and/or prosthetist in various ways. The orthotics technician supports the orthotist in providing care to patients with disabling conditions of the limbs and spine by fabricating orthoses and their components. The prosthetics technician similarly supports the prosthetist in providing care to patients with partial or total absence of a limb by fabricating prosthetic devices and/or components.

The orthotics technician, as a result of his skills, fabricates orthoses in such a manner as to provide maximum fit, function, cosmesis, and workmanship. He also performs repairs to, and maintenance of, orthoses as assigned.

The prosthetics technician may make positive molds, and, as a result of his skills, fabricates prostheses in such a manner to provide maximum fit, function, cosmesis, and workmanship. As does the orthotics technician, the prosthetics technician also performs the repairs to, and maintenance of, prostheses as assigned.

The registered technician can be considered the backbone of the orthotics/prosthetics profession. Many individuals are given full recognition of their skills by achieving *registered technician* status. The prerequisites for taking the Registered Technician exam are as follows:

A. Applicants for technician registration must possess at least a high school education from an accredited education institution in the United States, or must possess the General Education Development Test equivalent.

B. Applicants must possess a minimum of two years of acceptable experience in the fabrication of orthoses, prostheses, and/or their components. Such experience must be obtained under the direction of an ABC certified practitioner in the applicant's field of specialty (prosthetics or orthotics).

C. Applicants who have successfully completed a formal orthotic/prosthetic technician education program accredited by the EAC are exempt from the experience requirement.

Applicants who qualify for technician registration by virtue of their education and/or work experience may be admitted to an examination designed to test their knowledge and application of tools, materials, and fabricating techniques for orthoses and/or prostheses.

INTERNSHIP PROGRAMS

An internship program provides formal, structured experience in prosthetics and orthotics after the individual has completed an accredited practitioner level education program. An internship program is designed to fulfill the experience requirement for the ABC Practitioner Examination. Although attendance in an internship program is not currently required in order to take the examination, it is anticipated that such a requirement will be in place by September, 1993. Contact the ABC National Office for information on the internship program.

RESIDENCY PROGRAMS

One form of internship is through a residency program. This issue of *Orthotics and Prosthetics* lists several residency programs in progress at the time of printing. These programs are limited to one to three residents per residency period. However, internships are not limited to residency programs; they may also be completed at orthotics-prosthetics facilities.

EDUCATIONAL ACCREDITATION COMMISSION

In 1972, ABC developed the Educational Accreditation Commission (EAC). It was determined that the Commission's membership would consist of three certified practitioners nominated by ABC, three representatives of the educational community nominated by the University Council on Orthotic-Prosthetic Education (UCOPE), and one member who would be an orthopedic surgeon jointly selected by ABC and

UCOPE. In 1988, the EAC moved out from under the wing of ABC and established itself as an independent body. The structure changed also. ABC now appoints one representative, the American Academy of Orthotists and Prosthetists appoints one representative, and the American Orthotic and Prosthetic Association appoints one representative. UCOPE continues to appoint three representatives. The orthopedic surgeon is appointed by the Board of Directors of the Orthotic and Prosthetic National Office.

The functions of the EAC are as follows: (1) to develop guidelines for educational programs in orthotics and prosthetics at various levels of professional endeavor and, as a corollary, to assist interested educational institutions in developing appropriate orthotic and prosthetic educational programs; and (2) to accredit educational programs in orthotics and prosthetics according to established and approved guidelines.

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President's Message

by Paul Murka, CPO
President, 1988–1989
American Board for Certification in Orthotics and Prosthetics, Inc.

The purpose of the American Board for Certification in Orthotics and Prosthetics, Inc. (ABC) is to raise standards of patient care in the field of orthotics and prosthetics. Specifically, the Board is dedicated to insuring that those practitioners who treat the orthopedically handicapped have met accepted standards for orthotic and prosthetic patient care.

ABC was established in August, 1948 by the American Orthotic and Prosthetic Association in cooperation with the American Academy of Orthopedic Surgeons. These organizations recognized the need to institute a credentialing program designed to identify those practitioners, as well as facilities, qualified to render essential public health services in orthotics and prosthetics. Since its inception, ABC has been dedicated to advancing the levels of competency and ethics in the practice of these disciplines. The founding of ABC represented a voluntary joining together of persons dedicated to upgrading the profession of orthotics and prosthetics.

As an indication of the close relationship the organization has with the medical community, three of the ten members of the Board are orthopedic surgeons. Six other directors, three each, are named by the American Orthotic and Prosthetic Association and the American Academy of Orthotists and Prosthetists. A tenth member of the Board is a consumer advocate.

The Board requires adherence to strict standards prior to conferring certification on a practitioner. There are academic and scientific/technical educational standards to be met, and experience under the supervision of an ABC certified practitioner is also required. The examination consists of a written portion, followed by a comprehensive practical examination, which is conducted in surroundings resembling, as nearly as possible, a clinical setting. The prosthetic practical examination covers above-knee, below-knee, and upper extremity prostheses. The orthotic practical examination includes upper extremity, lower extremity, and spinal orthoses. ABC strives to insure that every individual certified can furnish all types of custom orthoses and prostheses fabricated in accordance with the prescription of a physician.

ABC is a full category A member of the National Commission for Health Certifying Agencies (NCHCA). This organization is itself a certifying body, created to raise and apply meaningful standards for individual certifying organizations in the health care field. Although NCHCA is a voluntary non-governmental commission, the Federal government recognized the need for such a standard setting body, and played a lead role in bringing the Commission into being. NCHCA advocates certification of health professionals based on competence. Its premise is that recognition

of competence serves the public and professional interests and can be done effectively by voluntary means.

In order for a credentialing body to attain membership in the Commission, it must meet a lengthy and comprehensive set of criteria that covers such areas as examination validity and reliability, safeguards to protect the public interest, and the establishment of qualifications for certification that are appropriate to the certified occupation. We take pride in the fact that ABC has met these strict standards.

ABC has been recognized by many federal and state agencies, such as the Veterans Administration, for its establishment of standards for practitioners and facilities in the orthotic/prosthetic field. An increasing number of government and third party agencies use ABC certification and accreditation as the criterion for insuring that patients receive essential orthotic and prosthetic services.

We are proud of our profession and would encourage young people who are interested in helping disabled persons to join with us in this endeavor. Students and others interested in our profession are encouraged to write to the National Headquarters of ABC, 717 Pendleton Street, Alexandria, Virginia 22314, to obtain information on such programs.

WHAT ACCREDITATION MEANS

The following is an explanation of the terminology being used in this issue for the category of ABC Accreditation. These terms are used: **to be applied for; provisionally accredited and fully accredited.**

To be applied for indicates that an institution is in the initial stages of structuring its program and intends to make formal application for accreditation to the Educational Accreditation Commission (EAC).

A **provisionally accredited** institution is one which has been evaluated by the Educational Accreditation Commission (EAC) for its paper presentation. This means that the EAC has determined that the educational institution, on paper, has met the requirements as stipulated by the *Essentials of Acceptable Educational Programs for Orthotics and Prosthetics.** At this stage of application, three on-site appraisers (one orthotic/prosthetic educator, one orthopedic surgeon, and one certified practitioner) are assigned to evaluate the educational institution's program.

An institution is **fully accredited** once it has successfully submitted its paper presentation, completed the three required on-site evaluations, and the EAC determines that the institution has met all requirements as stipulated by the *Essentials of Acceptable Educational Programs for Orthotics and Prosthetics.*

*There are currently three different Essentials: Essentials for Certificate Programs for Orthotists and Prosthetists; Essentials for the Education of Orthotists and Prosthetists at the Baccalaureate Level; and Essentials of Acceptable Technician Programs for Orthotists and Prosthetists.

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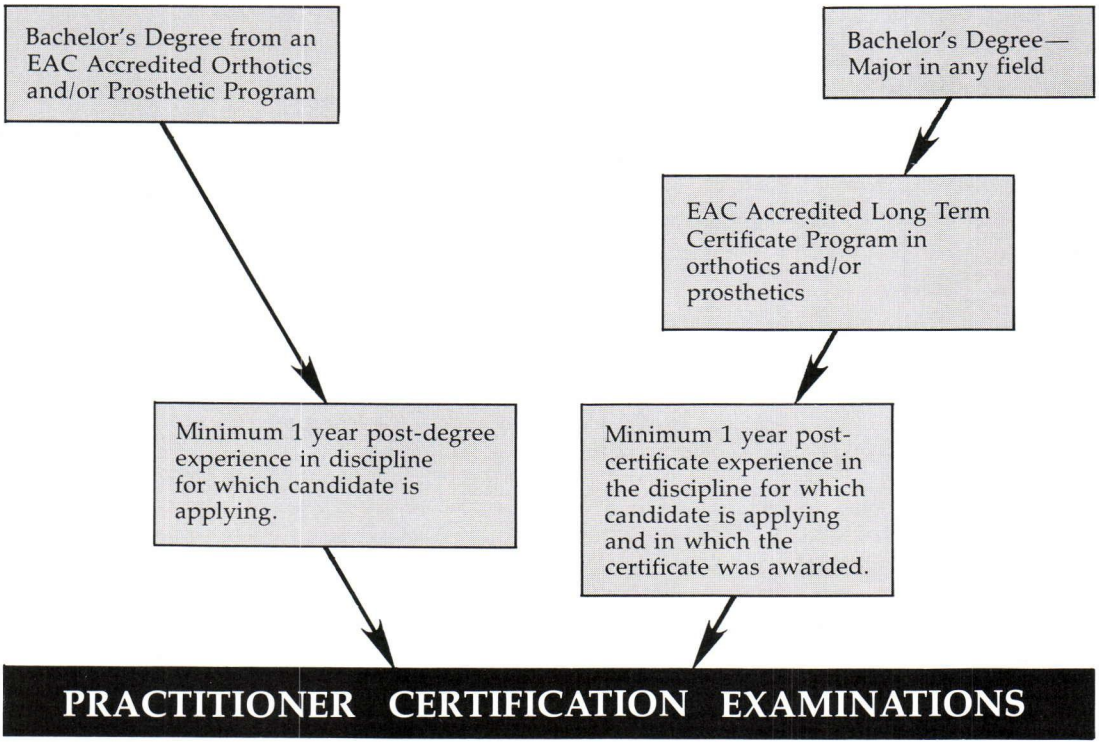
American Board for Certification in Orthotics and Prosthetics, Inc.

Practitioner Certification Examination Eligibility Chart

Applicants must be of good moral character and reputation.

Applicants must have obtained all required education from an institution of higher learning which is recognized by the American Council on Education. In addition, all required education in the discipline of application must have been acquired from an institution of higher learning which is accredited by the Educational Accreditation Commission of Orthotics and Prosthetics.

Applicants must have obtained all required experience in their discipline of application under the full-time, direct supervision of an ABC Certified Practitioner of that discipline. Required experience must have been devoted to patient care services. All required experience must be attested to by at least two ABC Certified Practitioners in the discipline of application, one of whom must be the full-time, direct supervisor of the applicant.



Baccalaureate Programs

- California State University—Dominguez Hills
- Florida International University
- New York University
- University of Texas Health Science Center at Dallas

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California State University—Dominguez Hills

Orthotics/Prosthetics Department
Health Sciences Department
1000 E. Victoria
Carson, California 90747
(213) 516-3444

Program:	Orthotics and Prosthetics
Degree or Certificate Awarded:	Bachelor of Health Science
ABC Accreditation:	Yes
Level of Training:	Practitioner
Prerequisites/Entrance Requirements:	Contact School
Medical School Affiliation:	Rancho Los Amigos Medical Center
Number of New Students Admitted:	Orthotics—10 Prosthetics—10
Faculty/Student Ratio:	1:6
Length of Program:	2 years
Dates of Courses:	Next class begins Spring, 1989
Application Deadline:	Fall, 1988
Address of Registrar:	1000 E. Victoria Street, Carson, California 90747 Ida Gibson, Program Coordinator

SEQUENCE OF COURSES

Year 1

Course	Hours Lec	Hours Lab	Units Lec	Units Lab	Course Units
Spring					
HEA 340 Lower Limb Orthotics I	20	100	1	2	3
HEA 350 Below-Knee Prosthetics I	20	100	1	2	3
HEA 240 Neuromusculoskeletal Pathomechanics I	45	0	3	0	3
HEA 210 Research Methods (Core)	45	0	3	0	3
				TOTAL	12
Summer					
HEA 352 Below-Knee Prosthetics II	20	50	1	1	2
HEA 250 Normal and Pathological Gait	10	20	1	1	2
HEA 252 Strength, Materials, and Fastening Technology	10	30	1	1	2
				TOTAL	6
Fall					
HEA 342 Lower Limb Orthotics II	20	100	1	2	3
HEA 354 Above-Knee Prosthetics I	20	100	1	2	3
HEA 242 Neuromusculoskeletal Pathomechanics II	45	0	3	0	3
HEA 310 Health Care Delivery Systems	45	0	3	0	3
HEA 317 Medical Science: O&P (Core)	45	0	3	0	3
				TOTAL	15

Year 2

Course	Hours Lec	Hours Lab	Units Lec	Units Lab	Course Units
Spring					
HEA 344 Spinal Orthotics	20	100	1	2	3
HEA 450 Upper Limb Prosthetics	20	100	1	2	3
HEA 452 Above-Knee Prosthetics II	15	45	1	1	2
HEA 491 Research Seminar in O&P I	15	0	1	0	1
HEA 312 Introduction to Public Health (Core)	45	0	3	0	3
HEA 314 Health Behavior (Core)	45	0	3	0	3
				TOTAL	15
Summer					
HEA 493 Preceptorship in Orthotics and Prosthetics	500				5
				TOTAL	5
Fall					
HEA 442 Lower Limb Orthotics III	20	100	1	2	3
HEA 440 Upper Limb Orthotics	20	100	1	2	3
HEA 454 Hip and Symes Prosthetics	20	100	1	2	3
HEA 492 Research Seminar in O&P II	15	0	1	0	1
HEA 315 Interpersonal Skills in Health Science	45	0	3	0	3
HEA 318 Health Resources Management	45	0	3	0	3
				TOTAL	16

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Florida International University

University Park
Miami, Florida 33199
(305) 554-2870

Program:	Prosthetics/Orthotics Baccalaureate Program
Degree or Certificate Awarded:	Bachelor of Science, Prosthetics & Orthotics
ABC Accreditation:	To be applied for
Level of Training:	Practitioner
Prerequisites/Entrance Requirements:	See Program Description
Medical School Affiliation:	University of Miami, Department of Orthopedics
Number of New Students Admitted:	Orthotics and Prosthetics: 12
Faculty/Student Ratio:	1:6
Length of Program:	Two years
Date of Courses:	Classes commence August of each year
Application Deadline:	March 1
Address of Registrar:	Florida International University, Office of Admissions, University Park, Miami, Florida 33199

THE UNIVERSITY

Florida International University, committed to the pursuit of excellence in a rapidly changing world, provides its students with intellectual challenge, an enriching campus life, a cosmopolitan atmosphere, and experiences that develop self-confidence. FIU prepares individuals to excel as effective contributors to their professions and their communities.

A member of the Florida State University System, FIU has the highest minimum entrance requirements in Florida, higher than most American universities. Students must present a record of above-average high school achievement and commensurate test scores to be offered admission to FIU. These rigorous standards create a learning climate with students who are motivated to succeed.

With over 16,500 students, 600 full-time faculty members (87 percent of whom hold Ph.D.'s) and 153 educational programs, FIU is the largest public university in South Florida and the fifth largest of Florida's 31 colleges and universities. Currently, the University includes eight Colleges and Schools: Arts and Sciences, Business Administration, Education, Engineering and Applied Sciences, Health Sciences, Hospitality Management, Nursing, and Public Affairs and Services. Research, teaching centers, and institutes include the Latin American and Caribbean Center, the Center for Labor Research and Studies, the Small Business Development Center, the Center for Banking Research, the Southeast Florida Center on Aging, the Women's Studies Center, the Drinking Water Research Center, the Center for Multilingual and Multicultural Studies, the English Language Institute, the International Institute for Creative Communications and others.

The University has two campuses and two major academic centers, all of which operate under a central administration. Its impressive physical plant includes ten major buildings spread over 540 acres in the western suburbs of Miami. With its lakes and lush tropical flora and fauna, the campus offers a respite from urban life. Apartment-style residence halls, the recently completed Sunblazer Sports Arena, a wildlife sanctuary area and various up-to-date recreational and athletic facilities contribute to a pleasant collegiate atmosphere. At adjacent Tamiami Park, students can enjoy all park facilities, such as pools, tracks, and courts.

The University's North Miami Campus, set on the shores of Biscayne bay, encompasses more than 200 acres, including a natural cypress woods preserve. It has a handsome aquatic center, apartment-style housing and buildings which have garnered prestigious architectural awards.

PROGRAM DESCRIPTION

The Program in Prosthetics and Orthotics leads to the award of a Bachelor of Science degree in Prosthetics and Orthotics and is designed for students who have completed 60 semester hours of acceptable academic study, or students who have junior classification and who have successfully completed certain prerequisite requirements. Students who already have a baccalaureate degree will be accepted if they have successfully completed the course prerequisites and have met other entrance requirements.

Classes are designed to provide the student with both academic or classroom preparation and practical, clinical or community experiences under the supervision of a certified prosthetist/orthotist. At the conclusion of the formal course work, students must successfully complete three months of internship under the supervision of a certified prosthetist/orthotist.

ADMISSION REQUIREMENTS

Selection into the Prosthetics and Orthotics Program is determined by the Prosthetics/Orthotics Admissions Committee on a competitive basis.

