Instructor Name: Michael Brncick
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Office Location: T1061
Office Telephone: 815-280-2219
Office Hours: M-R 8:00 – 9:00 AM; 11:45 – 12:45 PM

Course Description:
The course is designed to provide students with the knowledge and skills necessary to fabricate foot orthosis inserts, perform orthopedic shoe modifications, and fabricate foot orthoses/prostheses below or at the ankle joint. Foot and ankle skeletal structures and biomechanical principles of foot orthoses and partial foot prostheses are also integrated throughout the course.

IAI number: N/A

Credit and Contact Hours
* Credit Hours 4
* Lecture/Demonstration 2
* Lab/Studio/Clinical 4

Prerequisites: OPT 100
Books, Supplies, and Supplementary Materials
- Required Textbooks/Reading list
  No text required. Materials provided by program director
- Supplementary texts/materials
  All supplementary materials developed and provided by program director
- Other resources utilized:
  Curriculum from Northwestern University’s Prosthetic Orthotic Center

Methods of Instruction:

Lecture
Laboratory
Clinical Rotations

Student Learning Outcomes
1. Gather the necessary tools, instruments and material to fabricate various foot orthoses/prostheses
2. Select proper materials for a given foot orthosis/prosthesis intervention
3. Fabricate various levels of foot orthoses/prostheses with skill and accuracy.
4. Identify anatomical landmarks necessary to fabricate foot orthoses/prostheses
5. Modify foot casts for proper contours, alignment and biomechanical effect
6. Describe and discuss various trim line options for basic foot orthoses/prostheses
7. Take an impression for a basic foot orthosis and the UCBL orthosis
8. Fit and adjust basic foot orthoses
General Education Student Learning Outcomes
Students must be able to:
- Math: Calculate percentages, perform metric to English conversions, apply linear measurements with respect to human anatomy, perform basic geometric right angle lay out.
- English and language skills:
  Communicate verbal and written concepts in a clinical and laboratory environment.

Graded Assignments and Policies
Graded Assignments:
Laboratory projects are separated into technical and clinical sections. Each project is graded according to category. Quizzes and exams are given throughout the course. Attendance is taken and counted as part of the grade.

The following schedule is an estimate of the work that will be included in the final point total; should items be eliminated the same percentages will stand for the adjusted point total. The student’s grade is based on the individuals completed and corrected work.

<table>
<thead>
<tr>
<th>Assignments</th>
<th>Number</th>
<th>Points</th>
<th>Total</th>
<th>Grading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class Projects</td>
<td>7</td>
<td>10</td>
<td>70</td>
<td>A 100%-92%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>5</td>
<td>20</td>
<td>100</td>
<td>B 91%-87%</td>
</tr>
<tr>
<td>Final Written</td>
<td>1</td>
<td>50</td>
<td>50</td>
<td>C 86%-78%</td>
</tr>
<tr>
<td>Final Project</td>
<td>1</td>
<td>50</td>
<td>50</td>
<td>D 77%-70%</td>
</tr>
<tr>
<td>Class Participation</td>
<td>1</td>
<td>10</td>
<td>10</td>
<td>F Below 70%</td>
</tr>
</tbody>
</table>

Major Tests and Quizzes:
Student performance will be evaluated throughout the semester through the use of section quizzes; project evaluation check lists; midterm and final exams.

Classroom Policies and Procedures
A. General Information
Students must become familiar with the lab safety rules and abide by those rules. Students who are unable to follow the safety rules will not be allowed to continue in the program.

Complete all assignments and projects in a timely manner.

Wear proper clothing for surface anatomy sessions.

Homework assignments are required to be completed prior to the next class session. Homework assignments consist primarily of iCampus video presentations that are essential to understanding and preparing for laboratory projects for the next class meeting.

Open laboratory times are available each semester. The instructor will provide students with the open lab times at the beginning of each semester. Every effort should be made to complete projects during the allotted class time.

Since orthotics and prosthetics is a medical field, a clean and neat appearance is essential. Sleeveless shirts, short pants, or clothing of questionable taste, etc. are not acceptable in the O/P lab.

B. Attendance Policy:
Attendance is essential for the student to develop the sequentially presented skills. If absence is unavoidable, notify the instructor prior to a scheduled class. Because many of the projects build from what was done in previous class work, it is advisable to attend each class. Attendance is taken and class participation is counted as part of the grade.
Attend all classes. Do not make appointments during scheduled class times (doctors, dentist, personal, business, etc.).

An excused absence may be allowed in the case of personal illness, family emergency, transportation difficulties or as previously arranged with the instructor.

C. Make-up Policy

All work assigned will be due by the assigned date; late work may be accepted at a penalty to the student. The penalty is one-half (1/2) credit for the late assignment. The grade will be on a total point system with points assigned to each activity assigned to the class.

D. Extra-credit Policy

Students have the opportunity to gain extra credit through special projects, assistance in lab set up and other fabrication projects as determined by the department head. All extra credit must be scheduled and approved by the department head. Students may apply the agreed upon credit to projects, quizzes or exams.

