

## Course Description Form

1. Course Name:	Biomechanics
2. Course Code:	WBM-42-04
3. Semester / Year:	First semester/2025
4. Description Preparation Date:	30/07/2025
5. Available Attendance Forms:	Presence in the classroom
6. Number of Credit Hours (Total) / Number of Units (Total):	60 h/ 3 units
7. Course administrator's name (mention all, if more than one name)	Name: Saad M. Sarhan Email: <a href="mailto:saad.mah@uowa.edu.iq">saad.mah@uowa.edu.iq</a>
8. Course Objectives	<p><b>Course Objectives</b></p> <p>The topic of biomechanics aims to enable students to acquire the following skills:</p> <ul style="list-style-type: none"><li>• Improving technical performance (technique).</li><li>• Developing and innovating new tools.</li><li>• Enhancing training methods.</li><li>• Improving overall performance.</li><li>• Preventing injuries and facilitating rehabilitation processes.</li></ul>
9. Teaching and Learning Strategies	<p><b>Strategy</b></p> <ul style="list-style-type: none"><li>• The instructor delivers detailed theoretical lectures.</li><li>• The instructor requests periodic reports on the core topics of the subject.</li><li>• The instructor ensures mastery of the fundamental concepts and their practical applications, enhancing the teaching and learning process.</li><li>• The instructor introduces students to key applications, such as prosthetics and assistive devices in the field of biomedical engineering, both theoretically and practically.</li></ul>
10. Course Structure	

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1-3	9	1,2,3	The Biomechanics of the Human Upper Extremity	Lectures	Quizzes and HWs
4-6	9	1,2,3	The Biomechanics of the Human Lower Extremity	Lectures	
7-8	6	1,2,3	The Biomechanics of the Human Spine	Lectures	
9-10	6	1,2,3	Linear Kinematics of Human Movement	Lectures	
11-12	6	1,2,3	Angular Kinematics of Human Movement	Lectures	
13-15	9	1,2,3	Equilibrium and Human Movement	Lectures	

#### 11. Course Evaluation

Mid-term exam	30%
Quizzes and HWs	10%
Technical reports	10%
Final Exam	50%

#### 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	BASIC BIOMECHANICS EIGHTH EDITION Susan J. Hall, Ph.D.
Main references (sources)	The college library provides access to additional resources for the curriculum.
Recommended books and references (scientific journals, reports...)	Browsing scientific websites to stay updated on the latest developments in the subject.
Electronic References, Websites	