



Course Specification of Anatomy

Course Code (BE162)

I. Course Identification and General Information:						
1	Course Title:	Anatomy				
2	Course Code & Number:	BE162				
3	Credit hours:	C.H			TOTAL	
		Th.	Seminar	Pr		Tr.
		2	--	2	--	3
4	Study level/ semester at which this course is offered:	2 nd Level / 2 nd Semester				
5	Pre –requisite (if any):	Histology				
6	Co –requisite (if any):	None				
7	Program (s) in which the course is offered:	Biomedical Engineering Program				
8	Language of teaching the course:	English				
9	Location of Teaching the Course:	Faculty of Engineering				
10	Prepared by:	Dr. Sadeq Abdulmogni				
11	Reviewed by:	Dr. Mohammed Al-Olofi				
12	Date of Approval:					

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Faculty of Engineering
Department: Biomedical Engineering
Title of the Program: Biomedical Engineering



I. Course Description:

This course is designed to provide the students with the needed knowledge in human anatomy needed to be applied at a later stage during their clinical training. The lecture topics include introduction in general anatomy, Terminology of movement, Skeleton, Joints and Muscles.

III. Course Intended learning outcomes (CILOs) of the course (maximum 8CILOs)		Referenced PILOs (Only write code number of referenced Program Intended learning outcomes)
Knowledge and Understanding: Upon successful completion of the undergraduate Biomedical Engineering Program, the graduates will be able to:		
a1	Identify all structures, components, systems, Regions, parts, organs, cavities of human body.	A1 Describe and explain the underlying mathematical methods and theories; life scientific-principles; and engineering core concepts related to the Biomedical Engineering context.
		A2 Clarify the design principles and techniques and the engineering materials characteristics and how these are relevant to the developments and technologies in a biomedical systems context.
B. Cognitive/ Intellectual Skills: Upon successful completion of the undergraduate Biomedical Engineering Program, the graduates will be able to:		

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b1	Distinguish structures, bones, muscles, nerves, blood supply. Venous drainage and lymphatic drainage of upper and lower limbs of human body.	B1 Apply engineering principles; basic of life-science; mathematical theories; and modern tools professionally in modelling, analyzing, designing, and constructing physical digital systems; devices and/or processes relevant to Biomedical Engineering fields.
b2	Integrate anatomy with other sciences	B4 Consider the principles of management and its various functions to work professionally in Biomedical Engineering fields.
C. Professional and Practical Skills: Upon successful completion of the undergraduate Biomedical Engineering Program, the graduates will be able to:		
c1	Demonstrate relationship between the different structures and organs.	C1 Apply integrally knowledge of mathematics, life science, IT, design, business context and engineering practice to solve problems and to design systems/processes relevant to Biomedical Engineering.
D. Transferable Skills: Upon successful completion of the undergraduate Biomedical Engineering Program, the graduates will be able to:		
d1	Work separately or in a team to research and prepare a scientific topic.	D1 Lead and motivate individuals, show capability to work in stressful environments and within constraints, collaborate effectively within multidisciplinary team.

(A) Alignment Course Intended Learning Outcomes of Knowledge and Understanding to Teaching Strategies and Assessment Strategies:		
Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
a1. Identify all structures,	• Interactive lectures &	• Written tests (mid and final

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components, systems, Regions, parts, organs, cavities of human body.	examples, <ul style="list-style-type: none"> • Presentation • Interactive class discussions, 	terms and quizzes),
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(B) Alignment Course Intended Learning Outcomes of Intellectual Skills to Teaching Strategies and Assessment Strategies:

Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
b1. Distinguish structures, bones, muscles, nerves, blood supply. Venous drainage and lymphatic drainage of upper and lower limbs of human body.	<ul style="list-style-type: none"> • Interactive lectures & examples, • Presentation • Interactive class discussions, 	<ul style="list-style-type: none"> • Written tests (mid and final terms and quizzes),
Integrate anatomy with other sciences	<ul style="list-style-type: none"> • Interactive lectures & examples, • Presentation • Interactive class discussions, 	<ul style="list-style-type: none"> • Written tests (mid and final terms and quizzes),

(C) Alignment Course Intended Learning Outcomes of Professional and Practical Skills to Teaching Strategies and Assessment Strategies:

Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
c1 Demonstrate relationship between the different structures and organs.	<ul style="list-style-type: none"> -Lectures -Lab Experiments 	<ul style="list-style-type: none"> -Practical reports - Final Practical Exam

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(D) Alignment Course Intended Learning Outcomes of Transferable Skills to Teaching Strategies and Assessment Strategies:		
Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
d1. Work separately or in a team to research and prepare a scientific topic.	<ul style="list-style-type: none"> - Discussion - Self Learning ▪ - Presentation 	Research Oral discussion.

