

Orthotics & Prosthetics (co, cp, cpo)

- Orthotists fit external supports and braces (orthoses) for people with weakened or deformed body parts.
- Their goal is to enable individuals to function to the best of their ability.
- Orthotists may also be employed in industry as researchers and designers.
- Prosthetists produce and fit artificial (prosthetic) limbs to help people with limb loss function more fully.
- Prosthetists may also be employed in industry as researchers and designers.
- Both fields combine knowledge of medicine, engineering, and materials science to enhance the lives of people.
- They assess the patient's history, test muscle strength and range of motion, and evaluate devices for comfort, stability, and proper fit.
- Some professionals work as either a Prosthetist (CP) or Orthotist (CO), others are Certified Prosthetists Orthotists (CPO) and can practice in both disciplines.
- Orthotists and prosthetists work in a variety of settings: private practice, hospitals, rehabilitation facilities, specialty clinics, nursing homes, and industry.
- These are great careers for people who are problem solvers and who want to have extended relationships with their patients.
- Ultimately, these fields combine art, science, engineering, problem-solving, and patient care in unique and interesting ways.

Education & Licensure

- A master's degree is the minimum educational standard to become a certified practitioner. Currently there are 14
 accredited master's degree programs.
- Upon graduation from a CAAHEP-accredited O&P program, students must complete an NCOPE-accredited residency program to gain clinical training and experience in three primary areas: pediatrics, adult, and geriatrics.
- To practice as an Orthotist and/or Prosthetist, individuals must be certified by the American Board for Certification in Orthotics and Prosthetics, Inc.

Preparation

- Applicants should gain experience in orthotics and prosthetics by volunteering or working at a hospital, clinical rehabilitation facility, clinical orthotics and prosthetics facility or research facility.
- Laboratory experience such as plaster work, laminating, and vacuum forming are all seen favorably, as is patient contact.
- A minimum of one year of prosthetics or orthotics experience is encouraged.
- Taking the Graduate Record Exam (GRE) is required. A TOEFL exam may be required if English is not your first language.
- Prerequisite courses vary between programs, but typical requirements are listed below.
- All required courses must have a minimum C grade.

Common Prerequisite Courses (required courses determined by each graduate program but similar to this list)

Requirements	Purdue Equivalents (specific courses may vary by major)
General Biology with lab	BIOL 11000-11100 or 13100 & 23100 & 23200 (lab) or BIOL 23100 & ABE 22600* & upper-level biology (with lab), or BME 29500* & lab (BME 24300* or BME 32001* or BME 35400*) & upper-level biology (with lab)
Anatomy & Physiology	BIOL 20300-20400 (BIOL 30100-30200)
General Chemistry with lab	CHM 11510-11610 (with lab) or 12500-12600 or 12901 (CHM 11500 credit recommended—may earn this from course sequence) or CHM 13600 (with earned CHM 11500 credit)
Physics with lab	PHYS 22000-22100 or PHYS 23300-23400 or PHYS 17200 & 27200 or PHYS 17200 & 24100 & 25200 (lab) or ENGR 16100-16200*
Psychology	PSY 12000
College Algebra or higher math	MA 15300-15400 or 15800 or 15900
Additional Required & Recommended Courses at some programs	Gross Anatomy with dissection, Kinesiology, Biomechanics, Material Science, Public Speaking, Art/Drawing/Sculpture, and Business courses
	•

^{*}Ask individual orthotics/prosthetics programs if they will accept these courses toward requirements. Courses no longer offered.

Student Organization: Pre-OT/PT/AT Club, Caduceus Club (pre-med/pre-health club)

Program Information

Commission on Accreditation (CAAHEP) https://caahep.org/Students/Find-a-Program.aspx (search for Orthotist/Prosthetist)

Applying

- Application is made to some programs directly through their graduate programs and to others using a common application system called OPCAS (the Orthotics and Prosthetics Centralized Application Service) and also through their online graduate school applications.
- Competitive applicants will have:
 - Strong academic performance
 - o High scores on the GRE
 - o Leadership, teamwork, and communication skills
 - Volunteer and shadowing/observation experiences
 - Strong positive letters of recommendation
- Early application is recommended as many programs accept only a small number of students. OPCAS opens in mid-July
 and applications are most competitive if submitted within a month of the application opening.

Fee Assistance

- Visit specific school websites to learn if fee assistance is available.
- <u>OPCAS Fee Waivers</u>
 https://help.liaisonedu.com/OPCAS_Applicant_Help_Center/Starting_Your_OPCAS_Application/Getting_Started_with_Your_OPCAS_Application/O3_Application_Fees
- GRE Fee Reduction Program https://www.ets.org/gre/test-takers/general-test/register/fees.html

Employment Outlook

- The <u>Bureau of Labor Statistics</u> estimates demand for orthotic and prosthetic services is expected to increase as much as 15% by 2033. https://www.bls.gov/ooh/healthcare/orthotists-and-prosthetists.htm#
- The Department of Health and Human Services also projects a large increase in diabetic limb loss in the coming years which further increases the need for these professionals.
- Most students are employed before leaving their training programs.
- The median wage of certified Orthotists and Prosthetists is between \$78.310 in 2024.

Programs in the Region

- Northwestern University Chicago, IL | https://www.nupoc.northwestern.edu/education/masters-program/index.html
- <u>Eastern Michigan University</u> Ypsilanti, MI | https://www.emich.edu/chhs/hphp/programs/orthotics-prosthetics/index.php
- University of Pittsburgh Pittsburgh, PA | https://www.shrs.pitt.edu/po

More Information

- OPCAS (application service) https://opcas.liaisoncas.com/applicant-ux/#/login
- American Academy of Orthotists and Prosthetists https://www.oandp.org/
- Orthotics & Prosthetics (from AAOP) http://www.opcareers.org
- National Commission on Orthotic & Prosthetic Education https://ncope.org/
- What is POP? (Prosthetics, Orthotics, Pedorthics) https://whatispop.org/

Other Careers to Consider

Physical Therapy · Occupational Therapy · Athletic Training · Rehabilitation Therapy