Form: Course Syllabus	Form Number	EXC-01-02-02A
	Issue Number and Date	2/3/24/2022/2963 05/12/2022
	Number and Date of Revision or Modification	
	Deans Council Approval Decision Number	2/3/24/2023
	The Date of the Deans Council Approval Decision	23/01/2023
	Number of Pages	06

1.	Course Title	***Clinical practicum in below knee orthoses2***
2.	Course Number	***1833343***
3.	Credit Hours (Theory, Practical)	1 (**Practical**)
	Contact Hours (Theory, Practical)	2 hours/week
4.	Prerequisites/Corequisites	***Successful completion of 1833243***
5.	Program Title	Bachelor's in Orthotics and Prosthetics
6.	Program Code	1803
7.	School/Center	School of Rehabilitation Sciences
8.	Academic Department	Orthotics and Prosthetics
9.	Course Level	Undergraduate
10.	Year of Study/Semester	3nd year, 1st semester
11.	Program Degree	BSc in Orthotics and Prosthetics
12.	Other Departments involved in Teaching the course	None
13.	Main Teaching Instruction language	English
14.	Learning Types	☒ Face to Face ☐ Blended ☐ Fully Online
15.	Online Platform(s)	☒ Moodle ☒ Microsoft Teams
16.	Issuing Date	December 29, 2024
17.	Revision Date	January 5, 2025

18. Course Coordinator

Name: Dr. Amneh Alshawabka **Contact hours**: Sunday (8:00am – 9:30am)
Office number: 528 **Phone number:** +962-6-5355000 - 23272
Email: A.alshawabka@ju.edu.jo

19. Other Instructors

Name: Dr.
Office number:

20. Course Description

This course provides students with practical experience in the clinical management and delivery of below-knee orthoses. Students will have the opportunity to apply their theoretical knowledge to real-world cases, developing their skills in patient assessment, orthotic design, and device fitting. The placement focuses on refining students' clinical competencies while also enhancing their communication, teamwork, professionalism, and ability to work under pressure. Through evidence-based practice and critical thinking, students will learn to deliver high-quality care in a dynamic clinical setting..

21. Program Learning Outcomes

Program Learning Outcomes Descriptors (PLOD)

PLO	National Qualification Framework Descriptors*		
	Knowledge (A)	Skills (B)	Competency (C)
1. Develop and integrate knowledge from foundational courses; including basic sciences, medical sciences, and research methods to reflect on rehabilitation sciences practice.	☒	☐	☐
2. Demonstrate comprehensive knowledge and practical application of orthotics and prosthetics principles, including biomechanics, material science, device design, clinical application, emerging technologies, and evidence-based practices to support patient care and innovation	☒	☐	☐
3. Apply orthotic and prosthetic skills and techniques in accordance with professional standards, integrating the effective use of equipment, materials, components, and emerging technologies to design and fabricate devices.	☐	☒	☐
4. Perform comprehensive patient evaluations and develop individualized, evidence-based treatment plans, considering personal and environmental factors across diverse clinical settings.	☐	☒	☐
5. Compose effective oral and written communication for clinical and professional purposes including the use of information technology resources	☐	☐	☒
6. Operate within interprofessional teams of healthcare providers, clients, communities, and organizations in traditional and emerging practices and illustrate the qualities of a lifelong learner	☐	☐	☒
7. Apply leadership and management skills to advance Jordan and the global community scientifically, socially, and technologically in rehabilitation sciences.	☐	☐	☒
8. Generate scientific research that advances rehabilitation practices locally and globally.	☐	☐	☒
9. Employ critical thinking, clinical reasoning, and ethical principles to assess complex clinical situations, formulate informed decisions, and deliver patient-centered orthotic and prosthetic interventions.	☐	☐	☒
10. Exhibit autonomy in clinical decision-making while identifying and overcoming the challenges in delivering patient-centered orthotic and prosthetic interventions, including managing complex cases and addressing resource limitations.	☐	☐	☒

*Choose only one descriptor for each PLO: knowledge, skills, or competencies.