IV. Course Content:					
A – Theoretical Aspect:					
Order	Units/Topics List	Learning Outcomes	Sub Topics List	Number of Weeks	contact hours
1	Introduction to anatomy	a1	Definitions, Anatomical positions, Planes of anatomy	1	2
2	Terminology of movement	a1,a2, b2,c1, d1	Definitions of movements, anatomical terminology	2	2
3	Osteology	a1, a2 b1,b2	Ossification Types of bones	3	2
4	Skeleton	a1,a2, b1, d2	Axial Skeleton Appendicular Skeleton	4,5,6	6
5	Joints	a1, a2, b1,b2, c1, c2	Classification Examples	7	2
6	Mid term Exam	a1, a2, b1,b2, c1, c2, d2		8	2
7	Muscles	a1,a2, b2,c1, d1	Classification Examples	9 &10,11	6
8	Fascia	a1,a2, a3	Types Sites	12	2

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		b1, d2			
9	Blood supply	a1, a2 b1,b2	–	13 & 14	4
10	Final Theoretical Exam	a1,a2, a3 b1, d2, c3	MCQs and essay questions	16	2
Number of Weeks /and Units Per Semester				16	32

B - Practical Aspect: (if any)				
Order	Tasks/ Experiments	Number of Weeks	contact hours	Learning Outcomes
1	Terminology	3 rd	2	a 1, a2
2	Movements	4 th	2	a 1, a 2,b 1,b2
3	Bones	5 th	2	a 1,a 2, b1,b2
4	Axial skeleton	6 th	2	a 1,a 2, b1,b2
5	Appendicular skeleton	7 th & 8 th	4	a 1,a2, b1,b2
6	Joints	9 th	2	a1, a 2,b1,b2
7	Named markings	10 th & 11 th	4	a 1, a2 ,b1,b 2,c1,d1
8	Blood Supply	12 th & 13 th	4	a 1, a 2,b 1,b 2
9	Final practical Exam	14th	2	a 1, a 2,b 1,b 2
Number of Weeks /and Units Per Semester 12			24	

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V. Teaching Strategies of the Course:

- Lectures
- Discussion
- Self Learning
- Presentation
- Seminars
- Lab Experiments

VI. Assessment Methods of the Course:

- Quizzes
- Midterm Exam
- Final Written Exam
- Final Practical Exam
- Homework
- Group work

VII. Assignments:

No.	Assignments	Week Due	Mark
1			
2			
3			
Total			



VIII. Schedule of Assessment Tasks for Students During the Semester:					
No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Quizzes 1 & 2	4 & 12	10	10 %	a1, a2
2	Mid-Term Theoretical Exam	8	20	20%	a1, a2, b1, b2,
3	Mid-Term Practical Exam	9	5	5%	a1, a2, b1, b2
4	Final Practical Exam including Project Presentation & Evaluation	14	15	15 %	c1, c2,d1, d2
5	Final Theoretical Exam	16	50	50%	a1, a2, b1, b2
Total				100%	

IX. Learning Resources:	
1- Required Textbook(s) (maximum two).	
	1. Snell`s clinical anatomy, 2018, 6 th edition, F. snell. 2. Gray`s textbook of anatomy, 2009, 9 th edition, S. Grey
2- Essential References.	
	1. Hamilton`s textbook of basic anatomy, 2001, 6 th edition. 2. Sameh Doss lecture notes of anatomy. 3. Mader understanding Human anatomy and physiology, 5th edition, 2004.
3- Electronic Materials and Web Sites etc.	
	Websites:

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	<p>1- Clinical Snell of applied anatomy.</p> <p>2- Atlas of Sobotta.</p> <p>3- Franklen`s electronic atlas of human anatomy.</p>
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X. Course Policies:	
1	<p>Class Attendance:</p> <p>A student should attend not less than 75 % of total hours of the subject; otherwise he/she will not be able to take the exam and will be considered as exam failure. If the student is absent due to illness, he/she should bring a proof statement from university Clinic. If the absent is more than 25% of a course total contact hours, student will be required to retake the entire course again.</p>
2	<p>Tardy:</p> <p>For late in attending the class, the student will be initially notified. If he repeated lateness in attending class, he/she will be considered as absent.</p>
3	<p>Exam Attendance/Punctuality:</p> <p>A student should attend the exam on time. He/she is permitted to attend an exam half one hour from exam beginning, after that he/she will not be permitted to take the exam and he/she will be considered as absent in exam</p>
4	<p>Assignments & Projects:</p> <p>In general one assignment is given to the students after each chapter; the student has to submit all the assignments for checking on time, mostly one week after given the assignment.</p>
5	<p>Cheating:</p> <p>For cheating in exam, a student will be considered as fail. In case the cheating is repeated three times during his/her study the student will be disengaged from the Faculty.</p>
6	<p>Plagiarism:</p>

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	<p>Plagiarism is the attending of a student the exam of a course instead of another student. If the examination committee proofed a plagiarism of a student, he/she will be disengaged from the Faculty. The final disengagement of the student from the Faculty should be confirmed from the Student Council Affair of the university or according to the university roles.</p>
<p>7</p>	<p>Other policies:</p> <ul style="list-style-type: none"> - Mobile phones are not allowed to use during a class lecture. It must be closed; otherwise the student will be asked to leave the lecture room. - Mobile phones are not allowed in class during the examination. - Lecture notes and assignments might be given directly to students using soft or hard copy.



