

ORTHOTICS AND PROSTHETICS TECHNOLOGY (ORP)

ORP 100 (2 credit hours)

Introduction to Orthotics and Prosthetics

Introduces students to the profession of orthotics and prosthetics. Emphasizes professional practice, the role of the technician and career opportunities. Introduces students to basic mechanical skills and knowledge via laboratory project to determine if orthotics and prosthetics is a career path they would like to follow. Lecture: 1 credit (15 contact hours). Laboratory: 1 credit (30 contact hours).

Attributes: Technical

Components: LAB: Laboratory, LEC: Lecture

ORP 101 (3 credit hours)

Lower Extremity Orthotics I

Provides the knowledge and skills necessary to fabricate foot orthosis inserts, perform orthopedic shoe modification, and fabricate foot orthoses/prostheses below or at the ankle joint. Integrates study of foot and ankle skeletal structures and biomechanical principles of foot orthoses and partial foot prostheses. Lecture: 1 credit (15 contact hours). Laboratory: 2 credits (60 contact hours).

Pre-requisite: ORP 100 and admission to the Orthotics and Prosthetics Technician program.

Attributes: Technical

Components: LAB: Laboratory, LEC: Lecture

ORP 102 (3 credit hours)

Spinal Orthotics

Provides students with the knowledge and skills necessary to fabricate plastic and metal spinal orthoses. Introduces topics such as spinal skeletal structure, biomechanical principles of spinal orthoses, interpretation and application of spinal orthometry, variations of spinal orthoses and fitting of off-the-shelf spinal orthoses for the fitter level practitioner. Lecture: 1 credit (15 contact hours). Laboratory: 2 credits (60 contact hours).

Pre-requisite: ORP 100 and admission to the Orthotics and Prosthetics Technician program.

Attributes: Technical

Components: LAB: Laboratory, LEC: Lecture

ORP 103 (4 credit hours)

Lower Extremity Orthotics II

Provides the knowledge and skills necessary to fabricate plastic and metal ankle-foot orthoses. Examines foot and ankle skeletal structures and biomechanical principles of ankle foot orthoses. Interprets and applies ankle-foot orthometry, reviews variation of ankle-foot orthoses and examines fitting of off the shelf lower limb orthoses. Lecture: 2 credits (30 contact hours). Laboratory: 2 credits (60 contact hours).

Pre-requisite: ORP 100, ORP 101, and admission to the Orthotics and Prosthetics Program.

Attributes: Technical

Components: LAB: Laboratory, LEC: Lecture

ORP 104 (3 credit hours)

Lower Extremity Orthotics III

Provides the knowledge and skills necessary to fabricate plastic and metal knee-ankle-foot orthoses. Integrates study of foot, ankle and knee skeletal structures and biomechanical principles of knee-ankle-foot orthoses. Interprets and applies knee-ankle-foot orthometry, reviews variations of knee-ankle-foot orthoses and examines fitting of off-the-shelf knee orthoses. Lecture: 1 credit (15 contact hours). Laboratory: 2 credits (60 contact hours).

Pre-requisite: ORP 100, ORP 103, and admission to the Orthotics and Prosthetics Program.

Attributes: Technical

Components: LAB: Laboratory, LEC: Lecture

ORP 105 (3 credit hours)

Upper Extremity Orthotics

Provides the knowledge and skills necessary to fabricate plastic and metal upper extremity orthoses. Integrates study of upper extremity skeletal structures and biomechanical principles of upper extremity orthoses, interprets and applies upper extremity orthometry, reviews variation of upper extremity orthoses and fracture orthoses, and examines fitting of off-the-shelf upper extremity orthoses. Lecture: 1 credit (15 contact hours). Laboratory: 2 credits (60 contact hours).

Pre-requisite: ORP 100 and admission to the Orthotics and Prosthetics Program.

Attributes: Technical

Components: LAB: Laboratory, LEC: Lecture

ORP 106 (3 credit hours)

Orthotic and Prosthetic Skill Development

Provides the necessary skills to perform basic technological processes within the profession of orthotics and prosthetics. Emphasizes basic skills such as plaster work, plastic fabrication including thermosetting and thermoformed, introduces concepts of metal contouring, leather working including sewing concepts, and finishing skills. Reviews vertical fixture, shoe machines, routers and various other machines and tools specific to orthotics and prosthetics. Reviews laboratory safety and material safety. Lecture: 1 credit (15 contact hours). Laboratory: 2 credits (60 contact hours).