22. Course Learning Outcomes: By the end of this course, the student is expected to achieve the following Learning outcomes*:*

CLO 1. Critically evaluate patients requiring below-knee orthotic intervention to determine the most appropriate orthotic design, incorporating clinical assessments and biomechanical analysis. **(Skills/ Evaluate)**

CLO 2. Demonstrate proficiency in the measurement and casting techniques for the lower limb, ensuring accurate anatomical reproduction and precise plaster rectification for the fabrication of below-knee orthoses. **(Skills/Create)**

CLO 3. Execute the assembly of below-knee orthoses, integrating joint components, strapping mechanisms, and other functional elements, followed by bench alignment to ensure structural integrity and functionality (**Competencies**)

CLO 4. Apply advanced clinical techniques to fit and align below-knee orthoses, perform static and dynamic alignment assessments, and implement necessary modifications to optimize patient outcomes in terms of comfort, function, and biomechanical performance. (**Competencies**)

Matrix of Course Learning Outcomes according to National Qualification Framework Descriptors

CLO Number	Knowledge		Skills				Competencies
	Remember	Understand	Apply	Analyze	Evaluate	Create	
1					X		
2						X	
3							X
4							X

23. Matrix linking Course Learning Outcomes (CLOs) with Program Learning Outcomes (PLOs)

PLO* / CLO	1	2	3	4	5	6	7	8	9	10	**Descriptors		
											A	B	C
1.			X									X	
2.				X								X	
3.						X							X
4.										X			X

*Map each Course Learning Outcome to ONLY one Program Learning Outcome based on the Courses Matrix

** Descriptors are assigned based on (PLO) that was chosen and specified in the program learning outcomes matrix in item (21)

24. Topic Outline and Schedule:

Week	Lecture	Topic	ILO/s Linked to the Topic	Learning Types (Face to Face/ Blended/ Fully Online)	Platform Used	Synchronous / Asynchronous Lecturing	Evaluation Methods	Learning Resources
1	1.1	General Revision	1-4	Face to face	Moodle	Sync	Supervisor evaluation/ Rubric	
2	2.1	Case 1: Assessment & negative casting	1-4	Face to face	Moodle	Sync	Supervisor evaluation/ Rubric	
3	3.1	Case 1: Positive cast modification	1-4	Face to face	Moodle	Sync	Supervisor evaluation/ Rubric	
4	4.1	Case 1: Positive cast modification	1-4	Face to face	Moodle	Sync	Supervisor evaluation/ Rubric	
5	5.1	Case 1: Plastic draping	1-4	Face to face	Moodle	Sync	Supervisor evaluation/ Rubric	
6	6.1	Case 1: Static and dynamic alignments	1-4	Face to face	Moodle	Sync	Supervisor evaluation/ Rubric	
7	7.1	Case 1: Evaluation and assessment& Delivery and family education	1-4	Face to face	Moodle	Sync	Supervisor evaluation/ Rubric	
8	8.1	Case 2: Assessment & negative casting	1-4	Face to face	Moodle	Sync	Supervisor evaluation/ Rubric	
9	9.1	Case 2: Positive cast modification	1-4	Face to face	Moodle	Sync	Supervisor evaluation/ Rubric	
10	10.1	Case 2: Positive cast modification	1-4	Face to face	Moodle	Sync	Supervisor evaluation/ Rubric	
11	11.1	Case 2: Plastic draping	1-4	Face to face	Moodle	Sync	Supervisor evaluation/ Rubric	
12	12.1	Case 2: Static and dynamic alignments	1-4	Face to face	Moodle	Sync	Supervisor evaluation/ Rubric	

13	13.1	Case 2: Evaluation and assessment	1-4	Face to face	Moodle	Sync	Supervisor evaluation/ Rubric	
14	14.1	Case2: Delivery and family education	1-4	Face to face	Moodle	Sync	Supervisor evaluation/ Rubric	
15	**15.1**	Final examination	1-4	Face to face	-	Sync	Exam	

25. Evaluation Methods:

Course Evaluation Plan							
Evaluation Activity		**Mark***	**Course Learning Outcomes**				
			1	**2**	**3**	**4**	**5**
First Exam (mid exam)							
Second Exam							
Final Exam		20	x	x	x	x	x
Classwork							
Evaluation of Semester work	Projects\Reports						
	Research\Worksheets						
	Fieldwork visits						
	Clinical and practical performance	80	x	x	x	x	x
	Portfolio						
	Presentations						
	Simulation/Modeling						
	Discussion						
	Quizzes						
	Exercises						
	Interviews						
	Conferences						
	Any other evaluation activities approved by the faculty committee						
Total Marks (100%)		100					

* According to the instructions for granting a bachelor's degree

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**According to the instructions of organizing semester work, tests, examinations, and grades for the bachelor's degree.