All applicants must:

1. Meet the entrance requirements for Florida International University.
2. Hold a baccalaureate degree (BA, BS) or Associate of Arts (AA).
3. Have no less than 60 semester hours of acceptable college credit, or junior classification.
4. Have a minimum cumulative grade point average of not less than 2.8 on a 4.0 scale.
5. Complete the following course prerequisites:
   Biological and/or Physical Sciences (6 semester hours) to include 3 semester hours of Biology with Lab.
   Recommended courses:
   Anatomy (APB 1220) with Lab
   Anatomy of Physiology APB 2190, 2191, with Lab

   Mathematics (6 semester hours)
   Recommended courses:
   Trigonometry MAC 1114
   Calculus with Analytic Geometry MAC 2311
   Analytic Geometry MAC 2154

Physics (6 semester hours)
Recommended courses:
Physics PHY 2053, 2054 with Lab
Mechanics PHY 2205

Psychology (3 semester hours)
Recommended courses:
Human Growth and Development DEP 2000
Human Relations PCO 2731
Intrduction to Psychology PSY 2012

APPLICATION PROCEDURE

Applicants must complete the application for admission to Florida International University which can be obtained from the Office of Admissions, Florida International University, Miami, FL 33199. It should be returned to that same address.

Applicants must complete and return the Application for admission to the Prosthetics and Orthotics Program, Florida International University, Miami, FL 33199.

The first evaluation of completed applications will occur February 15th. Students who have their applications completed by that time will have the first opportunity to enter this program. Applications received after February 15th will be processed as they are received on a space available basis.

To facilitate processing your application, please submit two separate sets of official transcripts, one to the Admissions Office and one to the Director of the Prosthetics and Orthotics Program.

Acceptance into the Program

Students are accepted into the program on the strength of their academic preparation, and statement of why you wish to become a prosthetist-orthotist included in the application form.

Admission Committee decisions will be first announced in March prior to the opening of the fall semester, and thereafter as applications are acted upon.

COURSE OF STUDY

Year I

Course		*Hours*
ZOO 3731	Human Anatomy	3
ZOO 3731L	Human Anatomy Lab	1
EGN 3365	Materials in Engineering	3
OTH 4411	Pathology & Medical Surgical Disorders	3
PRO 3000	Prosthetic and Orthotic Techniques	4
	Elective	2
OTH 3413	Applied Kinesiology	2
OTH 3413L	Applied Kinesiology Lab	1
PRO 3300	Below-Knee Prosthetics	3
PRO 3300L	Below-Knee Prosthetics Lab	3
PRO 3310	Lower Limb Orthotics I	2
PRO 3320	Lower Limb Orthotics II	2
PRO 3310L	Lower Limb Orthotics Lab	3
OTH 3007	Medical Terminology	1
PHT 3310C	Orthopedics	2
PRO 3800	Field Work Experience Level I	3
	TOTAL	38

Year II

Course		*Hours*
ETM 3510	Mechanical Design I	3
PCB 3702	Intermediate Human Physiology	3
PRO 4330	Above-Knee Prosthetics I	2
PRO 4340	Above-Knee Prosthetics II	2
PRO 4330L	Above-Knee Prosthetics Lab	3
PRO 4350	Spinal Orthotics	2
PRO 4350L	Spinal Orthotics Lab	2
MAN 4802	Small Business Management	3
DEP 3402	Psychology of Adulthood	3
PRO 4360	Upper Limb Prosthetics	3
PRO 4360L	Upper Limb Prosthetics Lab	2
PRO 4370	Upper Limb Orthotics	3
PRO 4370L	Upper Limb Orthotics Lab	2
PRO 4830	Clinical Internship Supervised Setting—12 week placement	8
	TOTAL	41

COURSE DESCRIPTIONS

Year I

ZOO 3731 HUMAN ANATOMY (3)
ZOO 3731L HUMAN ANATOMY DEMONSTRATION (1)

Survey of organ systems of the human body with major emphasis on the skeletal, muscular, and peripheral nervous system. Demonstrations of the prosected human cadaver.

Prerequisite: One year of general biology with laboratory

EGN 3365 MATERIALS IN ENGINEERING (3)
A study of materials used in engineering. Includes atomic structure, phase diagrams and reactions within solid materials.
Prerequisite: CHM 1045

OTH 4411 PATHOLOGY AND MEDICAL SURGICAL DISORDERS (3)
Brief review of organ systems and primary diseases that affect each organ, with specific emphasis on the disabilities that would result from such diseases.
Prerequisite: Anatomy, physiology.

PRO 3000 INTRODUCTION TO PROSTHETICS AND ORTHOTICS (4)
Lecture and demonstrations to introduce the student to prosthetic, orthotic and biomechanical principles utilized during the clinical rehabilitation process.
Prerequisite: Admission to program or permission of instructor, or both.

OTH 3413 APPLIED KINESIOLOGY (2)
OTH 3413L KINESIOLOGY LAB (1)
A course providing learning experiences to develop skills in palpation, goniometry, manual muscle testing, and motion analysis of normal subjects.

PRO 3300 BELOW-KNEE PROSTHETICS (3)
Techniques of evaluation and education for all types of below-knee amputations as well as instruction in fitting the amputee.
Prerequisite: PRO 3000
Corequisite: PRO 3300L

PRO 3300L BELOW-KNEE PROSTHETIC LABORATORY (3)
Observation and supervised application of below-knee amputee assessment, device recommendation, and fabrication techniques.
Prerequisite: PRO 3000
Corequisite: PRO 3300

PRO 3310 LOWER LIMB ORTHOTICS I (2)
Focus is on the management of adult and juvenile patients with ankle/foot disabilities.
Prerequisite: PRO 3000
Corequisites: PRO 3320, PRO 3310L

PRO 3310L LOWER LIMB ORTHOTICS LABORATORY (3)
Laboratory sessions focus on the orthotic management of juvenile and adult patients with lower limb disabilities.
Prerequisite: PRO 3000
Corequisites: PRO 3310, PRO 3320

PRO 3320 LOWER LIMB ORTHOTICS II (3)
Focus is on the orthotic management of adult and juvenile patients with conditions affecting hip and knee.
Prerequisite: PRO 3000
Corequisites: PRO 3310, PRO 3310L

OTH 3007 MEDICAL TERMINOLOGY (1)
A self-instructional program of medical terminology.

PHT 3310C ORTHOPEDICS (2)
Multimedia lectures and patient case studies presented on the evaluation and management (surgical and non-surgical) of the orthopedic patient, correlated with laboratory practice in evaluative and treatment skills.

PRO 3800 FIELD WORK EXPERIENCE (3)
Clinical experience in an approved prosthetic or orthotic center, or both.
Prerequisites: PRO 3000, PRO 3310L

Year II

ETM 3510 MECHANICAL DESIGN I (3)
Advanced biomechanical principles involved in rehabilitation of prosthetic and orthotic patients.

PCB 3702 INTERMEDIATE HUMAN PHYSIOLOGY (3)
Functions of the human body and the

physico-chemical mechanisms responsible for each organ's function.
Prerequisite: General Biology

PRO 4330 ABOVE KNEE PROSTHETICS I (2)
Principles of fabrication, fit, dynamic alignment, techniques of evaluation, and education for suction suspended prostheses.
Prerequisites: PRO 3300, PRO 3300L
Corequisites: PRO 4300L, PRO 4340

PRO 4340 ABOVE KNEE PROSTHETICS II (2)
Principles of fabrication, fit, dynamic alignment, techniques of evaluation and education for conventional, non-suction prostheses.
Prerequisites: PRO 3300, PRO 3300L
Corequisites: PRO 4330L, PRO 4330

PRO 4330L ABOVE KNEE PROSTHETICS LAB (3)
Observation and supervised application of prosthetics for above-knee amputee patients; assessment, device recommendation, and fabrication techniques.
Prerequisites: PRO 3300, PRO 3300L
Corequisite: PRO 4330, PRO 4340

PRO 4350 SPINAL ORTHOTICS (2)
Spinal and pelvic biomechanics and pathomechanics, components and techniques for fabrication of spinal orthosis.
Prerequisite: PRO 3000
Corequisite: PRO 4350L

PRO 4350L SPINAL ORTHOTICS LAB (2)
Application of principles and techniques presented in PRO 4350 to the construction of a spinal orthosis.
Prerequisite: PRO 3000
Corequisite: PRO 4350

MAN 4802 SMALL BUSINESS MANAGEMENT (3)
The organization and operation of the small business: accounting, finance, production, and marketing subsystems. The use of analytical approach. Problems of manpower management and information flow. Possible use of EDP, case studies.

DEP 3402 PSYCHOLOGY OF ADULTHOOD (3)
The transition from youth to middle age is studied. Focus is on changing roles in family, work and societal settings, as these factors influence personality and other aspects of psychological function.

PRO 4360 UPPER LIMB PROSTHETICS (3)
Principles and techniques of prosthetic evaluation and education for all levels of upper extremity amputees.
Prerequisite: PRO 3000
Corequisite: PRO 4360L

PRO 4360L UPPER LIMB PROSTHETICS LAB (2)
Client assessment, device recommendation, and fabrication of upper limb prosthetic devices.
Prerequisite: PRO 3000
Corequisite: PRO 4360

PRO 4370 UPPER LIMB ORTHOTICS (3)
Biomechanics and pathomechanics as applied to upper extremity orthotic components and materials.
Prerequisite: PRO 3000
Corequisite: PRO 4370L

PRO 4370L UPPER LIMB ORTHOTICS LAB (2)
Application techniques and procedures described for upper limb orthotics, including evaluation of physical and functional deficits, measurement, fabrication, fitting and evaluation of devices.
Prerequisite: PRO 3000
Corequisite: PRO 4370

PRO 4850 CLINICAL INTERNSHIP (8)
Directed clinical experience in an approved prosthetic or orthotic center or both.
Prerequisite: Satisfactory completion of previous didactic courses or consent of instructor.

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New York University

Department of Prosthetics and Orthotics
School of Education, Health, Nursing and Arts Professions
317 East 34th Street, New York, New York 10016
(212) 340-6685

Program:	Baccalaureate of Orthotics/Prosthetics Program
Degree or Certificate Awarded:	Bachelor of Science—Prosthetics and Orthotics are included in the same course
Level of Training:	Practitioner
ABC Accreditation:	Fully accredited
Prerequisites/Entrance Requirements:	High School graduate with college preparatory courses; applicants with some college accepted as transfer students
Medical School Affiliation:	New York University Medical Center
Number of New Students Admitted:	12—combined prosthetics and orthotics instruction
Faculty/Student Ratio:	1:6–8 (in laboratories)
Length of Program:	Four years, of which two are specialization training
Dates of Courses:	September to May each year, with one summer's clinical affiliation after junior year
Application Deadline:	June 1st
Address of Registrar:	New York University, Office of Undergraduate Admissions, 22 Washington Square North, New York, New York 10011

PROGRAM DESCRIPTION

The New York University Baccalaureate Program in Prosthetics and Orthotics, established in 1962, enjoys the distinction of offering the first recognized academic degree to come into existence in this field. As such, it has been the most frequently emulated curriculum, serving as a model for other programs both in the United States and abroad.

As can be seen from the course sequence described below, the four year curriculum has two major components: (1) the freshman and sophomore years, which are devoted to several educational goals including written and oral language skills, introductory science courses, and exposure to other fields (social sciences, humanities, and liberal arts); and (2) the junior and senior years, which are devoted to specialization courses directly related to prosthetics and orthotics, designed to equip the student with the practical skills and theoretical understandings required by professional practitioners in this field.

Students who have completed courses at other colleges or universities may transfer into the New York University Prosthetics and Orthotics curriculum, preferably prior to the beginning of the junior year. Individuals planning to transfer are advised to follow the course sequence listed below as closely as possible.

BACCALEAUREATE PROGRAM SUGGESTED COURSE SEQUENCE

Freshman Year

Course	*Points*
Fall	
Writing Workshop I	4
Precalculus Mathematics	4
Introduction to Psychology	4
Humanities Elective	4
Total	16
Spring	
The Biological World	4
Writing Workshop II	4
Unrestricted Elective	2
Liberal Arts Elective	6
Total	16

Sophomore Year

Course	*Points*
Fall	
Introduction to Modern Chemistry	5
Biostatistics	3
Speech Communication	4
Social Science Elective	4
Total	16
Spring	
Introduction to Physics	5
Social Science Elective	4
Liberal Arts Elective	6
Total	15

Junior Year

Course	*Points*
Fall	
Human Anatomy (lecture-demo)	3
Prosthetic and Orthotic Techniques	6
Biomechanics	2
Mechanics	3
Clinical Affiliation	2
Total	16
Spring	
Physiology	2
Properties of Materials	2
Below-Knee Orthotics	4
Below-Knee Prosthetics	6
Physically Disabled: A Psychological Approach	3
Total	17

Senior Year

Course	*Points*
Fall	
Upper Limb Prosthetics	5
Upper Limb Orthotics	4
Spinal Orthotics	5
Clinical Affiliation (P&O)	2
Total	16
Spring	
Human Anatomy (laboratory)	1
Above-Knee Orthotics	4
Above-Knee Prosthetics	8
Professional Aspects of Prosthetics and Orthotics	2
Clinical Affiliation (P&O)	1
Total	16
FOUR YEAR TOTAL	128

SPECIALIZATION COURSE DESCRIPTIONS

Human Anatomy Lecture
45 Hours: 2 Points
Lectures on human anatomy of the skeletal, muscular, nervous, and circulatory systems. Demonstration on models.

Human Anatomy Laboratory
45 Hours: 1 Point
Dissection and demonstration of human cadaver for purpose of learning relationships of skeletal, muscular, circulatory, and nervous systems. Complements lectures in human anatomy.

Physiology
60 Hours: 2 Points
The skeletal, muscular, nervous endocrine, circulatory, respiratory, digestive, and urogenital systems are presented, and the laboratory reinforces the lecture material.

Physically Disabled: A Psychological Approach
45 Hours: 3 Points
Psychological factors that are prominent in the process of adjustment to a physical disability. Emphasis on understanding the psychological conditions of patients and the interaction between patient and health worker to foster optimum working relations between them.

Biostatistics
45 Hours: 3 Points
The collection, tabulation, and elementary analysis of vital statistics. Sources and uses of population, mortality, and morbidity data. Classification and tabulation, frequency distribution, measures of location and variation, rates and ratios, correlations and regression, and tests of significance.

Prosthetic and Orthotic Techniques
210 Hours: 6 Points
Use of specialized prosthetic and orthotic shop equipment and tools; techniques and procedures for working with plaster, thermoset and thermoform plastics, wood, metal, and leather utilized in prostheses and orthoses.

Biomechanics
30 Hours: 2 Points
Basic anthropometric data; physical properties of tissues; analysis of forces acting on the skeletal structures and torques developed around body joints; kinetic and kinematic analysis of prostheses and orthoses; and techniques of gathering biomechanical data for research and clinical applications.

Mechanics
45 Hours: 3 Points
Statics: forces, pressure, moments, free-body analysis, center of gravity, and friction. Dynamics: linear and angular displacement, velocity, and acceleration. Work, power, and efficiency. Emphasis on prosthetic and orthotic applications.

Properties of Materials
30 Hours: 2 Points
Behavior of materials subjected to tensile, compressive, shear, torsion, and bending stresses. Description of physical and mechanical properties of metals, plastics, woods, and laminates as related to prosthetic and orthotic design considerations.

Below-Knee Orthotics
120 Hours: 4 Points
Lectures, demonstrations, and laboratory practice in the fabrication and fitting of various designs of metal and plastic below-knee orthoses. Lectures also cover pertinent anatomy, pathomechanics, motor disabilities, and prescription considerations.

Above-Knee Orthotics
120 Hours: 4 Points
Lectures, demonstrations, and laboratory practice in the fabrication and fitting of various designs of above-knee orthoses. Lectures also cover pertinent anatomy, pathomechanics, motor disabilities, and prescription considerations.

Above-Knee Prosthetics
240 Hours: 8 Points
Principles and practices of above-knee and hip-disarticulation prosthetic fabrication, fitting and alignment, use of adjust-

able alignment devices, and methods of suspension. Experience in fabrication is supplemented by lectures pertaining to the comprehensive management of above-knee amputees and a review of anatomy and biomechanics.

Below-Knee Prosthetics
180 Hours: 6 Points
Principles of fabrication, fitting, suspension, and alignment of prostheses for below-knee amputations with special emphasis on the patellar-tendon-bearing prosthesis. Experience in fabrication is supplemented by lectures pertaining to the comprehensive management of below-knee amputees and a review of anatomy and biomechanics.

Upper-Limb Prosthetics
135 Hours: 5 Points
Instruction in the techniques and principles of prosthetic fabrication, fitting, and harnessing for a variety of upper-limb amputations. Prosthetic components, check-out and training procedures, and prescription considerations are also included.

Upper-Limb Orthotics
105 Hours: 4 Points
Lecture and laboratory practice in the basic principles of upper-limb bracing. Includes consideration of a variety of upper-limb disabilities, orthotic components, techniques of fabrication, as well as check-out and prescription considerations.

Spinal Orthotics
135 Hours: 5 Points
Survey of neurological, muscular, and skeletal anatomy and pathomechanics of the neck and trunk; principles of bracing to provide maximum function and comfort; laboratory practice in the fabrication and fitting of selected orthoses.

Professional Aspects of Prosthetics and Orthotics
30 Hours: 2 Points
Relationships between the prosthetist-orthotist and members of the other rehabilitation specialties, psychological considerations in patient care, current educational and research developments, and ethical responsibilities of the prosthetist-orthotist.

Clinical Affiliation—Prosthetics and Orthotics
1,000 Hours: 5 Points
Supervised clinical practice in certified prosthetics and orthotics facilities designed to expand the student's experience and skill.