E. Final Exam Information

Final exams are given during final exam week. Exams consist of a written exam and a laboratory practical.

F. Academic Honor Code

The objective of the academic honor code is to sustain a learning-centered environment in which all students are expected to demonstrate integrity, honor, and responsibility, and recognize the importance of being accountable for one's academic behavior.

Students who are found in violation of the academic honor code will be required to meet with the program director to determine the severity of the penalty. This may include dismissal from the program, remediation in the form of specific assignments or other measures that are determined by the department head.

G. College Statement about grades of “F” and withdrawal from class.

- Students may withdraw from a course by processing an add/drop form during regular office hours through the Registration and Records Office at Main Campus or Romeoville Campus, or by phone at 815-744-2200. Please note the withdrawal dates listed on your bill or student schedule. Every course has its own withdrawal date. Failure to withdraw properly may result in a failing grade of “F” in the course.

- At any time prior to the deadline dates established, an instructor may withdraw a student from class because of poor attendance, poor academic performance or inappropriate academic behavior, such as, but not limited to, cheating or plagiarism.

H. Intellectual Property

Students own and hold the copyright to the original work they produce in class. It is a widely accepted practice to use student work as part of the college’s internal self-evaluation, assessment procedures, or other efforts to improve teaching and learning and in promoting programs and recruiting new students. If you do not wish your work to be used in this manner, please inform the instructor.

I. Student Code of Conduct

Each student is responsible for reading and adhering to the Student Code of Conduct as stated in the college catalog.

J. Sexual Harassment

Joliet Junior College seeks to foster a community environment in which all members respect and trust each other. In a community in which persons respect and trust each other, there is no place for sexual harassment. JJC has a strong policy prohibiting the sexual harassment of one member of the college community by another. See Catalog or Student Handbook.
K. Student Support [http://jic.edu/services-for-students/pages/default.aspx](http://jic.edu/services-for-students/pages/default.aspx)

a. Disability Services: [http://jic.edu/services-for-students/disability-services/Pages/default.aspx](http://jic.edu/services-for-students/disability-services/Pages/default.aspx). Student Accommodations and Resources (StAR): If you need disability-related accommodations, specialized tutoring, or assistive technology in this class, if you have emergency medical information you wish to share with me, or if you need special arrangements in case the building must be evacuated, please inform me immediately. Please see me privately after class or at my office. New students should request accommodations and support by scheduling an appointment with the Student Accommodations and Resources (StAR) Office, Campus Center 1125, (815) 280-2230.

b. Tutoring: [http://jic.edu/services-for-students](http://jic.edu/services-for-students)

c. Counseling and Advising: [http://jic.edu/services-for-students/counseling-advising](http://jic.edu/services-for-students/counseling-advising)

d. Academic Resources: [http://jic.edu/services-for-students/academic-resources](http://jic.edu/services-for-students/academic-resources)

e. Support Programs: [http://jic.edu/services-for-students/support-programs-services](http://jic.edu/services-for-students/support-programs-services)

f. Technology Support: [http://jic.edu/services-for-students/Pages/technology-support.aspx](http://jic.edu/services-for-students/Pages/technology-support.aspx)

L. Safety

Students with an impaired ability to concentrate may jeopardize safety in this classroom for themselves, their classmates and their instructor. If your ability to concentrate is impaired you should discuss this matter with your instructor prior to operating equipment or performing a laboratory procedure. Students are responsible for reporting any condition that would impair the ability to concentrate. Failure to notify your instructor of this issue may be a violation of the Student Code of Conduct.

For safety purposes, students are required to wear closed shoes at all times.