Final exam descriptions table

CLO no.	CLO Weight	Total no. of questions	Total exam mark	No. of questions per CLO	No. of questions/ cognitive level					
					Remember 30%	Understanding 20%	Applying 20%	Analyze 10%	Evaluate 10%	Create 10%
1		5	20							
4		5	20							
3		5	20							
4		2.5	20							
5		2.5	20							

26. Course Requirements

Students should have internet connection, a computer and access to e-learning system. All lectures are face to face.

27. Course Policy

A- Attendance policies:

- Attendance will be taken periodically throughout the semester.
- Students are expected to attend and actively participate in all classes.
- Students are expected to be on time.
- When the student is unable to attend class, it is a courtesy to notify the instructor in advance using either e-mail.
- Repeated tardiness or leaving early will not be accepted.
- Students who miss class (or any portion of class) are responsible for the content. Any student who misses a class has the responsibility for obtaining copies of notes, handouts, assignments, etc. from class members who were present. If additional assistance is still necessary, an appointment should be scheduled with the instructor. Class time is not to be used to go over material with students who missed class(es).
- An absence of more than 15% of all the number of classes, **which is equivalent of 2 laboratories**, requires that the student provides an official excuse to the instructor and the dean.
- If the excuse was accepted the student is required to withdraw from the module.
- If the excuse was rejected the student will fail, and mark of zero will be assigned as suggested by the laws and regulations of the University of Jordan.

B- Absences from exams and handing in assignments on time:

- **The instructor will not do any make-up exams.**

- Exceptions for make-up exams and late submission of class assignments will be made on a case-by-case basis for true personal emergencies that are described as accepted by the regulations of UJ (e.g., documented medical, personal, or family emergency).
- Make-up exams will be arranged if justifications for missing the exam satisfy the above. It is the student's responsibility to contact the instructor within 24 hours of the original exam to schedule a make-up session. A make-up exam should be taken within a week from the original exam date, unless the student can provide documentation that makes meeting that deadline impossible; otherwise, the recorded score for that exam for the student will be a zero.
- Late assignments will not be accepted and submission of assignments (due to unjustified absence from class) by other students

C- Health and safety procedures:

- Students will not be in direct contact with patients during this course.
- Students are not expected to use any heavy tools or equipment that might impose health and safety issues during this course.
- Students should work safely, including being able to select appropriate hazard control and risk management, reduction or elimination techniques in a safe manner in accordance with health and safety legislation.
- Students should understand the importance of and be able to maintain confidentiality.
- Students should understand the importance of and be able to obtain informed consent.
- Students should know the limits of their practice and when to seek advice or refer to another professional

D- Honesty policy regarding cheating, plagiarism, and misbehavior:

- Students are expected to observe all University guidelines pertaining to academic misconduct.
- Any work submitted by a student for academic credit must be the student's own work. Submission of work taken directly from another source (e.g., book, journal, internet, clinic forms, or another student work) will be considered plagiarism and the student/group will get a zero grade for that work if part of an assignment. In addition, if copying occurred, both the student who copied the work and the student who gave material to be copied (if applicable) will receive a zero for the assignment.
- Students are expected to do work required for assignments on their own. Asking other instructors at the JU clinic or the staff, or other students to assist in or do any part of the assignment for them will negatively affect their grade on that assignment. The course instructor is the person the student needs to talk to if s/he has any difficulties pertaining to an assignment

or project and is strongly encouraged to schedule an appointment with the instructor if such difficulties arise during the semester.

- Course materials prepared by the instructor, together with the content of all lectures and review sessions presented by the instructor are the property of the instructor. Video and audio recording of lectures and review sessions without the consent of the instructor is prohibited.
- Any forms of academic misconduct will be handled according to the University of Jordan guidelines.