FINANCIAL AID AND EQUAL OPPORTUNITY

The financial aid program at New York University enables many qualified but needy students to enter the University with confidence that they will be able to complete their studies. No prospective student who feels he or she may need financial aid should be reluctant to apply for assistance.

The required Financial Aid Form may be obtained from the Office of Financial Aid, New York University, 23 West Fourth Street, New York, NY 10012.

The University is committed to a policy of equal treatment and opportunity in every aspect of its relations with its faculty, students, and staff members, without regard to sex, sexual orientation, marital or parental status, race, color, religion, national origin, age, or handicap.

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University of Texas

Health Science Center at Dallas
School of Allied Sciences
Prosthetic-Orthotic Department
5323 Harry Hines Boulevard
Dallas, Texas 75235

Program:	Prosthetics-Orthotics Program
Degree or Certificate Awarded:	Bachelor of Science Degree
ABC Accreditation:	Yes
Level of Training:	Practitioner
Prerequisites/Entrance Requirements:	60 credit hours of specified course work, see program description
Medical School Affiliation:	Southwestern Medical School
Number of New Students Admitted:	14 for combined prosthetic and orthotic instruction
Faculty/Student Ratio:	1:6
Length of Program:	Six semesters (2 years) following prerequisites
Dates of Courses:	Classes begin in late May of each year
Application Deadline:	February 28
Address of Registrar:	The University of Texas Southwestern Medical Center at Dallas, Office of the Registrar, 5323 Harry Hines Boulevard, Dallas, Texas 75235-9096

INTRODUCTION

The Prosthetics and Orthotics Program was established at The University of Texas Southwestern Medical Center at Dallas in 1982. Prosthetics and Orthotics is one of ten programs of study offered by the Southwestern Allied Health Sciences School. In addition, the program is fully accredited by the Educational Accreditation Commission of the American Board for Certification in Orthotics and Prosthetics, Inc. (ABC). The program has the distinction of being the first baccalaureate level Prosthetics and Orthotics Program at a state supported institution.

PROGRAM DESCRIPTION

The course of instruction at UT Southwestern is two years in length. The first 60 hours, which are completed prior to admission to UT Southwestern, compose the prerequisite phase. Specific prerequisites are required to prepare the student for the two year professional phase which follows. The professional phase includes advanced courses in anatomy, physiology and psychology of the handicapped individual, coupled with didactic, laboratory and clinical instruction in prosthetics and orthotics. Upon the successful completion of the program, students are awarded a Bachelor of Science Degree and a certificate in Prosthetics and Orthotics, which academically qualifies them to stand for certification in both disciplines in accordance with the regulations of the ABC.

COURSE DESCRIPTION

Students are admitted to the program in late May of each calendar year. To be considered for acceptance, applicants must successfully complete the prerequisite courses with a minimum earned 2.0 GPA on a four point system. Application deadline is February 28 each year. Anticipated class sizes will be approximately 14 students per year, with a cumulative total of 28 juniors and seniors. Lists of prerequisite courses and suggested electives follow.

Prerequisite Courses

Course	*Hours*
English (including at least 3 hours of composition or technical writing skills)	6
U.S. History (may include 3 hours of Texas History)*	6
U.S. Government (must include a study of the Texas Constitution)*	6
Psychology (3 hours of general required, 3 hours human development recommended)	6
Humanities or Social Studies (Sociology, Philosophy or Economics)	3
Mathematics (Algebra or higher)	3
Chemistry with lab (General Chemistry)	4
Physics with lab**	4
Biological Science with lab**	4
Human Anatomy with lab	4
Human Physiology with lab	4
Electives	10
Total	60

*Maximum 3 hours correspondence or television course accepted.
**Courses for non-science majors are not acceptable.

Suggested Electives

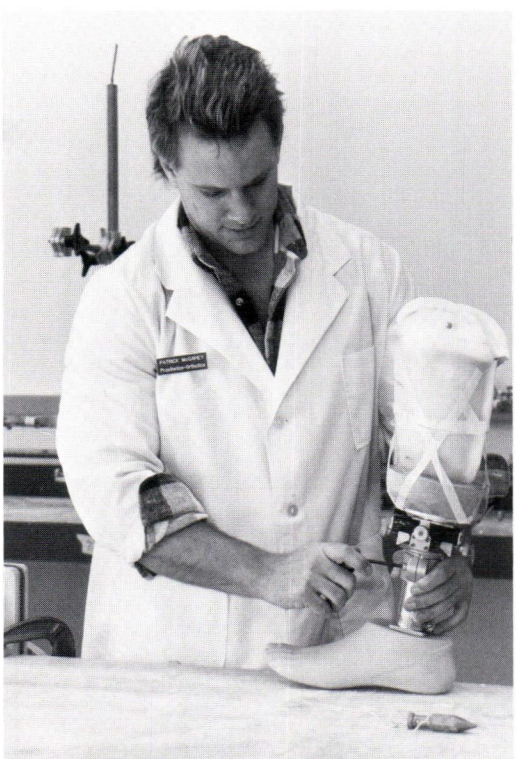
Kinesiology
Electronics
Mechanics
Technical Drawing
Material Technology

Students are strongly advised to volunteer in or visit a number of facilities offering prosthetic/orthotic services. This is seen as an important step in affirming an interest in this profession prior to pursuing it as a career.

PROGRAM FACILITIES

UT Southwestern is located on an 88 acre campus at Harry Hines Boulevard and Inwood Road, 3.5 miles northwest of downtown Dallas, and consists of the Southwestern Medical School, the Southwestern Graduate School of Biomedical Sciences and the Southwestern Allied Health Sciences School. It is adjacent to Parkland Memorial Hospital and Children's Medical Center, two of the Center's principal testing institution facilities. Also nearby are the Aston Ambulatory Care Center and the University Hospital.

The offices, laboratories, and patient treatment areas of the Prosthetics and Orthotics Program are housed in the newly renovated Southwestern Allied Health Sciences School Building. The junior and senior laboratories are modern and spacious and equally equipped for both prosthetic and orthotic fabrication.



Separate areas for plastics, plaster, and specialty machinery are adjacent to the main laboratories. The patient evaluation and fitting facilities are also conveniently located near the fabrication areas.

PROGRAM OF INSTRUCTION

The Prosthetics-Orthotics curriculum provides the student with the opportunity to develop a knowledge base in related sciences and the technical skills necessary to practice as a prosthetist-orthotist. In addition to classroom lectures and demonstrations, a significant amount of time is spent in laboratory sessions learning skills in gait analysis, patient evaluation, measuring, casting, modification, and fabrication of prostheses and orthoses.

Schedules are designed to provide the student a minimum of 540 hours of direct patient contact under the supervision of certified practitioners in both disciplines. Students assist in the fabrication, fitting, and evaluation of devices for patients in the clinical settings. This component affords students the opportunity to fabricate devices well above the minimum number required by ABC. Students may also be involved in selected research projects during the latter part of the professional phase of instruction.

SCHEDULE OF COURSES

Junior Year

Course		*Hours*
Summer		
HCS 4408	Human Anatomy	4
HCS 4209	Human Anatomy Lab	2
HCS 4207	Human Neuroanatomy	2
HCS 3407	Human Physiology	4
PO 3101	Prosthetic/Orthotic Techniques	1
	TOTAL	13

Fall

PO 3013	Lower Limb Orthotics	11
PO 3415*	Applied Prosthetics, Orthotics & Rehab. Technology I	4
PO 3217	Seminar in Prosthetics and Orthotics I	2
PT 4112	Biomechanics	1
	TOTAL	18

Spring

PO 3921	Lower Limb Prosthetics I	9
PO 3225	Seminar in Prosthetics and Orthotics II	2
RS 4305	Psychological Aspects of Chronic Illness and Disability	3
	TOTAL	14

Senior Year

Course		*Hours*

Summer

PO 4721	Upper Limb Prosthetics	7
PO 3423*	Applied Prosthetics, Orthotics & Rehab. Technology II	4
	TOTAL	11

Fall

PO 4001	Lower Limb Prosthetics II	10
PO 4205	Seminar in Prosthetics and Orthotics III	2
HCS 3322	Interpersonal Skills & Communication	3
	TOTAL	15

Spring

PO 4611	Spinal Orthotics	6
PO 4513	Upper Limb Orthotics	5
PO 4403*	Applied Prosthetics, Orthotics & Rehab. Technology III	4
PO 4217	Seminar in Prosthetics and Orthotics IV	2
	TOTAL	17

DESCRIPTION OF COURSES

HCS 4408 Human Anatomy

4 semester hours

A comprehensive study of the structure and function of the human body systems and their mechanisms. Emphasis is placed on the major characteristics of each body system and its relationship to other systems. Lectures and demonstrations emphasize basic correlative clinical concepts.

HCS 4209 Human Anatomy Laboratory

2 semester hours

Laboratory course that includes dissection. Will be taken concurrently with HCS 4408.

HCS 4207 Human Neuroanatomy

2 semester hours

Basic human neuroanatomy is covered with an emphasis on neurological clinical problems relevant to the rehabilitation of persons with neurological dysfunction. The format includes a series of lectures and laboratory presentations.

HCS 3407 Human Physiology

4 semester hours

A comprehensive study of the basic functions of the body systems and their interrelationships.

PO 3101 Prosthetic-Orthotic Techniques

1 semester hour

This introductory course is designed to familiarize the student with mechanical properties of materials, hand and power tools, and specialized equipment used in the fabrication of prostheses and orthoses. Proper safety techniques and operating procedures in the laboratory environment are stressed.

PO 3013 Lower Limb Orthotics

11 semester hours

Lectures are given covering anatomy, kinesiology, biomechanics, pathomechanics, neurology, and vascular supplies of the lower extremities. Additionally, evaluation of physical and functional deficits is presented. Methods of fabricating and evaluating orthotic devices are included, as well as instruction in fitting criteria of juvenile and geriatric populations. Laboratory practice is integrated throughout the semester in such a way that the student immediately applies the techniques described in the lecture.

*These may be taken during different semesters but each student will receive a minimum of 12 semester hours of Applied Prosthetics, Orthotics, and Rehabilitation Technology.

PO 3415 Applied Prosthetics, Orthotics and Rehabilitation Technology I

PO 3423 Applied Prosthetics, Orthotics and Rehabilitation Technology II

PO 4403 Applied Prosthetics, Orthotics and Rehabilitation Technology III

4 semester hours

These courses are based upon clinical observations and supervised application of prosthetic-orthotic principles as they relate to patient assessment, prescription recommendation and fabrication techniques. Rotations include the Scottish Rite Hospital for Crippled Children, Parkland Memorial Hospital, the Veteran's Administration Hospital, the Dallas Rehabilitation Institute and area private facilities.

PO 3217 Seminar in Prosthetics and Orthotics I

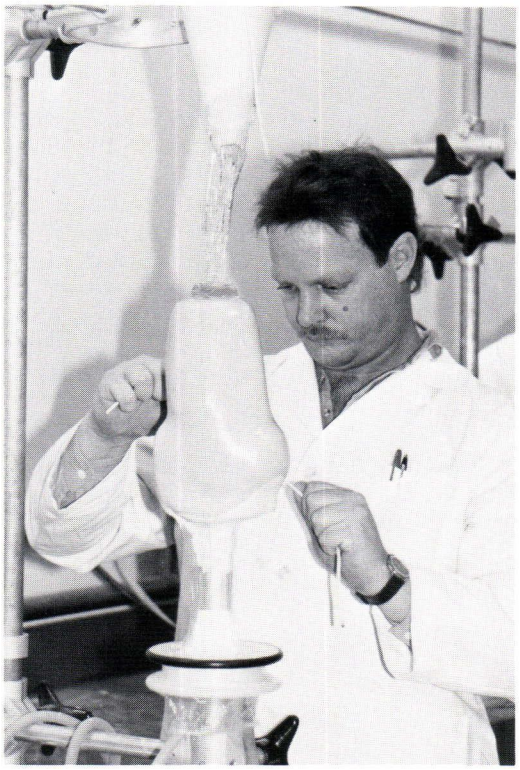
PO 3225 Seminar in Prosthetics and Orthotics II

PO 4205 Seminar in Prosthetics and Orthotics III

PO 4217 Seminar in Prosthetics and Orthotics IV

2 semester hours

These courses are designed to expand upon topics presented in other prosthetic-orthotic courses by utilizing adjunct faculty and guest lecturers from within the prosthetic-orthotic profession and related fields. Topics include history, ethics, roles of health professionals within the multidisciplinary team, and disease entities. Also, administration and management techniques for a prosthetic-orthotic service, new developments and concepts in prosthetics and orthotics, and methods of instruction in patient education are presented. The courses teach effective methods of medical record keeping and interdisciplinary oral/written communication. An integral part of these courses are a review of classic and current journal articles from which the student makes oral presentations. These exercises aid the student in



future professional presentation. Discussions of clinical experiences are also included.

PT 4112 Biomechanics

1 semester hour

This course is designed to provide the student with certain biomechanical skills that can be effectively used within the area of prosthetics and orthotics. Certain universal laws of physics and mechanics are constantly governing human movement on all levels from the paraplegic patient to the Olympic swimmer. It should be understandable, then, that a basic knowledge of these laws, together with a fundamental understanding of the mechanics of human motion, can be considered essential to the practice of any profession dealing with human movement.

PO 3921 Lower Limb Prosthetics I

9 semester hours

Lectures address physical and functional deficits that result from limb loss following

below-knee (BK) amputation. Differing levels of amputation, medical management, pre- and postoperative prosthetic care, prescription considerations, prosthetic materials, components and principles of fabrication, fit and dynamic alignment are also covered. Techniques of evaluation and training for all below-knee types of amputations, in addition to instruction in fitting the juvenile and geriatric populations, complete this course.

RS 4305 Psychological Aspects of Chronic Illness & Disability
3 semester hours

An introduction to the emotional and mental reactions associated with biologic illness and impairments, with emphasis on client or patient psychological needs, conflicts, adjustment mechanisms, signs and symptoms of severe emotional distress; contribution of psychology to care and treatment; and reactions of family and society to the chronically ill and disabled.

PO 4721 Upper Limb Prosthetics
7 semester hours

Course content includes a review of anatomy, kinesiology, biomechanics, pathomechanics, neurology, and vascular supplies as they relate to the upper extremity. Lectures are presented covering all levels of amputation, medical management, pre- and postoperative prosthetic care, and prescription consideration. Conventional components and principles of fabrication and harnessing are covered, as are above-elbow and below-elbow externally powered components and techniques of evaluation for each device. Special consideration is given to fitting the juvenile and geriatric populations.

PO 4001 Lower Limb Prosthetics II
10 semester hours

This course includes the study of physical and functional deficits that result from limb loss following above-knee (AK) amputation. Levels of amputation, medical management, pre- and postoperative prosthetic care, prescription considerations, materials and components, principles of fabrication, fitting and dynamic alignment are presented. Evaluation and training for all above-knee types of amputations are given with special attention to the juvenile and geriatric populations. Instruction is also given in the use of fluid control mechanisms as well as various other types of knee units. In addition, methods of fitting hip and knee disarticulations are demonstrated.

HCS 3322 Interpersonal Skills and Communication
3 semester hours

Designed to familiarize participants with holistic techniques for self-awareness and effective communication. The classes are divided into one-third theory and two-thirds experiential workshop. The methods are taken from many humanistic sources, including the Reichian approach of body-mind integration, as well as other ancient and modern sources.

PO 4611 Spinal Orthotics
6 semester hours

Instruction includes a review of spinal and pelvic anatomy, biomechanics and pathomechanics of the spine, materials and orthotic components, prescription considerations and principles of fabrication of spinal orthoses. Special attention is given to fitting the juvenile and geriatric populations. Students immediately apply the principles and techniques presented in lecture during supervised laboratory practices.

PO 4513 Upper Limb Orthotics
5 semester hours

Lectures relating to anatomy, kinesiology, biomechanics, pathomechanics, neurology, and vascular supplies of the upper extremity are given. Additionally, instruction includes a section in orthotic components and materials as they pertain to shoulder, arm, wrist, and hand disabilities. Laboratory practice is scheduled to allow the student to immediately perform the techniques and procedures described in lecture. Included in laboratory sessions are the evaluation of physical and functional deficits, recommendation of orthotic devices, selection of appropriate compo-

nents, measurement, fabrication, fitting, and evaluation of devices.

FINANCIAL AID

UT Southwestern has developed a strong student financial aid program that offers grants, loans, and other sources of assistance to eligible students. Additionally, a limited number of student stipends are available through the Program.

For more information, eligibility requirements, and application materials please contact:

Financial Aid Office
The University of Texas
Southwestern Medical Center at Dallas
5323 Harry Hines Boulevard
Dallas, Texas 75235-9021
Phone (214) 688-3611

CONCLUSION

This is a general information publication only. It is not intended to, nor does it contain all regulations that relate to students. Contents of this publication are subject to revision without notice. UT Southwestern reserves the right to withdraw courses at any time, change fees or tuition, rules, calendar, curriculum, degree programs, degree requirements, graduation procedures, and any other requirements affecting prospective students and those already enrolled. The provisions of this publication do not constitute a contract, express or implied, between any applicant, student or faculty member and UT Southwestern.

No person shall be excluded from, or denied the benefit of participation or be subject to discrimination under any program or activity sponsored or conducted by UT Southwestern on any basis prohibited by applicable law, including, but not limited to, race, color, national origin, religion, sex, or handicap.