Safety glasses must be worn in all designated areas.
<table>
<thead>
<tr>
<th>Week Dates</th>
<th>Unit, Topic, Class Activity</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Anatomy Review</td>
<td>Review of functional anatomy of the foot and ankle. Terminology specific to the foot and ankle. Review surface anatomy of foot and ankle. Objectives; 1. Identify skeletal structures of the foot 2. Palate the “talar neutral” position</td>
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<tr>
<td>Week 2</td>
<td>Pathology</td>
<td>Discuss and review the pathomechanics of the ankle foot complex. Review implications of the diabetic foot, arthritis foot, and athletic injuries as it relates to orthotic management of the foot. Objectives; 1. Explain the locking and unlocking mechanism of the sub-talar joint 2. List pathology specific foot complications as a result of diabetes 3. List common pathologies of the foot and identify the orthotic management used to treat the pathology</td>
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<tr>
<td>Week 3</td>
<td>Foot Impressions</td>
<td>Lecture demonstration of various foot impression techniques. Perform foot impressions (lab sessions) Objectives; 1. Perform basic patient assessment 2. Take a foam box impression 3. Perform a slipper cast impression 4. Obtain and record necessary orthometric data</td>
</tr>
<tr>
<td>Week 4</td>
<td>Foot Inserts</td>
<td>Evaluation of impressions, seal and fill, cast modifications. Laboratory project; mixing, pouring plaster; set up alignment for foot impressions. Objectives; 1. Identify the common criteria for evaluating a foot impression 2. Mix plaster and fill foot impressions in correct alignment</td>
</tr>
<tr>
<td>Week 5</td>
<td>Cast Preparation</td>
<td>Perform cast modifications to meet biomechanical objectives. Selection of materials and fabrication techniques. Objectives; 1. Modify a foam box foot impression 2. Modify a slipper cast impression</td>
</tr>
<tr>
<td>Week 6</td>
<td>Fabrication of Inserts</td>
<td>Lecture-demonstration fabrication techniques. Laboratory fabrication project. Objectives; 1. Operate and effectively utilize a vacuum bladder for forming foot orthoses 2. Identify and select materials for foot orthosis fabrication 3. Finish a complete foot orthosis 4. Identify and delineate the common trim lines for a</td>
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<tr>
<td>Week 7</td>
<td>Foot Orthosis Variations</td>
<td>Sulcus, metatarsal length, rigid and flexible systems. Partial foot prostheses. Laboratory project; critique of projects. Objectives; 1. Identify and trim a foot orthosis to various lengths 2. Fabricate a partial foot insert with toe filler 3. Fit and shape a partial foot insert into a shoe</td>
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<tr>
<td>Week 8</td>
<td>Shoes Measurement, Construction and Fitting</td>
<td>Theory and principles of shoe modifications. Shoe construction, materials, and methods of fabrication. Laboratory project; shoe construction Objectives; 1. Identify the components of a shoe 2. Utilize a Brannock device to measure feet 3. Identify proper shoe fit 4. Correctly fit a patient with a shoe</td>
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<tr>
<td>Week 9</td>
<td>Stabilizers, Heel and Sole Wedging</td>
<td>Lecture and laboratory of stabilizers, outflares, heel and sole wedging, indications for use, and fabrication techniques. Laboratory project; fabrication heel, sole wedging. Objectives; 1. Remove a sole from a shoe 2. Fabricate a full foot wedge 3. Fabricate a SACH heel 4. Fabricate and modify various types of heel and sole wedging</td>
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<tr>
<td>Week 10</td>
<td>Medial Buttress</td>
<td>Lecture and laboratory of medial buttress, indication for use, and fabrication techniques. Laboratory project; Medial buttress Objectives; 1. Delineate the trim lines for a medial buttress 2. Fabricate a medial buttress 3. Adjust and fit a medial buttress</td>
</tr>
<tr>
<td>Week 11</td>
<td>Rocker Soles and Shoe Elevations</td>
<td>Lecture and laboratory practice of rocker soles and shoe elevations. Laboratory fabrication project. Objectives; 1. Delineate the trim lines and location for rocker soles and shoe elevations 2. Fabricate a mild, double, and severe rocker sole</td>
</tr>
<tr>
<td>Week 12</td>
<td>Fitting and Critique Off the Shelf foot and ankle systems</td>
<td>Lecture and laboratory of rocker soles and shoe elevations, fitting and critique of laboratory projects. Objectives; 1. Observe various fittings of rocker soles 2. Recognize and identify proper fit and function of rocker soles 3. Recognize and use foot and ankle OTS systems specific to foot pathology</td>
</tr>
<tr>
<td>Week 13</td>
<td>UCBL Foot Orthoses Supra-Malleolar Orthoses</td>
<td>Rationale and impression techniques for the University of California Biomechanics Laboratory Foot Orthosis and Supra-malleolar Orthoses. Laboratory impression and measurement process. Objectives; 1. Perform the impression technique for a UCBL orthosis</td>
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<tr>
<td>Week 14</td>
<td>Cast Modifications and Fabrication of the UCBL Foot Orthosis</td>
<td>Lecture/Lab Cast modifications and fabrication process. Trim lines and finish fabrication. Objectives; 1. Fabricate a UCBL orthosis utilizing an extrinsic post 2. Delineate and finish the trim lines of the UCBL orthosis</td>
</tr>
<tr>
<td>Week 15</td>
<td>Fitting Critique</td>
<td>Fitting of UCBL orthoses and critique. Modifications and adjustments Objectives; 1. Fit a UCBL orthosis 2. Modify a UCBL orthosis to maximize biomechanical principles</td>
</tr>
<tr>
<td>Week 16</td>
<td>Pressure Garments for the Lower Limb</td>
<td>Lecture/Lab Review of lymph and circulatory system. Fitting of pressure garments for the lower limb Objectives; 1. Describe the pathologies associated with venous insufficiency 2. Measure a leg for the proper sized compression garment 3. Don a pressure garment and instruct a patient on donning techniques 4. Explain care and use</td>
</tr>
<tr>
<td>Final</td>
<td>Final Exam week</td>
<td>Written/Practical Exam</td>
</tr>
</tbody>
</table>

**Effective Date:** 1-16-2012

Signature of Department Chair: ________________________________