E- Grading policy:

- Grading for this course will be determined based upon the accumulation of points for variety of assignments and exams.
- All work will be evaluated on completeness, organization, clarity of information, and the integration and application of the material

F-Available university services that support achievement in the course:

- The University of Jordan provides many services to support social, health, and mental well-being of students in general and students with disabilities in specific. Students are advised to visit the Faculty of Students Affairs to learn more about those services.
- If you are a student with a disability for which you may request accommodations, please notify the staff of Services for Student with Disabilities (Faculty of Students Affairs) as soon as possible. Please also contact the instructor as soon as possible (email is acceptable) so the appropriate accommodations for this course can be made.

28. References

A- Required book(s), assigned reading and audio-visuals:

1. AAOS Atlas of Orthoses and Assistive Devices. Bertram Goldberg, John D. Hsu. 4th edition.
2. Lower Limb Orthotics; Orthotist supplement. New York University.
3. Lower Limb Orthotics; New York University.
4. Clinical anatomy for medical students, (7th Ed.), Snell Richard S.
5. Biomechanics: Principles and Application, Furey, Michael J. "Joint lubrication." (2000).
6. Biomechanics in Clinic and Research. Jim Richards.
7. Orthotics: A comprehensive Clinical Approach. Joan E. Edelstein, 1st edition, SLACK 2002.

8. Gait analysis: normal and pathological function. New Jersey: SLACK. Jacquelin Perry, M., 2010.

- Recommended books, materials, and media:

- Students should have internet connection, a computer and access to Microsoft Teams and the Moodle (e-learning system). All theory lectures will be given face to face and will be provided at the dashboard of the e-learning system.
- Articles and teaching materials provided by lecturer through the e-learning website

Videos of practical content uploaded on Microsoft Stream, E-learning and YouTube- **Recommended books, materials, and media:**

29. Additional Information

- This course builds on the knowledge that you have obtained in the Physics, anatomy, Orthopedics, Gait analysis and biomechanics so make sure that you prepare and revise the necessary information.
- This course is highly dependent on the e-learning website so make sure you have access to this platform and you can download the materials and access the lectures.
- If you require any further information, make sure to e-mail the instructor and arrange for a meeting during the announced office hours

Name of the Instructor or the Course Coordinator: Dr. Amneh Alshawabka	Signature: Amneh Alshawabka	Date: October 5, 2025
Name of the Head of Quality Assurance Committee/ Department Dr. Mahmoud Fataftah	Signature: MF	Date: ……..……
Name of the Head of Department Dr. Mahmoud Fataftah	Signature: MF	Date: ……..……
Name of the Head of Quality Assurance Committee/ School or Center ……Dr. Lara Khliafat…….	Signature: …LK……...……	Date: 2/11/2025 ……..……
Name of the Dean or the Director … Dr. Lara Khliafat……..	Signature: …LK……...……	Date: 2/11/2025 ……..……

The University of Jordan الجامعة الاردنية

The University of Jordan
Faculty of Rehabilitation Sciences
Prosthetics and Orthotics Department

Rubric for Clinical practicum in below knee orthoses2 (1833343)/ (3rd year)

Student's name: ……. **Instructor's name: ……**

Student's roll no.: …… **Student's No.:…….**

Case No. :…… **Total score: /40**

1. Portfolio, Assessment & Prescription 10%				
Red flag: - **The student must be able to measure the MMT and RoM correctly, otherwise, the mark for this section will be zero.** - **The student must be able to decide the best orthotic intervention(s) based on patient's need, otherwise, the mark for this section will be zero**				
	Unacceptable 0%	**Good 1%**	**Excellent 2%**	**Total score**
Subjective History (2 marks)	Unable to provide patient history and goals reflect only obtaining device	Most relevant parts of patient history and goals are gathered with details	All relevant parts of patient history and goals are gathered with details, enough to show a full understanding of the patient needs	
General Physical Assessment/ Specific test (e.g. Silfverskiold, LLD, Thomas Tests…) (2 marks)	Lacks the basic parts of a physical assessment and shows very poor understanding	Physical assessment was mostly done efficiently, demonstrating good understanding of the need to examine relevant areas such as skin, sensation, balance, overall mobility and any other comorbidities needed for this treatment plan	Physical assessment was full done efficiently, demonstrating strong understanding of the need to examine relevant areas such as skin, sensation, balance, overall mobility and any other comorbidities needed for this treatment plan	
Range of Motion Testing (RoM) & Muscle Strength Testing (MMT) (2 marks)	Unable to complete relevant ROM testing & Unable to complete muscle strength testing using the oxford scale	complete most of the relevant ROM testing & complete most of muscle strength testing using the oxford scale	Comprehensive measurement of relevant ROM & MMT testing incorporated into the assessment in a timely and	