Certificate Programs

- California State University—Dominguez Hills (Rancho Los Amigos Medical Center)
- University of California at Los Angeles
- New York University
- Northeast Metro Technical Institute (NMTI)
- Northwestern University Medical School
- Shelby State Community College
- University of Strathclyde (Scotland)

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California State University—Dominguez Hills

Rancho Los Amigos Medical Center
7450 Leeds Street
Downey, California 90242
(213) 940-7655

Program:	Long Term Certificate Course in Orthotics
Degree or Certificate Awarded:	Joint Certificate from Rancho Los Amigos and California State University
ABC Accreditation:	Yes
Level of Training:	Orthotic Practitioner
Prerequisites/Entrance Requirements:	Bachelor degree (ABC eligible and A.A. degree candidates considered)
Medical School Affiliation:	California State University, Dominguez Hills
Number of New Students Admitted:	Orthotics: 6
Faculty/Student Ratio:	1:6
Length of Program:	1 year
Dates of Course:	July to June
Application Deadline:	January
Address of Registrar:	Rancho Los Amigos Medical Center, Orthotic Dept., 7450 Leeds Street, Downey, California 90242

PROGRAM DESCRIPTION

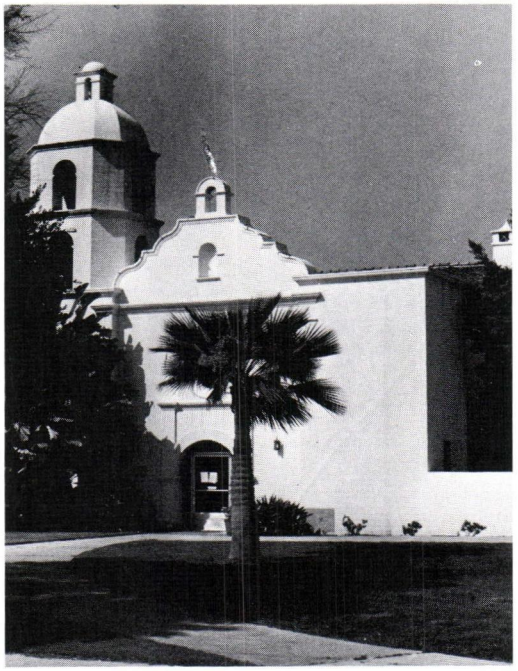
The Orthotic Department at Rancho Los Amigos Medical Center, in affiliation with California State University, Dominguez Hills, offers a one year long-term certificate course in orthotics, which is accredited by the American Board for Certification in Orthotics and Prosthetics, Inc.

Rancho Los Amigos Medical Center, located south of Los Angeles, is a major multi-disciplinary rehabilitation facility with an international reputation in orthopedics and rehabilitation.

The Orthotic program is designed to exceed the requirements established by the American Board for Certification, and students are well prepared for entry into the profession at the practitioner level. Students receive a mixture of practical laboratory instruction, classroom didactics, and daily interaction with patients in a wide variety of actual clinical situations. Students rotate through various services designed to acquaint them with the more prevalent pathologies and treatment philosophies. These services include spinal cord injury, stroke, spina bifida, muscle disease, diabetes, arthritis, cerebral palsy, post polio, and spine deformities.

The didactic portion of the course is divided into lower limb, upper limb, and spine. Each of these divisions contains daily classroom instruction in anatomy (including cadaver dissection), kinesiology, pathology, pathomechanics, and orthotic design principles. Other specialized classes include gait analysis, biomechanics, muscle testing, and strength of materials.

The laboratory portion is designed to teach students how to fabricate orthotic systems in the following categories: lower limb, upper limb, spine. With the exception of basic orthoses in the early weeks of the course, these systems are made for actual patients. Experience with hand tools and light duty power equipment (band saw, drill press, sander, etc.) is desirable.



Administration Building at Rancho Los Amigos Hospital.

During non-classroom time, students are assigned to a staff orthotist and are involved in patient evaluation, measuring, fabrication, and fitting of various orthoses. In addition, they attend such activities as out-patient clinics, ward rounds, and conferences.

In the early weeks, students spend half a day in classroom/lab activities and half a day in clinical activities. All ABC-required orthotic systems are fabricated during this period. Many other orthoses are fabricated throughout the year and serve to build on basic experience and skill. As the year progresses, less time is spent in formal classroom activities and more is spent in clinical activities.

This program is designed to build competency in all areas of orthotic practice including patient management, system design and fabrication, fitting and problem-solving, and interaction with other health team members.

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University of California at Los Angeles

Prosthetics/Orthotics Education Program
UCLA Rehabilitation Center
Room 22-46
1000 Veterans Avenue
Los Angeles, California 90024

Program:	UCLA Prosthetics Education Program
Degree or Certificate Awarded:	Prosthetics Certificate
ABC Accreditation:	Yes
Level of Training:	Post-Graduate
Prerequisites/Entrance Requirements:	Baccalaureate Degree required. Selection is competitive based upon aptitude, educational background, and work experience.
Medical School Affiliation:	UCLA School of Medicine
Number of New Students Admitted:	14
Faculty/Student Ratio:	1:7
Length of Program:	6 months
Dates of Course:	September through February
Application Deadline:	April 15
Address of Registrar:	Prosthetics Education Program, UCLA Rehabilitation Center, Room 22-46, 1000 Veteran Avenue, Los Angeles, California 90024

GENERAL DESCRIPTION

The UCLA Prosthetics Education Program offers an intensive, up-to-date, dynamic curriculum designed to prepare the student for professional practice. Over 1,000 hours of classroom lectures, demonstrations, and clinical patient contact are included in the six month course. Instruction covers time honored fundamentals of prosthetic design, function, and alignment, as well as the more recent advances in prosthetic technology that are essential to a successful, modern prosthetics practice. Integrated into the certificate program are annual seminar courses which feature the latest in new techniques, components, and materials aimed primarily at the experienced clinical practitioner. Through participation in these activities, the certificate student not only receives instruction in recent prosthetic developments, but also is afforded the opportunity to interface directly with a varied group of established professionals.

SELECTION PROCESS

The UCLA Staff encourages all prospective applicants to become as involved with prosthetics as possible through affiliation with local ABC certified prosthetic facilities in their communities. This will give the applicant an opportunity to develop a familiarity with prosthetic practice and better determine if the profession is suitable to his or her needs. Visits to the UCLA facilities are also encouraged if possible, but are not mandatory to the selection process.

Since UCLA typically receives about three to four times the number of applications as there are spaces for certificate students, the selection process is necessarily competitive. Each applicant is required to take two written tests which can be forwarded by mail for completion at a testing center near the applicant's home. One of the tests assesses mechanical aptitude and the other general knowledge. Transcripts of the applicant's college work are also required and are reviewed primarily for course content rather than grades alone. Letters of recommendation may be forwarded for inclusion in the applicant's selection folder if desired.

When the April 15 deadline for applications is reached, all completed applicant files are independently reviewed and arranged in order of selection priority by the individual staff members. Staff then comes together to compare, justify, and discuss their selections and resolve any differences. Once complete, the top fourteen selectees are notified along with a number of alternates. Since in recent years one or more primary selectees has declined acceptance, alternates may expect to be notified of ultimate acceptance.

PROGRAM FACILITIES

All classes in the UCLA Prosthetics Education Program meet in the Rehabilitation Center, West Medical Campus, which is located a few blocks away from the main UCLA Campus and within walking distance of the UCLA School of Medicine and Hospital.

The teaching area contains a complete student laboratory equipped with the typical equipment found in the modern prosthetics fabrication facility, patient casting and fitting rooms, classrooms, and a gait analysis capability centered around video recording and playback equipment.

PROGRAM OF INSTRUCTION

The UCLA Prosthetics Certificate Program follows a proven formula of instruction which balances didactic classroom lectures on the various subjects relating to prosthetics with hands-on clinical experience. The ABC minimum standards of subject matter and hours required for each phase covered are fully met and are exceeded in many cases. Accordingly, students will have the opportunity to work with modern componentry, materials and technique.

Included in the curriculum is the UCLA-developed Total Surface Bearing Suction Below-Knee Socket design and the UCLA Ischial Containment Above-Knee Prosthesis. Both of these techniques emphasize precision casting and modification procedures as necessary for more anatomical and comfortable prosthetic fittings.

The popular myoelectric and switch-operated electric upper extremity systems are covered in detail in hands-on fittings of both below and above-elbow patients. These courses are usually conducted by representatives from the manufacturer of the components, and successful completion qualifies the student for access to the systems in future patient fittings.

FINANCIAL AID

Neither UCLA nor the Prosthetic Certificate Program are prepared to offer scholarships, stipends, or financial aid to students. Typically, selectees apply for and receive funds for tuition through the Guaranteed Student Loan (GSL) program of the federal government. Staff members are familiar with GSL application procedures and will guide the student through the application process.

LIVING ENVIRONMENT

The UCLA campus is situated in the western part of Los Angeles, an area known for limited affordable housing. Many students find it necessary to go some distance from the campus before finding suitable accommodations. Under such circumstances an automobile is almost an absolute necessity for commuting. In the past, however, students have gone together in groups to cost share an apartment beyond the affordability of one. Staff members are prepared to help establish lines of communication between selectees who wish to join together in such an arrangement prior to the beginning of each annual class.

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New York University

Post Graduate Medical School
317 East 34th Street
New York, New York 10016
(212) 340-6686

Program:	Prosthetics & Orthotics Certificate program
Degree or Certificate Awarded:	Professional Certificate—Orthotics and Prosthetics
Level of Training:	Practitioner
ABC Accreditation:	Fully accredited
Prerequisites/Entrance Requirements:	Baccalaureate degree from an accredited institution, including prerequisite introductory courses in biology, mathematics (algebra and trigonometry), physics, psychology, and chemistry
Medical School Affiliation:	New York University Post-Graduate Medical School
Number of New Students Admitted:	18—combined prosthetic and orthotic instruction
Faculty/Student Ratio:	1:6–8 (in laboratories)
Length of Program:	Four semesters, including the intervening summer
Dates of Courses:	September to May each year, as well as clinical affiliation in the intervening summer
Application Deadline:	June 1
Address of Registrar:	Prosthetics and Orthotics, New York University Post-Graduate Medical School, 317 East 34th Street, New York, New York 10016

PROGRAM DESCRIPTION

The Certificate Program at the New York University Post-Graduate Medical School consists of 18 courses offered over a period of four 15-week semesters and the intervening 13-week summer session—this latter period being devoted exclusively to clinical affiliation in accredited prosthetic and orthotic facilities. In comparison to other certificate programs, it is noteworthy that this is the only one with 1,000 hours (25 full-time weeks) of clinical practice. This work experience, in addition to our increased emphasis on theoretical and didactic instruction, makes this program unique.

Needless to say, these additional time-consuming experiences would not be included if they did not significantly strengthen the professional preparation of the students. The academic and laboratory courses, together with the required field experience, provide a high degree of entry-level professional competency and establish the strongest possible foundation upon which to build a career in prosthetics and orthotics.

For a listing of course descriptions, see NYU Baccalaureate Program, pages 37–38.

First Year

Course	*Points*
Fall	
Biomechanics	2
Mechanics	3
Prosthetic and Orthotic Techniques	6
Biostatistics	3
Human Anatomy	3
TOTAL	17
Spring	
Below-Knee Orthotics	4
Below-Knee Prosthetics	6
Psychology of the Physically Disabled	2
Properties of Materials	2
Clinical Affiliation	1
Physiology	2
TOTAL	17
Summer	
Clinical Affiliation	13 weeks

Second Year

Course	*Points*
Fall	
Spinal Orthotics	5
Upper-Limb Orthotics	4
Upper-Limb Prosthetics	5
Clinical Affiliation	3
TOTAL	17
Spring	
Above-Knee Orthotics	4
Above-Knee Prosthetics	8
Professional Aspects of Prosthetics and Orthotics	2
Clinical Affiliation	2
Human Anatomy (laboratory)	1
TOTAL	17
TWO YEAR TOTAL	68

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Northeast Metro Technical Institute (NMTI) (University of Minnesota)

3300 Century Avenue North
White Bear Lake, Minnesota 55110
(612) 770-2351

Program:	Orthotics and Prosthetics Training Program
Degree or Certificate Awarded:	Joint Certificate of Completion from NMTI and the University of Minnesota Medical School
Level of Training:	Orthotic Practitioner/Prosthetic Practitioner
ABC Accreditation:	Yes
Prerequisites/Entrance Requirements:	One year fabrication experience in intended area of study and a minimum of an Associate Degree. Technician course or special basic lab skills.
Medical School Affiliation:	University of Minnesota Medical School
Number of New Students Admitted:	Orthotics: 12
Faculty/Student Ratio:	1:6
Length of Program:	Orthotics Practitioner—Nine months Prosthetics Practitioner—Nine months
Dates of Courses:	September through June
Application Deadline:	Applications taken at all times for waiting list
Address of Registrar:	Admissions, Northeast Metro Tech, 3300 Century Avenue North, White Bear Lake, Minnesota 55110

PROGRAM DESCRIPTION

NMTI offers ABC accredited programs in orthotics and prosthetics on both technician and practitioner levels. The programs are integrated into a career ladder concept enabling students to earn Associate and Bachelor degrees of applied science.

The curriculum is up-to-date and innovative based on national surveys of experts in the field. A fully developed library and an individualized training approach allow students greater freedom in their learning experience.

PRACTITIONER PROGRAMS

As an outgrowth of the successful technician training programs, NMTI offers the accredited Prosthetic and Orthotic Practitioner Programs jointly with the University of Minnesota Medical School.

The nine month Prosthetic Practitioner Program covers below-knee, above-knee, and upper limb patient management techniques and fitting skills. Actual practice fitting amputees is critiqued by instructors and students in group settings. Transparent check sockets are used to increase socket interface understanding during patient fittings. Modular prosthetics, fluid, and myoelectric control are all part of the curriculum.

The Orthotic Practitioner Program is designed to provide the student with the fundamental knowledge of patient management and standard techniques for measurement, fabrication, and fitting in the area of lower, upper, and spinal orthotics.

In conjunction with written and audio-visual materials, lecture demonstrations, and lab work, students receive instruction by University of Minnesota medical staff as a regular part of the curriculum.

In both practitioner programs, students attend clinics at major medical health care centers. These affiliations provide students with essential off-campus training experience where clinical team cooperation may be observed. Instruction is personalized and competency-based, and classes are in session six hours per day, with provisions made for students to use the Learning Resource Center beyond the six hours.

Prosthetic Practitioner

We have featured some of the major topic and skills areas with approximate hours for our Prosthetic Practitioner program. A complete listing is available when you visit our counseling department.

Skill/Topic Area	*Average Hours*
Prosthetist role	32
Anatomy	83
Lower limb prosthetics	503
Upper Limb prosthetics	446
TOTAL	1080

Orthotic Practitioner

We have featured some of the major topic and skills areas with approximate hours for our Orthotic Practitioner program. A complete listing is available when you visit our counseling department.

Skill/Topic Area	*Average Hours*
Introduction	30
Lower limb—introduction	96
Lower limb—below-knee	150
Lower limb—above-knee	154
Upper limb	210
Spinal orthotics—general	180
Spinal orthotics—scoliosis & kyphosis	72
Clinical experience	180
TOTAL	1080

Hours and topics subject to change.

ACTIVE STAFF

The staff is professionally active in orthotics and prosthetics regional and national events. The program regularly hosts regional seminars and administers the American Board for Certification Technician Registration Examination. Na-

tionally recognized orthotists and prosthetists and registered technicians serve on all the program's advisory committees.

ENVIRONMENT

In addition to the professionally active program, students will find a modern, well-lit and climate-controlled working environment. Highlights include the newly designed patient fitting areas and a cheerful laboratory with specialty wood, metal, plastic, plaster and sewing rooms. These rooms are well-ventilated and noise controlled work areas. Special effort has been made to simulate as closely as possible the "real job" situation. Learning resource centers and libraries provide the student and instructional staff with ample standard and contemporary materials pertaining to the field.

LOCATION

NMTI is located in beautiful White Bear Lake, a lakeside suburb of the Twin Cities, Minneapolis-St. Paul. Students take advantage of the many available cultural and recreational activities in the metro area throughout the year while attending NMTI.

APPLICATIONS PROCEDURE

The start date for the Practitioner programs is September. Processing of applications takes three months before start dates.

For further information on the Prosthetic or Orthotic Programs regarding tuition, fees, course content, housing, application forms and entrance requirements, write:

Director
Martha Yucel, M.A.

Prosthetic Practitioner Program
Attention: Steven Stolberg, C.P.

Orthotic Practitioner Program
Attention: Ed Haddon, C.O.

Lead Instructor:
Kenneth L. Chagnon, B.S., C.P.O.

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Northwestern University Medical School

Prosthetic-Orthotic Center
345 East Superior, 17th Floor
Chicago, Illinois 60611
(312) 908-8006

Program:	Certificate Programs in Orthotics and Prosthetics
Degree or Certificate Awarded:	Certificate in Orthotics; Certificate in Prosthetics
ABC Accreditation:	Yes
Level of Training:	Certificate
Prerequisites/Entrance Requirements:	B.S. or B.A., preferably in a health-science field; coursework in human anatomy
Medical School Affiliation:	Northwestern University Medical School
Number of New Students Admitted:	Orthotics: 20; Prosthetics: 18
Faculty/Student Ratio:	1:6
Length of Program:	4½ months each
Dates of Courses:	January–May and August–December of each year
Application Deadline:	6 months prior to the start of the program
Address of Registrar:	345 E. Superior Street, 17th floor, Chicago, Illinois 60611; (312) 908-8006

PROGRAM DESCRIPTION

Northwestern University's Prosthetic-Orthotic Center functions as a division of the Medical School's Department of Orthopaedic Surgery. Located within the McGaw Medical Center of Northwestern University and housed in the Rehabilitation Institute of Chicago, NUPOC is ideally situated to provide its prosthetic-orthotic trainees with unique educational opportunities. NUPOC's students participate in prosthetic-orthotic clinics and orthopedic conferences on a weekly basis.