Template for Course Plan (Syllabus) OF

Anatomy BE162

I. Course Identification and General Information:					
1	Course Title:	Anatomy			
2	Course Code & Number:	BE162			
3	Credit Hours:	Credit Hours	Theory Hours		Lab. Hours
			Lecture	Exercise	
		3	2	--	2
4	Study Level/ Semester at which this Course is offered:	2 nd Level / 2 nd Semester			
5	Pre –Requisite (if any):	Histology			
6	Co –Requisite (if any):	None			
7	Program (s) in which the Course is Offered:	Bachelor of Biomedical Engineering			
8	Language of Teaching the Course:	English			
9	Location of Teaching the Course:	Faculty of Engineering			
10	Prepared by:	Dr. Sadeq Abdulmogni			
11	Reviewed by:	Dr. Mohammed Al-Olofi			
12	Date of Approval:				

II. Course Description:

This course is designed to provide the students with the needed knowledge in human anatomy needed to be applied at a later stage during their clinical training. The lecture topics include introduction in general anatomy, Terminology of movement, Skeleton,



Joints and Muscles.

III. Course Intended Learning Outcomes (CILOs): (مخرجات تعلم المقرر)

A. Knowledge and Understanding: Upon successful completion of the course, students will be able to:

- a1 Identify all structures, components, systems, Regions, parts, organs, cavities of human body.
- a2 Categorize all the basic information which prepare them as medical doctor in the future, and enable them for postgraduate study.

B. Intellectual Skills: Upon successful completion of the course, students will be able to:

- b1 Distinguish structures, bones, muscles, nerves, blood supply. Venous drainage and lymphatic drainage of upper and lower limbs of human body..
- b2 Integrate anatomy with other sciences

C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:

- c1 Demonstrate relationship between the different structures and organs.

D. Transferable Skills: Upon successful completion of the course, students will be able to:

- d1 Work separately or in a team to research and prepare a scientific topic.

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
1	Introduction to anatomy	Definitions, Anatomical positions, Planes of anatomy	1	2
2	Terminology of movement	Definitions of movements, anatomical terminology	2	2

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IV. Course Contents:				
A. Theoretical Aspect:				
No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
3	Osteology	Ossification Types of bones	3	2
4	Skeleton	Axial Skeleton Appendicular Skeleton	4,5,6	6
5	Joints	Classification Examples	7	2
6	Mid term Exam		8	2
7	Muscles	Classification Examples	9 &10,11	6
8	Fascia	Types Sites	12	2
9	Blood supply.		13-14	4
10	Final Theoretical Exam	MCQs and essay questions	16	2
Number of Weeks /and Units Per Semester			16	32

B. Case Studies and Practical Aspect:			
No.	Tasks/ Experiments	Number of Weeks	Contact Hours
1	Terminology	3 rd	2
2	Movements	4 th	2
3	Bones	5 th	2
4	Axial skeleton	6 th	2

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B. Case Studies and Practical Aspect:			
No.	Tasks/ Experiments	Number of Weeks	Contact Hours
5	Apppendicular skeleton	7 th & 8 th	4
6	Joints	9 th	2
7	Named markings	10 th & 11 th	4
8	Blood Supply	12 th & 13 th	4
9	Final practical Exam	14 th	2
Number of Weeks /and Units Per Semester		12	24

C. Tutorial Aspect:			
No.	Tutorial	Number of Weeks	Contact Hours
1			
Number of Weeks /and Units Per Semester			

V. Teaching Strategies of the Course:	
<ul style="list-style-type: none"> - Lectures - Discussion - Self Learning - Presentation - Seminars - Lab Experiments 	

VI. Assessment Methods of the Course:	
<ul style="list-style-type: none"> - Quizzes 	



VI. Assessment Methods of the Course:

- Midterm Exam
- Final Written Exam
- Final Practical Exam
- Homework
- Group work
-
-

VII. Assignments:

No.	Assignments	Week Due	Mark
1			
2			
3			
Total			

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment
1	Quizzes 1 & 2	4 & 12	10	10 %
2	Mid-Term Theoretical Exam	8	20	20%
3	Mid-Term Practical Exam	9	5	5%
4	Final Practical Exam including Project Presentation & Evaluation	14	15	15 %



VIII. Schedule of Assessment Tasks for Students During the Semester:				
No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment
5	Final Theoretical Exam	16	50	50%
Total			100	100%

IX. Learning Resources:	
<ul style="list-style-type: none"> Written in the following order: 	
1- Required Textbook(s) (maximum two):	
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