Orthotics & Prosthetics (CO, CP, CPO)

Career Descriptions

- **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.

Becoming an Orthotist and/or Prosthetist

- A master's degree is the minimum educational standard to become a certified practitioner. Currently there are 13 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 (pre-reqs set by each graduate program but similar to this list)

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Purdue Equivalents (specific courses may vary by major)</th>
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<tbody>
<tr>
<td>General Biology with lab</td>
<td>BIOL 11000-11100 or 13100 &amp; 23100 &amp; 23200 (lab) or BIOL 23000 &amp; upper level biology (including 2 hours of lab)</td>
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<tr>
<td>Anatomy &amp; Physiology</td>
<td>BIOL 20300-20400 or BIOL 30100-30200</td>
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<tr>
<td>General Chemistry with lab</td>
<td>CHM 11500-11600 or 12500-12600 or 12300-12400 or 12901 (CHM 11500 credit exam recommended along with CHM 12901) or CHM 13600</td>
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<tr>
<td>Physics with lab</td>
<td>PHYS 22000-22100 or PHYS 23300-23400 or PHYS 17200 &amp; 27200 or PHYS 17200 &amp; 24100 &amp; 25200 (lab) or ENGR 16100-16200*</td>
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<tr>
<td>Psychology</td>
<td>PSY 12000</td>
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<tr>
<td>College Algebra or higher math</td>
<td>MA 15300-15400 or 15800 or 15900</td>
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<tr>
<td>Additional Required &amp; Recommended Courses at some programs</td>
<td>Gross Anatomy with dissection, Kinesiology, Biomechanics, Material Science, Public Speaking, Art/Drawing/Sculpture, and Business courses</td>
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*Ask individual orthotics/prosthetics programs if they will accept these courses toward requirements.
Student Organization: Pre-OT/PT Club, Caduceus Club

Research Programs

Accredited Practitioner Programs http://www.ncope.org/accredited/practitioner/

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
  - High scores on the GRE
  - 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.
- OPCAS Fee Waivers
  https://help.liaisonedu.com/OPCAS_Applicant_Help_Center/Starting_Your_OPCAS_Application/Getting_STARTED_with_Your_OPCAS_Application/03_Application_Fees
- GRE Fee Reduction Program
  https://www.ets.org/gre/revised_general/about/fees/reductions/

Employment Outlook

- The demand for orthotic and prosthetic services is expected to increase as much as 22% by 2026.
- 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 $69,120 and $75,300 in 2018.

Programs in the Region

- Northwestern University Chicago, IL https://www.nupoc.northwestern.edu/
- Eastern Michigan University Ypsilanti, MI https://www.emich.edu/chhs/hphp/orpr/
- 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 http://www.ncope.org

Other Careers to Consider

- Physical Therapy
- Occupational Therapy
- Athletic Training