The Center offers separate certificate programs for persons interested in pursuing careers as prosthetic or orthotic practitioners.

PROSTHETIC CERTIFICATE PROGRAM

The content of the prosthetic certificate program consists of didactic and laboratory instruction in prosthetics. Topics include anatomy, kinesiology, gait analysis, patient evaluation, prosthetic components, principles of prescription, measurement, casting, cast modification, alignment, and fabrication and fitting of upper and lower-limb amputees.

ORTHOTIC CERTIFICATE PROGRAM

The content of the orthotic certificate program consists of didactic and laboratory instruction in orthotics. Course work includes anatomy and physiology, pathology, normal and pathological gait, biomechanics, measurement, casting, cast modification, fabrication and fitting of upper-limb, lower-limb, and spinal orthotics.

PREREQUISITES

For admission to the certificate program in prosthetics-orthotics, priority is given to individuals holding a baccalaureate or higher degree in a related field. Examples of curricula considered to be "related" are: occupational and physical therapy, biology, physiology, kinesiology, physical science, biomedical engineering, and engineering sciences. Applicants should have some basic knowledge in plasterwork, laminating, and general laboratory experience. Actual patient contact is strongly suggested. It is desirable, but not mandatory, that applicants have prior work experience in a prosthetic-orthotic facility which is certified by the American Board for Certification.

Additionally, the faculty strongly recommends that a student not attempt to complete two separate certificate programs in a single calendar year.

FACULTY

Charles M. Fryer, M.S., *Director*
May Cotterman, M.S., L.P.T., *Assistant Director*
James C. Russ, C.O., *Director, Orthotic Education*
Gunter Gehl, C.P., *Director, Prosthetic Education*
Michael D. Brncick, C.P.O., *Instructor*
Arnel H. Dobrin, M.A., *Instructor*
Mark L. Edwards, C.P., *Instructor*
Scott D. Silver, C.O., *Instructor*
Joan M. Zinter, C.O., *Instructor*

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Shelby State Community College

Orthotics/Prosthetics Program
Department of Allied Health Sciences
737 Union
P.O. Box 40568
Memphis, Tennessee 38174-0588
(901) 528-6818

Program:	Orthotics/Prosthetics Program
Degree or Certificate Awarded:	Associate of Applied Science and/or Long Term Certificate
Level of Training:	Orthotic Practitioner/Prosthetic Practitioner
ABC Accreditation:	Fully accredited
Prerequisites/Entrance Requirements:	High School diploma for Associate admission. Associate in progress for Certificate admission
Number of New Students Admitted:	Orthotics: 18; Prosthetics: 18
Faculty/Student Ratio:	1:6–1:9 in laboratories
Length of Program:	Two years Associate; 10½ months Certificate
Dates of Courses:	Associate begins each September; Certificate begins each July
Application Deadline:	April 15; applications may be accepted up to the start of class, on a space available basis
Address of Registrar:	737 Union, P.O. Box 40568, Memphis, Tennessee 38174-0568

PROGRAM DESCRIPTION

The Orthotics-Prosthetics program at Shelby State Community College is designed to meet the ever-growing demand for professionally trained orthotics-prosthetics practitioners. At present, accredited schools and universities in North America are unable to replace those practitioners lost to attrition. Several schools and universities throughout the United States have certified orthotic-prosthetic practitioner programs. SSCC is one of the youngest of these programs, having been granted accreditation by the American Board for Certification in Orthotics and Prosthetics in 1982.

The two year Orthotic/Prosthetic Practitioner program is designed to prepare students for employment in commercial or government facilities. Upon successful completion of the program, the student will be awarded an Associate of Applied Science Degree and/or a Long Term Certificate in Orthotics and Prosthetics.

LOCATION

Orthotic-Prosthetic Practitioner students will take all their required courses at Shelby State's mid-town campus, which is less than a mile from the mighty Mississippi River and the hustle and bustle of a rejuvenated downtown Memphis. Professional courses are offered in the Allied Health building, which is one of 11 ultra-modern buildings that make up the mid-town complex. The Orthotic and Prosthetic program has its own classrooms, library, and well-equipped laboratories for both orthotics and prosthetics. The 17 acre campus is located across the street from The University of Tennessee Center for the Health Sciences with easy access to several major medical facilities. The Allied Health building is located directly across from the gymnasium which seats 2,500 and features a sauna, weight room, racquetball courts and dressing rooms for men and women. Four tennis courts are located adjacent to the gym. A modern cafeteria serving hot meals, short orders, and snacks is located in the heart of the campus, as is a full-service bookstore. Most Shelby State facilities are easily accessible to handicapped students.

ACCREDITATION

Shelby State Community College is accredited by the Southern Association of Colleges and Schools as a two year degree-granting institution. Also, accreditation has been granted in both orthotics and prosthetics by the American Board for Certification in Orthotics and Prosthetics, Incorporated.

SELECTION

Selection for the Orthotics/Prosthetics program is made by an admissions committee from those individuals who have been accepted as regular admission students by Shelby State. Generally, this means that the College must have on file (1) a completed SSCC Admissions Application, (2) a high school transcript or GED certificate, (3) an American College Testing (ACT) exam score, and/or (4) results of the institutional placement assessment test.

A completed Allied Health Admissions Application must also be filed with the Shelby State Admissions Office prior to the April 15 deadline for the Orthotics/Prosthetics program.

Students must meet all prerequisite requirements before official acceptance into the program will be granted.

HOW TO APPLY

For an admissions application and specific information on applying to Shelby State, write or call:

Admissions Office
Shelby State Community College
737 Union Avenue
P.O. Box 40568
Memphis, Tennessee 38174-0568
(901) 528-6707

For additional information on Shelby State's Orthotic/Prosthetic program, or

other health-related curricula, contact:

Coordinator, Orthotics-Prosthetics
Department of Allied Health Sciences
Shelby State Community College
761 Linden Avenue
P.O. Box 40568
Memphis, Tennessee 38174-0568
(901) 528-6818

CURRICULUM PLAN

English Composition I
Speech
College Algebra
Medical Terminology
Chemistry for the Health Sciences
Physics for the Health Sciences
Anatomy and Physiology I & II
History
Psychology
Physical Education
Arts
Introduction to Orthotics/Prosthetics
Orthotics/Prosthetics Materials and Methods
Clinical Kinesiology
Pathophysiological Conditions
Spinal Orthotics
Upper Extremity Orthotics
Lower Extremity Orthotics
Upper Extremity Prosthetics
Below-Knee Prosthetics
Advanced Below-Knee Prosthetics
Above-Knee Prosthetics

RECOMMENDED COURSE SEQUENCE

First Year

(same for Orthotics and Prosthetics)

Course	*Hours*
Fall	
Composition I, Group I	3
Anatomy & Physiology, Group 4	4
Algebra, Group 3	3
Medical Terminology	3
Chemistry for the Health Sciences	4
TOTAL	17
Spring	
Speech, Group 2	3
Anatomy & Physiology II	4
Physics for the Health Sciences	4
History, Group 6	3
Psychology, Group 5	4
TOTAL	17
Summer I	
Health & Physical Education, Group 8	3
TOTAL	3

Second Year Option

Course	*Hours*
Summer II	
Introduction to Orthotics-Prosthetics*	3
Orthotics-Prosthetics Materials & Methods*	3
TOTAL	6
Fall	
Spinal Orthotics	5
Upper Extremity Orthotics	4
Clinical Kinesiology	3
TOTAL	12
Spring	
Lower Extremity Orthotics	8
Pathophysiological Conditions	3
Arts, Group 7	3
TOTAL	14

Total Core	40 hours
Total Concentration	29 hours
Grand Total	69 hours

Second Year Prosthetics Option

Students seeking a Bachelor of Professional Studies degree in Orthotics and Prosthetics from Memphis State University first earn the Associate of Applied Science degree in Orthotics/Prosthetics from Shelby State Community College. (Students with O/P training from another institution should consult with the department before applying to this program.)

For further information and for a copy of the complete guidelines, write to the Department of Allied Health Sciences at Shelby State Community College.

To request an Allied Health Application for the program and an entrance application for the College, please write the Admissions Office.

Course	*Hours*
Summer II	
Introduction to Orthotics/Prosthetics*	3
Orthotics/Prosthetics Materials and Methods*	3
TOTAL	6

Fall

Upper Extremity Prosthetics	5
Clinical Kinesiology	3
Below-Knee Prosthetics	4
TOTAL	12

Spring

Advanced Below-Knee Prosthetics	3
Above-Knee Prosthetics	8
Pathophysiological Conditions	3
Arts, Group 7	3
TOTAL	17

Total Core	40 hours
Total Concentration	32 hours
Grand Total	72 hours

Long Term Certificate: Orthotics

Course	*Hours*
Second Summer Session	
Introduction to Orthotics-Prosthetics*	3
Orthotics/Prosthetics Materials and Methods*	3
TOTAL	6
Fall	
Spinal Orthotics	5
Upper Extremity Orthotics	4
Clinical Kinesiology	3
TOTAL	12
Spring	
Lower Extremity Orthotics	8
Pathophysiological Conditions	3
TOTAL	11
Total semester hours	29

Long Term Certificate: Prosthetics

Course	*Hours*
Second Summer Session	
Introduction to Orthotics-Prosthetics*	3
Orthotics/Prosthetics Materials and Methods*	3
TOTAL	6
Fall	
Upper Extremity Prosthetics	5
Clinical Kinesiology	3
Below-Knee Prosthetics	4
TOTAL	12
Spring	
Advanced Below Knee Prosthetics	3
Above-Knee Prosthetics	8
Pathophysiological Conditions	3
TOTAL	14
Total semester hours	32

Through the recently established Center of Excellence in Rehabilitation Technology Education, SSCC will bring experts from orthotics/prosthetics and physical therapy together with individuals knowledgeable in the instructional media field to develop both computer-assisted and interactive video teaching modules. These modules will focus on specific medical problems such as spinal cord injuries, cerebral palsy, burns, lowback problems, and multihandicaps. Through the use of these tools, both the instruction and evaluation of patient management in these areas could be greatly enhanced.

*Not required for extension of title students

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University of Strathclyde

National Centre for Training and Education in Prosthetics and Orthotics
Curran Building
131 St. James' Road
Glasgow G4 OLS, Scotland

Program:	Prosthetics and Orthotics
Degree or Certificate Awarded:	Bachelor of Science (Honours) of the University of Strathclyde
Level of Training:	Honours degree level
ABC Accreditation:	N/A
Prerequisites/Entrance Requirements:	Scottish University level—science based, or academic equivalent
Medical School Affiliation:	Area and national clinical units
Number of New Students Admitted:	14 combined prosthetics/orthotics
Faculty/Student Ratio:	1:6
Length of Program:	4 years (total 166 weeks)
Dates of Courses:	Commencement early October
Application Deadline:	February
Registrar:	National Centre for Training & Education in Prosthetics & Orthotics, University of Strathclyde, Curran Building, 131 St. James' Road, Glasgow G4 OLS, Scotland

PROGRAM DESCRIPTION

The National Centre offers a four year full-time course leading to the award of a Bachelor of Science (Honours) in Prosthetics and Orthotics. The program covers all aspects of education and training in both prosthetics and orthotics. The essential ingredients of the program are:

1. Academic Studies
2. Practical Training
3. Clinical Experience

The first three years of the course, each of which extends over 40 weeks (four ten-week terms), are devoted to academic studies integrated with practical training in the fitting and fabrication of prosthetic and orthotic devices. During the fourth year, the student spends 46 weeks (23 weeks prosthetics, 23 weeks orthotics) in clinical centres which have been authorized to take part in our clinical placement program. During this period, which is controlled, structured and examinable, the student, under supervision, applies the skills which he has learned in the first three years of the course in a clinical environment. The class of honours awarded is dependent on the student's performance in his third and fourth years. Classes of award are First Class, Second Upper Class, Second Lower Class, Third Class, and Unclassified.

ACADEMIC STUDIES

The subjects included in the prosthetics and orthotics curriculum range over the basic physical and life sciences and the application of these to prosthetics and orthotics and related medical and social topics. The academic studies program is conducted in the first three years of the course, as shown below:

First Year

Life Science I	125 hours
Mechanics and Biomechanics I	100 hours
Prosthetics and Orthotics Science I	480 hours*
Clinical Studies I	75 hours
Mathematics and Statistics	75 hours
Design and Graphical Communications	75 hours
Electrotechnology	75 hours
TOTAL	1,000 hours

Student receiving instruction during casting for ankle-foot orthosis.

Second Year

Life Science II	125 hours
Mechanics and Biomechanics II	125 hours
Prosthetics and Orthotics Science II	660 hours*
Clinical Studies II	75 hours
Computer Studies	25 hours
TOTAL	1,010 hours

Third Year

Life Science III	125 hours
Mechanics and Biomechanics III	125 hours
Prosthetics and Orthotics Science III	660 hours*
Clinical Studies III	75 hours
Materials Technology	75 hours
TOTAL	1,060 hours

The Clinical Studies lectures and demonstrations take place in collaborating hospitals throughout Scotland and are undertaken by Senior Clinicians drawn from the register of the National Centre's Clinical Associates.

PRACTICAL TRAINING

The practical training is provided in the workshop and clinical facilities of the National Centre for Training and Education in

*including practical training

Prosthetics and Orthotics during the first three years of the degree course. During this period the time allocated to practical training amounts to 58 weeks distributed as follows:

First Year	16 weeks
Second Year	21 weeks
Third Year	21 weeks
TOTAL	58 weeks

In the practical training sessions, the student receives closely supervised instruction in workshop practice and in the manufacture and fitting of the major types of prosthetic and orthotic devices to patient subjects. The instruction takes the form of lectures and demonstrations, followed by the fitting and fabrication by the student under the close supervision of a trained instructor. Emphasis throughout is on measurement, casting, fitting and adjustment—as opposed to fabrication techniques—although the student also performs the operations required of technicians. The practical training course is integrated throughout with the Prosthetics and Orthotics Science courses and is examinable.

The time allocated to the different aspects of prosthetic and orthotic practice is as follows:

Introducing Workshop Practice	190 hours
Lower Limb Prosthetics	580 hours
Upper Limb Prosthetics	340 hours
Lower Limb Orthotics	340 hours
Upper Limb Orthotics	160 hours
Spinal Orthotics	190 hours
TOTAL	1,800 hours

CLINCAL EXPERIENCE

The fourth year of the degree course is spent in approved Hospital Prosthetic and Orthotic Clinics. During this year, the student spends 23 weeks in a prosthetic clinic and a further 23 weeks in an orthotics clinic. The clinical work is supervised by an experienced prosthetist/orthotist, and the student will gain a wide experience of clinical work. At the end of each 23 week placement, a clinical examination is conducted in the National Centre.

QUALIFICATIONS FOR ENTRY

The present Scottish Certificate of Education qualifications competitive entry standard for entry from fifth year is as follows: Four Higher Grade Passes, including:

Mathematics—Grade 'B' Pass
Physics—Grade 'B' Pass
and preferably Chemistry or Biology

Applicants from the sixth year are required to show improvement over the above standard.

Full consideration is given to candidates with a combination of subjects and pass grades of a standard equivalent to the above. Provision is made for applicants with other qualifications (e.g. National Certificates or Diplomas) and for mature applicants to be considered for entry.

Entry can only be made into the first year of the course.

Candidates with General Certificate of Education 'A' level qualifications require three passes, including Mathematics at 'C' Grade and Physics at 'C' Grade and preferably Chemistry or Biology.

Equivalent overseas qualifications are acceptable for entry to the University. For general guidance, applicants from the USA would be expected to have completed their first year at an American University and to have obtained "good grades." Each application is judged on its individual merits.

SELECTION OF TRAINEE PROSTHETISTS/ ORTHOTISTS

Trainees are selected from suitably qualified applicants by means of interview. In the case of overseas applicants, this can normally be arranged in the country of residence.

FURTHER INFORMATION

Requests for further information relating to this course should be addressed to the Director of the Centre, Professor J. Hughes.

Residency Programs

- **Cleveland Clinic Foundation**
- **Gillette Children's Hospital Habilitation Technology Labs**
- **Newington Children's Hospital**
- **The University of Oklahoma**
- **Shands Hospital at the University of Florida**

Orthotics and Prosthetics, Volume 42, Number 1, pp. 67–68.

The Cleveland Clinic Foundation

9500 Euclid Avenue
Cleveland, Ohio 44106
(216) 444-6285

Program:	Orthotic and Prosthetic Residency
Degree or Certificate Awarded:	Diploma following successful completion
ABC Accreditation:	Yes
Level of Training:	All technical and clinical practical experience to meet ABC requirements for certification
Prerequisites/Entrance Requirements:	Successful completion of all education requirements as designated by ABC for certification
Number of New Students Admitted:	Orthotics: 2; Prosthetics: 1
Faculty/Student Ratio:	Orthotics: 3 practitioners to 2 residents; Prosthetics: 2 practitioners to 1 resident
Length of Program:	One year
Dates of Courses:	Courses begin either January 1 or July 1 and run for one year
Application Deadline:	March 1 and October 1
Address of Registrar:	Cleveland Clinic Foundation, Department of Orthotics & Prosthetics, Desk W-10, 9500 Euclid Avenue, Cleveland, Ohio 44106

PROGRAM DESCRIPTION

The Cleveland Clinic Foundation is comprised of a 1000+ bed hospital unit and outpatient clinic which provides care in 38 specialties and 67 subspecialties. It is the second largest group practice in the world with a full time professional staff of over 350 physicians and scientists.

