



# Orthotics & Prosthetics (C.O., C.P., C.P.O.)

## Career Descriptions

- **Orthotists** fit external supports and braces (orthoses) for people with weakened or disformed body parts.
- Their goal is to enable individuals to function to the best of their ability.
- Orthotists may also be employed in industry as 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 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 the devices for comfort, stability, and proper fit.
- Some professionals work as either a Prosthetist or Orthotist, 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.
- Pedorthics is the practice of evaluating and fabricating footwear and foot orthoses to treat conditions for foot and ankle diseases.
- Ultimately, orthotics and prosthetics combines art, science, engineering,

problem-solving, and patient care in unique and interesting ways.

## Becoming an Orthotist and/or Prosthetist

- A Master's degree is the minimum educational standard to become a certified practitioner (as of 2013). Currently there are 12 accredited master's degree programs.
- The residency is the second half of an individual's education and advancement towards becoming an O&P practitioner. 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.
- After certification individuals may use the credentials of CO (Orthotists), CP (Prosthetist), or CPO (Certified Prosthetist Orthotist).

## Prerequisite Courses

- Prerequisite courses vary between programs, but typical requirements include at least 1 course each in: biology, chemistry, physics, psychology, algebra or higher math, human anatomy, human physiology.
- All required courses must have a minimum C grade.

### Common Prerequisite Courses (pre-reqs set by each graduate program but similar to this list)

Requirements	Purdue Equivalent (specific courses may vary by major)
General Biology with lab	BIOL 11000-11100 <b>or</b> 13100 & 23100 & 23200 (lab)
Anatomy & Physiology	BIOL 20300-20400 <b>or</b> 30100-30200
General Chemistry with lab	CHM 11500-11600 <b>or</b> 12500-12600 <b>or</b> 12300-12400 <b>or</b> 12901 (CHM 11500 credit exam recommended along with CHM 12901)
Physics with lab	PHYS 22000-22100 <b>or</b> 23300-23400 <b>or</b> 17200 & 27200 <b>or</b> 17200 & 24100
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

## Job Outlook

- The demand for orthotic and prosthetic services is expected to increase by 27% 2024.
- 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.
- The total number of persons with an amputation is expected to increase by at least 47% by 2020.
- Most students are employed before leaving their training programs.
- The median wage of certified Orthotists and Prosthetists is between \$64,430 and \$75,300 in 2015.

## 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.

## 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.
- Early application is recommended as many programs accept only a small number of students.

## More Information

- [OPCAS](https://opcas.liasoncas.com/applicant-ux/#/login) (Application service) <https://opcas.liasoncas.com/applicant-ux/#/login>
- [American Academy of Orthotists and Prosthetists](http://www.oandp.org) <http://www.oandp.org>
- [Orthotics & Prosthetics \(from AAOP\)](http://www.opcareers.org) <http://www.opcareers.org>
- [National Commission on Orthotic & Prosthetic Education](http://www.ncpe.org) <http://www.ncpe.org>
- [Bureau of Labor Statistics](http://www.bls.gov/ooh/healthcare/orthotists-and-prosthetists.htm#) <http://www.bls.gov/ooh/healthcare/orthotists-and-prosthetists.htm#>

## Programs

[Northwestern University](http://www.nupoc.northwestern.edu/) Chicago, IL <http://www.nupoc.northwestern.edu/>

[Eastern Michigan University](http://www.emich.edu/chhs/hphp/orpr/) Ypsilanti, MI <http://www.emich.edu/chhs/hphp/orpr/>

Information for this career guide came from the above websites, the [Bureau of Labor Statistics](http://www.bls.gov/ooh/healthcare/orthotists-and-prosthetists.htm#tab-1) <http://www.bls.gov/ooh/healthcare/orthotists-and-prosthetists.htm#tab-1>, and [Explore Health Careers](http://www.explorehealthcareers.org) <http://www.explorehealthcareers.org>