Pre-requisite: ORP 100 and admission to the Orthotics and Prosthetics Program.

Attributes: Technical

Components: LAB: Laboratory, LEC: Lecture

ORP 107 (2 credit hours)

Orthotic Prosthetic Biomaterials

Provides the necessary knowledge of materials utilized in prosthetic and orthotic fabrication. Emphasizes characteristics of materials and their application in fabrication techniques utilized in the orthotic prosthetic laboratory. Introduces use of sheet plastics and thermosetting plastics for various layups and fibers. Lecture: 1 credit (15 contact hours). Laboratory: 1 credit (30 contact hours).

Pre-requisite: ORP 100 and admission to the Orthotics and Prosthetics Program.

Attributes: Technical

Components: LAB: Laboratory, LEC: Lecture

ORP 108 (2 credit hours)**Practice Management**

Provides the student with the knowledge and skills to design a safe and efficient prosthetic orthotic laboratory. Reviews the process of managing the areas of orthotic and prosthetic practice including administrative documentation. Lecture: 1 credit (15 contact hours). Laboratory: 1 credit (30 contact hours).

Pre-requisite: ORP 100 and admission to the Orthotics and Prosthetics Program.

Attributes: Technical

Components: LAB: Laboratory, LEC: Lecture

ORP 195 (4 credit hours)**Clinical Experience I**

Familiarizes students with the profession of orthotics and prosthetics by applying knowledge and skills in the work setting. Emphasizes work experience with the fabrication of orthoses and /or prostheses while practitioners in the field mentor students as they perform required tasks described in the clinical affiliation agreement. Clinical: 4 credits (120 contact hours).

Pre-requisite: ORP 100 and admission to the Orthotics and Prosthetics Program.

Attributes: Technical

Components: CLN: Clinical

ORP 200 (4 credit hours)**Transibial Prosthetics**

Provides students with the knowledge and skills necessary to fabricate transtibial prostheses. Introduces impression procedures, interface materials, foot and ankle mechanisms, alignment and transtibial design variations. Lecture: 2 credits (30 contact hours). Laboratory: 2 credits (60 contact hours).

Pre-requisite: ORP 100 and admission to the Orthotics and Prosthetics Program.

Attributes: Technical

Components: LAB: Laboratory, LEC: Lecture

ORP 201 (4 credit hours)**Transfemoral Prosthetics**

Provides students with the knowledge and skills necessary to fabricate transfemoral prostheses. Introduces impression procedures, interface materials, foot and ankle mechanisms, alignment and transfemoral design variations. Lecture: 2 credits (30 contact hours). Laboratory: 2 credits (60 contact hours).

Pre-requisite: ORP 100 and admission to the Orthotics and Prosthetics Program.

Attributes: Technical

Components: LAB: Laboratory, LEC: Lecture

ORP 202 (4 credit hours)**Transradial and Transhumeral Prosthetics**

Provides students with the knowledge and skills necessary to fabricate transradial and transhumeral prostheses. Introduces impression procedures, interface materials, cable systems, alignment and variations of transradial and transhumeral prostheses. Lecture: 2 credits (30 contact hours). Laboratory: 2 credits (60 contact hours).

Pre-requisite: ORP 100 and admission to the Orthotics and Prosthetics Program.

Attributes: Technical

Components: LAB: Laboratory, LEC: Lecture

ORP 203 (3 credit hours)**Advanced Techniques**

Familiarizes students with current technology developments in the field of orthotics and prosthetics. Reviews computer-aided design and manufacturing, advanced component and material design, pathologic gait deviations and technology solutions as well as patient outcome measurement tests. Lecture: 1 credit (15 contact hours). Laboratory: 2 credits (60 contact hours).

Pre-requisite: ORP 100 and admission to the Orthotics and Prosthetics Program.

Attributes: Technical

Components: LAB: Laboratory, LEC: Lecture

ORP 295 (4 credit hours)**Clinical Experience II**

Reinforces student familiarity with the profession of orthotics and prosthetics by applying knowledge and skills in the work setting. Develops additional work experience with the fabrication of orthoses and /or prostheses as students are mentored by practitioners in the field to perform required tasks as described in the clinical affiliation agreement. Clinical: 4 credits (120 contact hours).

Pre-requisite: ORP 100, ORP 195, and in good standing in the Orthotics and Prosthetics Program.

Attributes: Technical

Components: CLN: Clinical