The Cleveland Clinic Education Foundation sponsors the nation's largest free-standing post-graduate medical education program. It currently includes 500 physicians in 33 approved residency programs and 550 medical students annually rotating through internships. There are also over 25 residency/internship programs in allied health and nursing education programs.

The Orthotic and Prosthetic residency program is structured to provide a combination of laboratory and clinical experience that is required by the ABC to sit for certification. Because the Cleveland Clinic Foundation is a teaching hospital, there are a number of additional education programs available to the residents during their stay.

Specific training in areas related to orthotics and prosthetics is also provided, such as surgical scrub technique, infectious disease orientations, hazardous chemical review programs, and basic science presentations. Weekly attendance at Orthopaedic Grand Rounds and biweekly attendance at interdepartmental orthotic and prosthetic education programs are required.

Individuals interested in applying for the residency program, or those who would like a more detailed description of the program should contact: Director of Orthotics and Prosthetics, Cleveland Clinic Foundation, 9500 Euclid Avenue, Desk W-10, Cleveland, Ohio 44106.

Orthotics and Prosthetics, Volume 42, Number 1, p. 69.

Gillette Children's Hospital Habilitation Technology Labs

Residency Program
200 East University Avenue
St. Paul, Minnesota 55101

Program:	Residency in Pediatric Orthotics
Degree or Certificate Awarded:	None, except a letter on request
Level of Training:	Residency
Prerequisites/Entrance Requirements:	Completion of post-graduate orthotic practitioner courses, or a bachelor of science in orthotics
Medical School Affiliation:	Gillette Children's Hospital
Number of New Students Admitted:	1
Faculty/Student Ratio:	5:1
Length of Program:	6 months
Dates of Courses:	Starting date flexible
Application Deadline:	None
Address of Registrar:	J. Martin Carlson, Director of Habilitation Technology, Gillette Children's Hospital, 200 E. University Avenue, St. Paul, Minnesota 55101

PROGRAM DESCRIPTION

The residency is informal and experiential. It is structured to provide the resident with experience in pediatric upper extremity and lower extremity, and spinal orthotics, custom seating, and adaptive equipment. Our laboratory is organized into specialty teams and the resident works for a time with each team. The resident is able to access a variety of weekly orthopedic clinics and daily orthopedic conferences, as well as the Habilitation Technology staff development program. The resident is encouraged to discuss alterations in specialty team assignments as may fit his-her needs. The resident is encouraged to spend some time each week on a special study or design project and write a paper on that topic.

Orthotics and Prosthetics, Volume 42, Number 1, p. 70.

Newington Children's Hospital

181 E. Cedar Street
Newington, Connecticut 06111
(203) 667-5360

Program:	Orthotics and Prosthetics Residency Program
Level of Training:	This program is intended for graduates of ABC accredited orthotics and prosthetics practitioner education programs who require one year of experience before taking the ABC Practitioner Certification Examination
Degree or Certificate Awarded:	Residency Diploma
Length of Program:	One year
Prerequisites/Entrance Requirements:	Graduate from ABC accredited practitioner education program, requiring one year of experience
Number of New Students Admitted:	2
Faculty/Student Ratio:	1:1
Dates of Courses:	July 1–June 30; January 1–December 30
Application Deadline:	March for the July 1 starting date; November for the January 1 starting date

GENERAL DESCRIPTION

In 1980 Newington Children's Hospital Orthotic & Prosthetic Department established the post-graduate resident orthotist program. This program is a one-year certificate program designed to meet the ABC experience requirements for certification.

As the professional education of the orthotist/prosthetist becomes more consistent and more concise, it is vitally important to focus on that most important time, the post-graduate year in preparation for certification.

This program is a broad-based professional/technical experience for the graduate orthotist that is deliberately filled with experiences of all kinds—from the most fundamental aspects of our profession, to what we all regard as the higher levels of professional participation: clinics, rounds, and participation in forums and seminars.

Orthotics and Prosthetics, Volume 42, Number 1, pp. 71–73.

The University of Oklahoma

Oklahoma City Campus—Health Sciences Center
Department of Orthopedic Surgery and Rehabilitation
P.O. Box 26307
Oklahoma City, Oklahoma 73126
(405) 271-3644

Program:	Orthotic Residency Program
Degree or Certificate Awarded:	Certificate of completion of clinical affiliation
ABC Accreditation:	Yes
Level of Training:	Post-graduate (Practitioner) Residency
Prerequisites/Entrance Requirements:	Completion of long term orthotic program plus at least a Bachelor of Science degree, or completion of a Bachelor of Science degree in orthotics & prosthetics
Medical School Affiliation:	University of Oklahoma
Number of New Students Admitted:	Orthotics—2
Faculty/Student Ratio:	1:1
Length of Program:	1 year
Dates of Courses:	July 1 to June 30
Application Deadline:	January 1 to May 15
Address of Registrar:	O'Donoghue Rehabilitation Institute, Post Office Box 26307, Oklahoma City, Oklahoma 73126

PROGRAM DESCRIPTION

This residency program is supervised by the Department of Orthopedic Surgery and Rehabilitation at the University of Oklahoma Health Sciences Center. The one-year program will enable residents to meet examination requirements in compliance with the regulation established by the American Board for Certification in Orthotics and Prosthetics.

Each resident will receive experience in both adult and pediatric treatment concepts, as well as a variety of clinical and

The University of Oklahoma Health Sciences Center is located on the Oklahoma City campus.

technical experiences. The program will include direct patient contact and interaction with physicians and other health care professionals.

The Orthotic Department is located in the O'Donoghue Rehabilitation Institute which is centered on the campus of the University of Oklahoma, College of Medicine, in Oklahoma City. Also located on this campus is Oklahoma Children's Memorial Hospital and Oklahoma Memorial Hospital. The program involves all three teaching hospitals and provides a wide variety of experiences to the student. The program's objective is to graduate orthotists with a well-rounded background in the medical field and a high degree of competency. The Orthotic Department utilizes the most up-to-date management techniques and strives to stay abreast of the latest research. Our staff is highly professional and is regarded as an integral part of the Department of Orthopedic Surgery. The Orthotic Department is accredited by the American Board for Certification in Orthotics and Prosthetics and the Association of Children's Orthotic and Prosthetic Clinics.

The program was initiated during 1982 and has now graduated five classes. Our program begins on July 1 and is one year in length.

COURSE CONTENT

The orthotic resident will function as an integral component of the Orthotic Department. Supervision will be provided by the orthotic staff in all clinical situations.

The resident will be expected to rotate through a variety of clinics and have as much patient contact as possible. Instruction will also be provided to enhance the technical skill of the resident.

Also, an original research paper should be completed by the year's end. This research is done in conjunction with the orthopaedic residents or orthotic staff. The paper should be suitable for presentation at a continuing education seminar.

The goal of this resident program is to provide a well-rounded education for the orthotic resident. Also, graduating quality health care professionals is one of the University's objectives.

Candidate Requirements

1. Each candidate must possess at least a Bachelor of Science degree.
2. Each candidate will have succesfully completed either a long-term certificate course in orthotics at an accredited university or have successfully completed a four year program in orthotics from an accredited university.
3. Each candidate should plan to participate in the program for the one year duration, July 1 through June 30.

APPLICATION PROCEDURE

The following items should accompany each candidate's letter of application:

1. Comprehensive curriculum vitae.
2. Two letters of professional recommendation.
3. Recent photograph

Upon receipt of the aforementioned information, your letter of application will be considered by the orthotic resident program acceptance committee. Letters of application will not be accepted after May 15. Notice of acceptance into the program will be made after May 30.

Letters of application should be sent to:

William J. Barringer, C.O.
O'Donoghue Rehabilitation Institute
Post Office Box 26307
Oklahoma City, OK 73126
(405) 271-3644

Orthotics and Prosthetics, Volume 42, Number 1, pp. 74–75.

Shands Hospital at the University of Florida

Orthotics/Prosthetics
Laboratory Residency Program
1600 SW Archer Road
Box J-341
Gainesville, Florida 32610
(904) 395-0373

Program:	Orthotics/Prosthetics Laboratory Residency Program
Degree or Certificate Awarded:	Certificate of Completion Clinical Residency
Level of Training:	This program is intended to introduce a graduate to practitioner level competency in a supervised learning environment
Prerequisites/Entrance Requirements:	Graduate from an ABC accredited practitioner education program
Medical School Affiliation:	University of Florida School of Medicine
Number of New Students Admitted:	1
Faculty/Student Ratio:	1:1
Length of Program:	One year
Dates of Courses:	July 1 to June 30
Application Deadline:	March 1
Address of Registrar:	P.O. Box J-341, Gainesville, Florida 32610, Attention: Charles F. Luckhardt, II, M.Ed., C.P.O.

PROGRAM DESCRIPTION

Shands Hospital at the University of Florida offers a one year certificate Orthotics/Prosthetics Laboratory Residency program. The program is designed to meet the ABC experience requirements for certification.

This multi-disciplinary program provides a unique environment for orthotic patient management. Experiences for residents will be presented stressing basic protocols and building through knowledge to more sophisticated management techniques.

ROLE OF THE ORTHOTIC RESIDENT

The Orthotic Resident will be expected to perform as a professional practitioner, with the resident assuming given responsibilities as competency allows. These responsibilities include patient evaluation, design, fabrication, and fitting patients with appropriate orthoses under professional supervision. As the resident's performance warrants, the instructor-supervisor's role will diminish with the resident managing a patient load on an equal level with other staff orthotists.

At the end of the first quarter of the residency, the resident will submit for approval a topic for publication. The department director will give the resident various dates for submission of the topic, etc.

HOSPITAL FACILITIES

Shands Hospital at the University of Florida is the referral hospital for the state of Florida. Shands Hospital is a 476-bed, private, non-profit corporation. Its medical staff members are also faculty members in the College of Medicine at the University of Florida and are active in teaching, patient care and research.

The full resources of the hospital will be available to the resident as with regular staff.

Orthotic Lab

Orthotic Lab consultations are primarily from the Orthopedic Clinic, which includes adult and pediatric services. The pediatric phase is comprised mostly of cerebral palsy, spina bifida, and scoliosis patients. The adult phase is comprised of fracture bracing, sports medicine, and tumor service. Neurosurgery is second in the number of referrals, consisting mostly of cervical cases, such as low profile halo-vest, peripheral neuropathy, and various support collars. The Shands Orthotic Lab has also recently implemented a prosthetic service.

The Orthotic Lab makes an active effort to keep abreast of any new developments in the profession. The personnel in the Lab are encouraged to provide input for new designs and techniques. Standards for quality patient care are foremost in the operation of the Orthotic Lab, and personnel are given every opportunity to express themselves in implementing quality care. The Orthotic Lab supports an environment of creativity and development for the future.

APPLICATION PROCEDURE

The following items should accompany each candidate's letter of application:

1. Comprehensive curriculum vitae.
2. Two letters of recommendation.
3. A written statement outlining expectations and goals as a future certified orthotic practitioner.
4. Recent photograph.

Upon receipt of the above information, the letter of application will be considered by the orthotic Resident Program Acceptance Committee. Notice of acceptance will be made after April 1. At this time, only one position of Residency is available within the program.

Letters of application should be sent to:

Charles F. Luckhardt, II, M.Ed., C.P.O.
Shands Hospital
P.O. Box J-341
Gainesville, FL 32610

Technician Programs

- **Harmarville Training Institute**
- **Northeast Metro Technical Institute (NMTI)**
- **Spokane Falls Community College**

Orthotics and Prosthetics, Volume 42, Number 1, pp. 77–80.

Harmarville Training Institute

P.O. Box 11386
620 Alpha Drive
Pittsburgh, Pennsylvania 15238-0386
(412) 967-2750

Program:	Orthotics and Prosthetics Technican Programs
Degree or Certificate Awarded:	Diploma; Associate in Specialized Technology Degree
Level of Training:	Orthotics Technician & Orthotic Technology; Prosthetics Technician & Prosthetic Technology
ABC Accreditation:	Accredited for 9 month Orthotic Technician Program; Application for Accreditation for 9 month Prosthetic Technician Program in process (mid-1988)
Prerequisites/Entrance Requirements:	High School Diploma or G.E.D. It is suggested that the applicant be comfortable working with tools and generally working with their hands.
Medical School Affiliation:	Harmarville Rehabilitation Center, Inc., a 200 bed free-standing rehabilitation center with educational affiliations in the rehabilitation health care professions
Number of New Students Admitted:	15 Orthotics and 15 Prosthetics students each term
Faculty/Student Ratio:	1:12 in laboratory
Length of Program:	Orthotics Technician Diploma—9 months Orthotic Technology/Associate in Specialized Technology Degree Program—15 months Prosthetic Technician Diploma—9 months Prosthetic Technology/Associate in Specialized Technology Degree Program—15 months

Dates of Courses:	Quarterly starts—January, April, July, and October
Application Deadline:	Applications may be accepted up to the start of class, on a space available basis
Address of Registrar:	P.O. Box 11386, 620 Alpha Drive, Pittsburgh, Pennsylvania 15238-0386; phone (412) 967-2750

PROGRAM DESCRIPTION

Harmarville Training Institute (HTI) offers an American Board for Certification in Orthotics and Prosthetics (ABC) accredited program in orthotics at the technician level for the nine month program. HTI has a prosthetics program at the technician level that is nine months. Both programs are integrated into a career ladder concept enabling students to earn an Associate in Specialized Technology Degree in 15 months.

HTI is fully accessible to the handicapped. The Institute itself uses over 20,000 square feet of space for academic and administrative activities. The equipment used for instructional purposes at HTI represents both industry standards and state of the art for all the fields taught.

Accreditation and Transfer Agreements

HTI is accredited by the Accrediting Bureau of Health Education Schools and is licensed by the Commonwealth of Pennsylvania Department of Education. HTI is authorized to award an Associate in Specialized Technology Degree (A.S.T.) as structured by the State of Pennsylvania. HTI has also established strong transfer agreements with several local colleges and will seek to develop transfer agreements for graduates throughout the United States.

International Students

International students may also apply for admission to HTI. HTI is authorized by the U.S. Immigration and Naturalization Service (INS) to accept and enroll non-immigrant students under the M-1 visa status. Part-time attendance for international students is prohibited by the INS.

Nature and Scope of Curriculum

Graduates of the nine month diploma program in orthotics are able to perform in a professional manner the necessary standards expected in orthotic patient care. The course of study includes anatomy and physiology, English communications, math and anthropometry, general psychology, plus related orthotic courses that will enable the graduate to secure necessary measurements and tracings; layout patterns and tracings; fabricate various spinal, upper extremity, and lower extremity orthoses; fabricate and finish various types of metal and plastic orthoses; repair and refurbish orthoses; and understand the rationale for the orthoses fabricated. An in-house internship at Harmarville Rehabilitation Center is included in the nine month program.

Graduates of the 15 month orthotic degree program are able to perform advanced orthotic work. Course emphasis is placed upon individualized advanced

projects and methodology. Computer applications, principles of shop management, and an internship are included.

Graduates of the nine month diploma program in prosthetics study general subjects that include anatomy and physiology, general psychology, English communications, math, and anthropometry, as well as courses specific to prosthetics that include introduction to materials and basic machine application, below-knee (Symes) and (P.T.B.) foot, above-knee and upper limb prosthetics. An in-house internship at Harmarville Rehabilitation Center is also included.

The 15 month prosthetic degree program teaches advanced prosthetic fabrication techniques. Course emphasis is placed upon individualized advanced projects and methodology. Recreational prosthesis, principles of shop management, computer applications, and an internship are included.

SUGGESTED COURSE SEQUENCE

Orthotics Technician: Diploma Program

Term One		Credits
OR 101	Anatomy and Physiology	3
OR 102	Introduction to Materials and Basic Machine Applications	3
OR 103	Practical Application and Shoe Modification	3
OR 104	English Communications	3
OR 105	Math and Anthropometry	3
	TOTAL	15

Term Two		Credits
OR 201	Lower Extremity—AFO Metal	3
OR 202	Spinal I	3
OR 203	Upper Extremity—AFO Plastic	3
OR 204	Arch Supports	3
OR 205	General Psychology	3
	TOTAL	15

Term Three		Credits
OR 301	Lower Extremity—KAFO Metal	3
OR 302	Spinal II	3
OR 303	Upper Extremity	3
OR 304	Lower Extremity—KAFO Plastic	3
OR 305	In-House Internship	3
	TOTAL	15
	TOTAL AST CREDITS	45

Orthotics Technology: Associate in Specialized Technology Degree Program

To complete the Associate in Specialized Technology Degree, it is necessary to finish the first three terms of the Orthotics Technician Diploma Program and then complete the two additional terms listed below.

Term Four		Credits
OR 401	Computer Applications	3
OR 402	Advanced Upper Extremity	3
OR 403	Cervical Orthosis	3
OR 404	Advanced KAFO—Metal	3
OR 405	Patient Management	3
	TOTAL	15

Term Five		Credits
OR 501	Research of New Orthotic Techniques	3
OR502	Advanced KAFO—Plastics	3
OR 503	Principles of Shop Management	3
OR 504/OR 505	Internship	6
	TOTAL	15
	TOTAL AST CREDITS	75

Prosthetics Technician: Diploma Program

Term One		Credits
PR 101	Anatomy and Physiology	3
PR 102	Introduction to Materials & Basic Machine Application	3
PR 103	General Psychology	3
PR 104	English Communications	3
PR 105	Math & Anthrpometry	3
	TOTAL	15

Term Two		Credits
PR 201	Below-Knee Prosthetics (Symes)	6
PR 202	Below-Knee Prosthetics (P.T.B.)	6
PR 203	Foot Prosthetics	3
	TOTAL	15

Term Three		Credits
PR 301	Above-Knee Prosthetics	6
PR 302	Upper Limb Prosthetics	6
PR 303	In-House Internship	3
	TOTAL	15
	TOTAL AST CREDITS	45

Prosthetics Technology: Associate in Specialized Technology Degree Program

To complete the Associate in Specialized Technology Degree it is necessary to successfully complete the diploma program in prosthetics and then complete these two additional terms.