			efficient manner, well documented.	
Communication (2 marks)	No introduction and communication did not flow, there was almost no overall involvement of the patient or their family	Communication was generally organized, with good engagement of the patient and/or their family throughout most of the interaction.	Patient greeted with clear introductions, goals of appointment outlined, open and closed questions asked as appropriate and patient engaged into an ongoing process	
Orthotic type/design (2 marks)	No logic, lacks fundamentals principles	The decision was appropriate for the patient's presentation and required several guidance or verification.	Acceptable decision/ design with minimal assistance	

2. Negative Casting 10%

Red flag: The negative cast should be strong enough and smooth internally with acceptable length and dimensions, otherwise, the mark for this section will be zero.

	Unacceptable 0%	**Good 2.5%**	**Excellent 5%**	**Total score**
Casting angle and hand positions	Very poor with re-casting recommend	Acceptable shaping of the bar with minimal assistance	An excellent execution	
Coverage & Wrapping	Very poor with re-casting recommend	Acceptable shaping of the bar with minimal assistance	An excellent execution	

3. Positive Plaster Rectification 10%

	Unacceptable 0%	**Good 1 %**	**Proficient 2%**	**Total score**
Forefoot, ROA	Slightly flat or the forefoot is Abducted or adducted	Not completely flat in all direction, or a symmetrical shape	Flat in all direction, Symmetrical shape, No forefoot adduction or abduction	
MLA & LLA	Incorrect height or dimension	Incorrect shaping or size of M arch	Correct shape and size	

Heel	Incorrect size (ML dimension, Unsymmetrical shape, Semi flat surface	Correct size (ML dimension), Unsymmetrical shape or Semi flat surface	Correct size (ML dimension), Symmetrical shape, Semi flat surface	
Leg	Unsymmetrical shape, Smooth & even surfaces	Unsymmetrical shape or Smooth & even surfaces	Symmetrical shape, Smooth & even surfaces	
Markings and measures	No markings, No measurements,	Most measurements are taken without prompting Clearly indicated Measurement form used	All markings are in place and clearly marked. All key measurements taken independently Measurement form used and fully filled.	
4. Fitting& Finishing 10%				
Red flag: - **The orthosis should be sung fit with correct alignment, otherwise, the mark for this section will be zero** - **. The orthosis should be acceptable by the patient without any sharp edges, otherwise, the mark for this section will be zero.**				
	Unacceptable 0%	**Good 1 %**	**Proficient 2.5%**	**Total score**
Total fit	Very poor with re-casting recommend	One or two aspects are to be fixed before final hand-in.	Excellent fit	
Trim lines	Incorrect height or dimension(s), sharp edges & asymmetrical shape	Only one aspect is to be fixed	Correct height and dimension(s), no sharp edges & symmetrical shape	
Alignments (SVA, LLD, AAFO, orthotic knee joint,…..)	Lacks fundamentals	Student had minor assistance	Optimal alignment according to patient's gait pattern/deformity	
Finishing	Very poor cosmetic	Some technical imperfections	Cosmetically pleasing device	
Final Written exam 20%				

Notes:

- ***The student should follow the lab safety rules and instructions and avoid wasting time and materials. Failure to comply:***
  1. ***For one time:*** ***The student will be sent an official notice***
  2. ***For two times:*** ***The student will be official investigated***
  3. ***For three times:*** ***The student will be withdrawn from the lab.***
- ***All the points mentioned above should be documented in the Portfolio file, otherwise, the mark for the related point will be zero***
- ***Student will not be able to attend the final written exam if he/she absent for more than two classes.***
- ***Student will not be able to attend the final exam if he/she failed to deliver his/her orthotics case.***

Best of luck