Term Four		Credits
PR 401	Advanced Above-Knee Prosthetics	6
PR 402	Advanced Upper Limb Prosthetics	6
PR 403	Computer Applications	3
	TOTAL	15

Term Five		Credits
PR 501	Recreational Prosthesis	3
PR 502	Prosthetics Overview	3
PR 503	Principles of Shop Management	3
PR 504	Internship	6
	TOTAL	15
	TOTAL AST CREDITS	75

FINANCIAL AID

HTI is pleased to be able to provide financial assistance to help students meet the cost of education and career preparation.

A student's financial aid award may consist of a "package" of financial assistance from non-repayable grants to repayable student loans, and/or assistance from funds provided by outside sources. The Financial Aid Office offers counseling and assistance on the appropriate method of financial assistance to fit each case.

The Pennsylvania Higher Education Assistance Agency (PHEAA) assists those who are Pennsylvania Residents who demonstrate financial need as determined by the PHEAA formula. Connecticut, Delaware, Maryland, Massachusetts, Ohio, Rhode Island, Vermont, Washington DC, and West Virginia have executed reciprocity agreements with Pennsylvania's Higher Education Assistance Agency.

LOCATION AND HOUSING

HTI is located in a pleasant suburb 15 miles northeast of Pittsburgh, Pennsylvania. In the vicinity are many recreational and cultural opportunities, including boating, skiing, outdoor concerts, museums, art galleries, shopping malls and professional football, hockey, and baseball games in season.

If a student needs help finding suitable housing, the admissions office will help find affordable housing in the vicinity of the Institute. HTI can provide a listing of local apartments, houses, efficiencies, and sleeping rooms in varying price ranges to suit any budget.

APPLICATION PROCEDURE

Please call HTI's admissions office at (412) 967-2750 (in Pennsylvania) and 1-800-331-5190 (from outside Pennsylvania) for information on applying.

Orthotics and Prosthetics, Volume 42, Number 1, pp. 81–83.

Northeast Metro Technical Institute (University of Minnesota)

3300 Century Avenue North
White Bear Lake, Minnesota 55110
(612) 770-2351

Program:	Orthotic/Prosthetic Technician Programs
Degree or Certificate Awarded:	Degree of Occupational Proficiency in Orthotics and Prosthetics Technician
Level of Training:	Orthotic Technician/Prosthetic Technician
ABC Accreditation:	Fully accredited
Prerequisites/Entrance Requirements:	Persons interested in a career as a Prosthetics and Orthotics Technician must have a high degree of manual dexterity and good eyesight. Some artistic ability is helpful and an ability to work with many types of machines and equipment plus a variety of materials is necessary. Persons who are allergic to dust or fumes from lacquers, resins, or plasters may react unfavorably in this profession.
Medical School Affiliation:	Cooperative Associate degree with Lakewood Community College
Number of New Students Admitted:	Orthotics: 18; Prosthetics: 18
Faculty/Student Ratio:	1:12
Length of Program:	Orthotics Technician—One year Prosthetics Technician—One year
Dates of Courses:	Monthly start times, based on graduate completion

Application Deadline:	Openings filled numerically from a waiting list on a monthly basis
Address of Registrar:	3300 Century Avenue North, White Bear Lake, Minnesota 55110

PROGRAM DESCRIPTION

Northeast Metro Tech offers American Board for Certification in Orthotics and Prosthetics (ABC) accredited programs in orthotics and prosthetics on both technician and practitioner levels. The programs are integrated into a career ladder concept enabling students to earn Associate and Bachelor degrees in applied science.

The curriculum is up-to-date and innovative, based on national surveys of experts in the field. A fully developed library and an individualized training approach allow students greater freedom in their learning experience.

TECHNICIAN PROGRAMS

NMTI offers a 12 month prosthetic technician program. Students receive training in anatomy, terminology, technology of materials, mathematics, general lab procedures, prosthetic componentry, and fabrication procedures for below-knee, above-knee, below-elbow, and above-elbow prostheses. They become proficient in working with wood, metal, leather, plastic, and plaster. Students also work in prosthetic facilities for 180 hours as a clinical experience.

The orthotics technician course is also 12 months in length. Students become experienced in fabrication of basic orthoses. Students are instructed in and practice fabrication techniques for plastic and metal systems, upper limb, lower limb, and spinal orthoses. Other related areas of studies include terminology, technology of materials, chemistry, mathematics, anatomy and physiology, use of special orthotic equipment, theory and techniques of plaster work, leather work, technical drawing, orthopedic footware modification, foot support, and performance as an aid to the orthotist. As a transition from the classroom to their first job in the field, students work in an orthotic facility for 180 hours as a clinical experience.

Orthotic Technician

We have featured some of the major topic and skills areas with approximate hours for our Orthotic Technician program. A complete listing is available when you visit our counseling department.

Skill/Topic Area	*Hours*
Related instruction: safety, tool use, math	204
Tools & materials	96
Anatomy	54
Spinal orthotics	138
Shoe modification & foot orthoses	162
Basic ankle-foot orthoses	132
Basic knee-ankle-foot orthoses	252
Upper limb orthotics	112
Orthotic practical experience	180
TOTAL	1440

Prosthetic Technician

We have featured some of the major topic and skills areas with approximate hours for our Prosthetic Technician program. A complete listing is available when you visit our counseling department.

Skill/Topic Area	*Hours*
Related instruction: safety, tool use, math	204
Tools & materials	66
Anatomy	54
Prosthetic fabrication: below-knee	412
Prosthetic fabrication: above-knee	248
Prosthetic fabrication: upper limb	258
Prosthetic practical experience	180
TOTAL	1440

Hours and topics subject to change.

CAREER LADDER CONCEPT

The program has a career ladder concept. Students who choose to go on to the practitioner level can take additional work at Lakewood Community College to receive their associate of applied science degree, and course work at the University of Minnesota to receive baccalaureate degrees.

ACTIVE STAFF

The staff is professionally active in orthotics and prosthetics regional and national events. The program regularly hosts regional seminars and administers the ABC Technician Registration Examinations. Nationally recognized orthotists and prosthetists and registered technicians serve on all the program's advisory committees.

ENVIRONMENT

In addition to the professionally active program, students will find a modern, well-lit and climate-controlled working environment. The facilities include the newly designed patient fitting areas and a cheerful laboratory with specialty wood, metal, plastic, plaster, and sewing rooms. These rooms are well-ventilated and noise controlled work areas. Special effort has been made to simulate as closely as possible the "real job" situation. Learning resource centers and libraries provide the student and instructional staff with ample standard and contemporary materials pertaining to the field.

LOCATION

NMTI is located in beautiful White Bear Lake, a lakeside suburb of the Twin Cities, Minneapolis-St. Paul. Students take advantage of the many available cultural and recreational activities in the metro area throughout the year while attending NMTI.

For information on the Orthotics and Prosthetics Technician Program, write:

Attention:
Admissions and Counseling
Northeast Metro Technical Institute
3300 Century Avenue North
White Bear Lake, MN 55110

Orthotics and Prosthetics, Volume 42, Number 1, pp. 84–85.

Spokane Falls Community College

W3410 Fort George Wright Drive
Spokane, Washington 99204

Program:	Orthotic and Prosthetic Technician Program
Degree or Certificate Awarded:	A.A.S. Degree in Orthotic/Prosthetic Technology
ABC Accreditation:	Yes
Level of Training:	Orthotic/Prosthetic Technician
Prerequisites/Entrance Requirements:	High school graduate or GED
Number of New Students Admitted:	Orthotics: 12; Prosthetics: 12
Faculty/Student Ratio:	1:12
Length of Program:	Two years
Dates of Courses:	SFCC is on the quarter system; students admitted each quarter as space allows
Application Deadline:	Fall quarter: August; Winter quarter: November; Spring quarter: March
Address of Registrar:	SFCC, W3410 Ft. George Wright Drive, Spokane, Washington 99204 (Admissions Office, MS3011)

PROGRAM DESCRIPTION

Spokane Falls Community College is one of two colleges of the Community Colleges of Spokane serving six counties of northeastern Washington state. Opened in the fall of 1967, its 18 modern buildings are housed on a 113-acre site adjacent to the Spokane River. Emphasis at SFCC is on liberal arts and preprofessional training, as well as associate in applied science degree programs.

The campus accommodates classrooms, laboratories, a theater, art gallery, televi-

sion and radio broadcasting studios, a music/performing arts center, a photo lab, a physical education facility/gymnasium, and a 3,500-seat athletic stadium. Enrollment in the on-campus day and evening credit programs is estimated at 5,558.

The primary objective of the Orthotics and Prosthetics Technology Program is to train technicians who are knowledgeable in general laboratory procedures, wood-working, metal, leather, plastic, and plaster to assemble components with the skill that the orthotics-prosthetics profession requires. Subjects include: basic knowledge of related math and chemistry, basic anatomy and physiology, technology of materials, use of tools and machinery, theory and techniques of plaster, suspension systems, and laboratory safety and maintenance.

A certificate is awarded at the completion of the orthotics program and at the completion of the prosthetics program. The A.A.S. Degree in Orthotics and Prosthetics Technology is granted to students who successfully complete both programs. Clinical experience entails five weeks at the end of each program in orthotics and prosthetics—10 weeks total.

Orthotics: SFCC Suggested Course Program*

Course		*Hours*
First Quarter		
ORTHO 41	Orthopedic Equipment & Material	4
ORTHO 42	Spinal Anatomy Related to Orthotics	3
ORTHO 44	Spinal Orthotics	10
General Edcuation Requirement		3-5
	TOTAL	20-22
Second Quarter		
ORTHO 52	Foot & Ankle Skeletal Structures	3
ORTHO 54	Orthotic Shoe Fabrications	4
ORTHO 56	Ankle-Foot Orthosis (AFO)	10
General Education Requirement		3-5
	TOTAL	20-22
Third Quarter		
ORTHO 62	Related Anatomy for the Above-Knee Orthotics	1
ORTHO 64	Above the Knee Orthotics (KAFO)	8
ORTHO 72	Upper Extremity Anatomy Related to Orthotics	1
ORTHO 74	Upper Extremity Orthotics	7
General Education Requirement		4-5
	TOTAL	21-22
Fourth Quarter		
ORTHO 78	Clinical Orthotics	6
	TOTAL	6
General Education Requirements		
SCCI 107	Business Communications	3
HS 136	Improving Interpersonal Communications	5
MATH 10	Math Review	5
MATH 35	The Metric System	1
HLTH 174	First Aid	3
GS 266	Cooperative Education Seminar	2
	TOTAL	19

Prosthetics: SFCC Suggested Course Program*

Course		*Hours*
First Quarter		
PROS 11	Prosthetic Tools & Materials	4
PROS 12	Related Human Anatomy	3
PROS 14	Below-Knee Prosthetics	10
General Education Requirement		3-5
	TOTAL	20-22
Second Quarter		
PROS 22	Related Anatomy of the Above-Knee Anputation	3
PROS 24	Advanced Below-Knee Prosthetics	4
PROS 26	Above-the-Knee Prosthetics	10
General Education Requirement		3-5
	TOTAL	20-22
Third Quarter		
PROS 32	Related Anatomy	2
PROS 34	Below-Elbow Prosthetics	8
PROS 36	Above-Elbow Prosthetics	7
General Education Requirement		3-5
	TOTAL	20-22
Fourth Quarter		
PROS 38	Clinical Prosthetics	6
	TOTAL	6

*One year of two year A.A.S. Degree in SFCC Orthotic/Prosthetic Technician Program

Masters Degree Programs

- **University of Connecticut**

Orthotics and Prosthetics, Volume 42, Number 1, pp. 87–89.

University of Connecticut

School of Allied Health Professions
Box U-101
358 Mansfield Road
Storrs, Connecticut 06268
(203) 486-2834

Program:	Master of Science in Allied Health—Prosthetics/Orthotics
Degree or Certificate Awarded:	Master of Science
ABC Accreditation:	N/A
Level of Training:	Graduate
Prerequisites/Entrance Requirements:	Bachelor of Science degree; Board eligible, or passed ABC Practitioner Certification examination; minimum of one year experience in Prosthetics and/or Orthotics
Medical School Affiliation:	Newington Children's Hospital
Number of New Students Admitted:	5 (either discipline)
Faculty/Student Ratio:	1:1
Length of Program:	Four semesters (2 years)
Dates of Courses:	September to May, summer courses available
Application Deadline:	Flexible
Address of Registrar:	Caroline C. Nielson, Ph.D., School of Allied Health Professions, Box U-101, 358 Mansfield Road, Storrs, Connecticut 06268

PROGRAM OBJECTIVES

The School of Allied Health Professions at the University of Connecticut, in collaboration with Newington Children's Hospital, is the first graduate program in the country to offer a Master of Science degree with an area of emphasis in prosthetics/orthotics. The program focuses on the expanding role of the professional in the health care system. Coursework is designed to address the increasing complexity of technological developments in rehabilitation, and to extend the education and training of the orthotist/prosthetist in comprehensive areas of contemporary practice including research, education, and management. The program is designed to meet the needs of the present and future by preparing prosthetists and orthotists for positions of leadership in health care.

THE CURRICULUM

The curriculum goals are to provide the prosthetist/orthotist with the opportunity to develop knowledge of the health care system, and an understanding of his/her future role as an integral part of the health care system.

The curriculum has been designed to utilize the resources of the University of Connecticut and Newington Children's Hospital. The model has three components: (1) a required core of courses providing the student with a foundation in the health care delivery system and leadership development; (2) a tract of electives which provide the student with competencies in research, education, or management; and 3) a professional tract which provides opportunities for exploring selected areas of orthotics and prosthetics. These three components are synthesized with integrative seminars and a practicum.

Core Courses

The core courses in the School of Allied Health Professions have been designed and developed with an interdisciplinary focus to reflect issues, knowledge, and skills relevant to all health professionals. The core component consists of nine credits of course work related to the system in which the health professional works and interacts, role identity and conflict, the prevailing forces of contemporary society, and basic concepts of research in health care.

The core courses also offer an opportunity for interaction with other health colleagues and increased understanding of the role and function of the total health care team. Core courses include: (1) Health Care Processes and Systems, (2) The Allied Health Professional in Contemporary Society, and (3) Research Methods in Allied Health.

Elective Trace

The elective area provides an opportunity to gain further experience in education, research, or administration. The elective component consists of nine or twelve credits of course work in one of these areas of professional interest.

The Education Elective addresses the need to prepare health practitioners for teaching roles in clinical and academic settings. Course work focuses on learning theories, educational evaluation, and new instructional methods and media techniques.

The Research Elective offers considerable flexibility in design and course selection to meet the professional needs of the student. A course in statistics and computer application is required. The student may select other courses related to a research topic. Individualized guidance on research studies working with patients and new technological developments is emphasized.

The Administrative Elective provides the administrative knowledge and skills required for effective administrative performance at the department and program levels.

In both the Education and Administrative Electives, students participate in a final seminar integrating and applying the learned concepts to their allied health specialties.

Professional Tract: Orthotics and Prosthetics

The technical discipline component of the advanced degree program is designed to expand the professional's knowledge base and technical competence. The professional tract consists of a three-credit seminar, examining interdisciplinary roles in contemporary prosthetic/orthotic practice, and 12 credits of internship rotations at the Newington Children's Hospital and satellite affiliates. The clinical topics are divided into two categories: (1) Advanced Technological Applications and (2) Orthotic/Prosthetic Patient Management. The Advanced Technological Applications include Computerized Gait Analysis, Biomechanical Analysis, Composite Material Applications, Externally Powered Orthotics/Prosthetics, and Postural Management. The Orthotic/Prosthetic Patient Management category includes Cerebral Palsy, Muscle Disease, Myelomeningocele, Scoliosis, Cerebral Vascular Accidents, Post Polio-Myelitis, Paraplegia, Arthritis, and Sports Medicine. Students have the opportunity to pursue individual areas of interest chosen from these topics.

Project and Practicum

The project allows the student to utilize abilities gained in the program by developing and implementing a project relevant to his/her professional interest. The project provides tangible evidence of knowledge gained during graduate study. Examples of projects include curriculum guidelines, exercise guides for patients, instructive video tapes, and published research studies.

The practicum provides the opportunity for an orthotist/prosthetist to be an educator, researcher, or administrator in a supervised practicum experience with constant evaluation and feedback. In conjunction with the practicum, students also take part in a related seminar. The seminar provides an opportunity to discuss and analyze major issues relevant to contemporary health practices and trends, and to examine individual goals within an interdisciplinary setting. The practicum and seminar consist of six credits. Both the project and the practicum are designed to develop problem solving skills and promote increased awareness of the applicability of research.

FINANCIAL ASSISTANCE

The curriculum is designed to be a full-time two year program. However, it is possible to enroll as a part-time student while continuing employment. For those students who choose the full-time option, two Graduate Assistantships with a summer stipend are available. With the Assistantship, tuition is waived and a $20,000 stipend, including benefits, is provided.

APPLICATION INFORMATION

For an application or further information about the program and the Graduate Assistantships, write or call: Caroline C. Nielsen, Ph.D., Academic Coordinator for Prosthetics/Orthotics, Graduate Program, School of Allied Health Professions, Box U-101, University of Connecticut, Storrs, Connecticut 06268; (203) 486-2834.

Classified Ads

In order to properly calculate the number of words in (and the cost of) a classified advertisement, add up every character in the ad, including commas, hyphens, etc. Divide the sum by five (we consider a word to consist of 5 characters) to find the total number of words. Then figure the cost based on these rates: MEMBERS—first 30 words $32.00. Each addiitonal word $1.50. NON-MEMBERS—first 30 words $78.00. Each additional word $4.00. Responses to AOPA Box numbers are forwarded unopened free of charge and kept confidential. Advertisements are to be paid in advance. Make checks payable to AOPA. Send to AOPA, 717 Pendleton Street, Alexandria, VA 22314. No classified ads will be taken by phone.

DIRECTOR OF ORTHOTICS/PROSTHETICS

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Requires: Certified prosthetist/orthotist. Previous management experience desired.

Excellent management salary and benefits.

Come and fulfill your professional goals and objectives in a progressive organization while enjoying the beautiful recreational area of North Central Wisconsin.

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Employment Management
(715) 847-2800

Send resume to:

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For our Southgate, Michigan branch. Health, dental, and pension benefits paid. Salary negotiable. Send resume to: E.H. Rowley Company, Inc., 11330 Woodward Avenue, Detroit, MI 48202.

Small P&O Facility for Sale in desirable college town. Will consider partnership offer from CPO. Gallatin Prosthetics, 103 Commercial Drive, Bozeman, MT 59715; (406) 586-8386.

CPO or CO with Prosthetic Experience

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John G. Craig, CPO
President, MFA Management, Inc.
3600 Gaston Avenue, #123
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Full time position available for experienced individual to head our orthotic fabrication department. All replies will be kept confidential.

Contact:

Bob Manfredi, Jr.
289 Broadway
Long Branch, NJ 07740
(201) 222-0366

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Progressive CPO/CO skilled in comprehensive and contemporary patient and staff management. Numerous opportunities exist in this professional career position. Maine Orthotic Lab is an orthotic/physical therapy facility located two hours out of Boston in beautiful Portland, Maine. Call or write to discuss possibilities: 300 Park Avenue, Portland, ME 04102; (207) 773-8818.

1988 ABC Examination Schedule

Exam Type	Date	Location	Application Deadline
Clinical Patient Management	August 8–21	University of Texas Dallas, TX	March 15
Technician O&P	September 15–16	Spokane Falls Spokane, WA	August 15
Written/Visual	October 15–16	Alexandria, VA Chicago, IL Los Angeles, CA	September 15
Clinical Patient Management	December 17	To be announced	September 15

CEC 3-88

July 15–16

"Clinical Practice Management—Ethical and Legal Considerations"

Vanderbilt Plaza Hotal
Nashville, Tennessee

*

CEC 4-88

September 23–24

"Spinal Orthotics and Seating"

Holiday Inn at Kansas City International Airport
Kansas City, Missouri

*

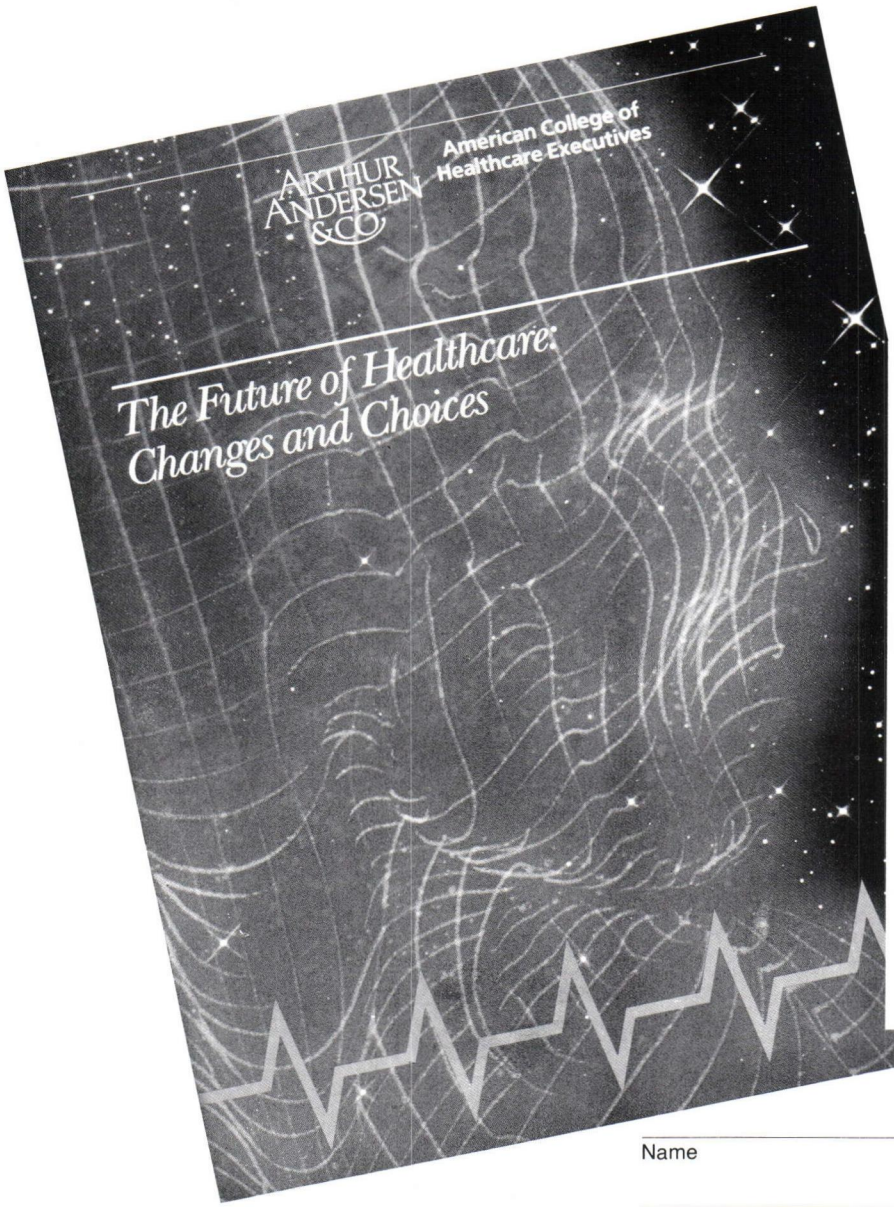
CEC 5-88

September 23–24

"Current Clinical Technical Concepts in Lower Limb Prosthetics and Orthotics"

San Francisco Airport Hilton
San Francisco, California

FOR MORE INFORMATION, CONTACT
THE ACADEMY NATIONAL HEADQUARTERS
(703) 836-7118



The Future of Healthcare: Changes and Choices presents the insights and predictions of 1,600 national healthcare leaders and astute observers. The study has been conducted by Arthur Anderson & Co., part of The Arthur Andersen Worldwide Organization, which provides professional services in accounting and audit, tax, management information consulting and the American College of Healthcare Executives, the professional society of more than 21,000 healthcare executives. The study's primary purpose is to anticipate the future shape and direction of this critical national resource—our healthcare system.

- ☐ Quality will be even better by 1995, but not everyone will see this improvement first-hand because of fiscal restrictions.
- ☐ Healthcare's share of the GNP will increase to over 12%, but access will not improve for everyone.
- ☐ Marketplace incentives, rather than a comprehensive national health insurance plan, will guide the system, but approximately 700 hospitals will close by 1995.
- ☐ The private sector—physicians, hospital executives and the JCAH—will define what is quality, but the "highest" quality of care" will be replaced in the public agenda by a goal of "adequate" quality.
- ☐ The responsibility to fund care for the medically indigent will fall to government, but indigent care costs to hospitals will increase 80%.

Name _____

Company _____

Address _____

City _____ State _____ Zip _____

Copies of the Study are $35 each. Please make your check payable to AOPA and enclose it with this form when ordering.

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The Future of Healthcare
717 Pendleton Street
Alexandria, VA 22314

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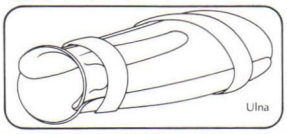

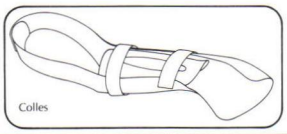

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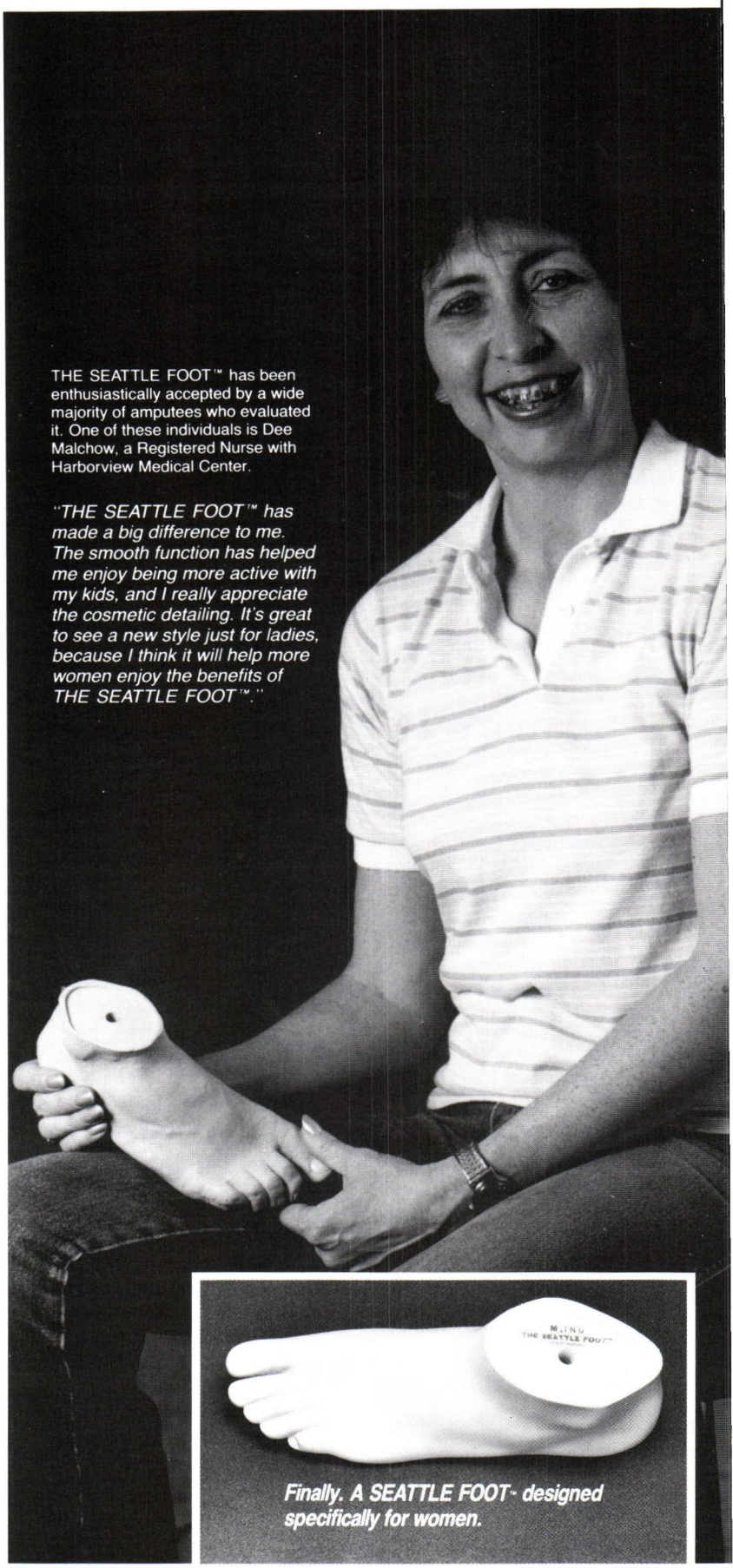

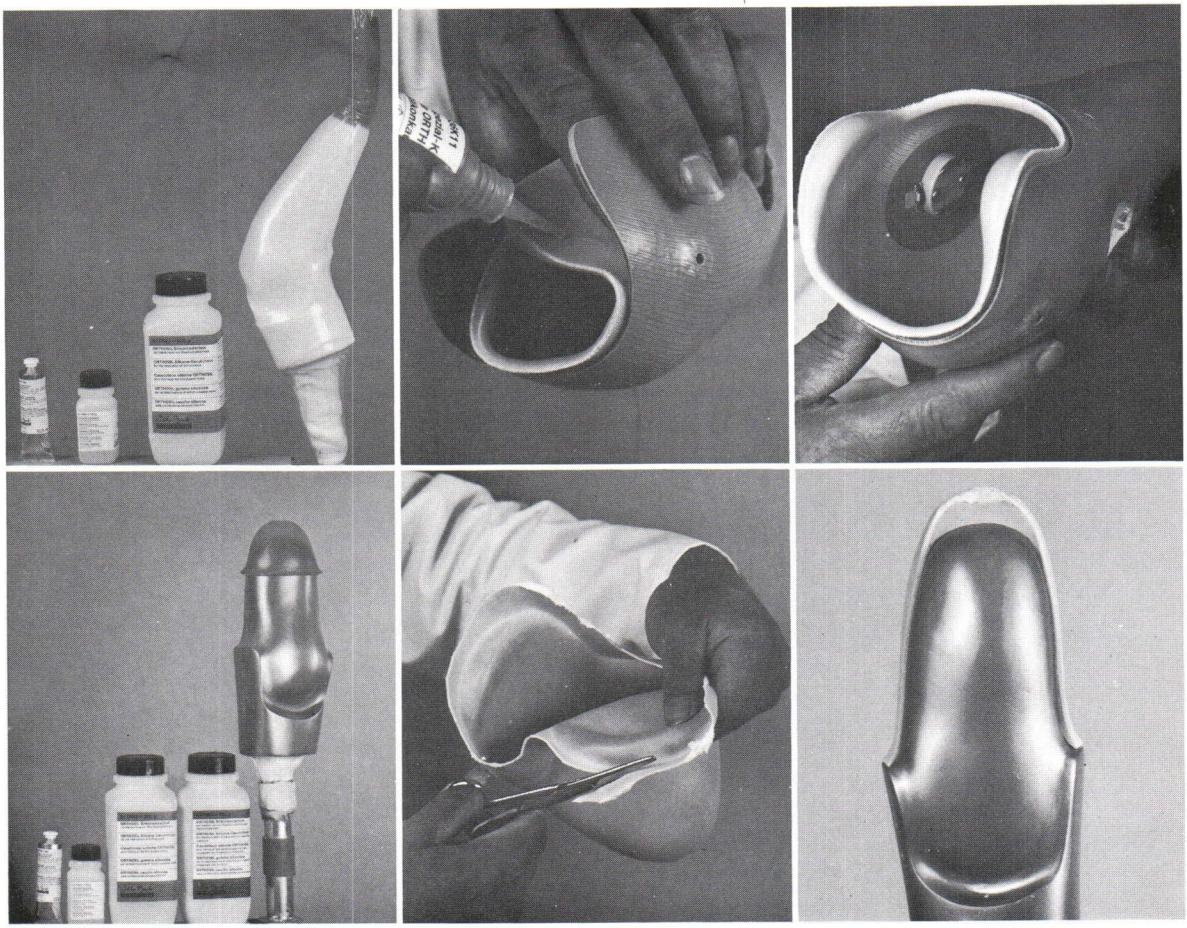

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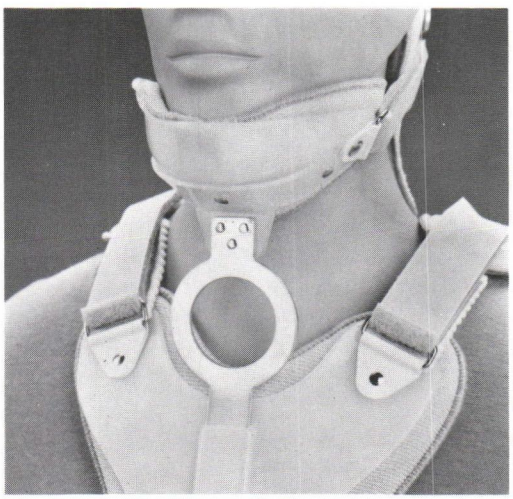
The Minerva Cervical Brace consists of a pre-fabricated, flexible polyethylene body jacket with reinforced aluminum anterior and posterior uprights. For easy fitting, and to correctly unload the spine, overall height adjustment points may be quickly set according to prescribed treatment. The body jacket is easily contoured to patient anatomy and firmly attached with an "over the shoulder" suspension strap system.

Indications
The Minerva Cervical Brace immobilizes the cervical spine from C1 to T1 and may be used post-surgically including post-halo applications for severe cervical lesions. A circumferential head band provides additional control of flexion, extension and rotation.



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Reprinted below is the application required by ABC for those wishing accreditation for their education programs. Please use this form when applying for credits.

American Board for Certification in Orthotics and Prosthetics

Application for Continuing Education Activities

Group A—Accredited Instruction

Educational Activity: _____

Date(s) of Program: _____

Institution and Location: _____

Sponsor: _____

Number of credit units applied for: _____

Prerequisite

A. SUBMISSION 60 DAYS PRIOR TO PRESENTATION. (If presenters or subject matter changes within the sixty days notify ABC directly.)

B. Time frames must be presented: *example—9:00 to 9:45* (in & out)

C. Brief description of subject matter.

D. Along side of, or under the presenters, his or her credentials.

E. What categories they are applying for Continuing Education Units in: *example—Scientific, Business, etc.*

Comments

_____

_____

_____

_____

For Official Use Only

Course received late: Yes ☐ Date Received _____ No ☐

Course Approved: Yes ☐ Date Received _____ No ☐

If Disapproved or Number of Credit Units Reduced, Please State Reason(s).

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Signature Date

American Orthotic and Prosthetic Association
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