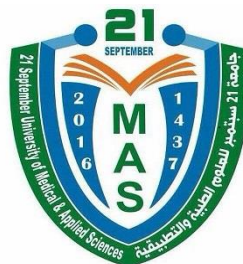


Republic of Yemen
Ministry of Education & Higher Research
Council of Academic Accreditation & Quality Assurance of
Higher Education (CAQA)



**21 septamber University of Medical
and Applied Science**



Faculty of Applied Medical Science

Department of **Medical Radiology and Imaging Technology**

Program of Radiologic Technology and Medical Imaging

Course Specification of

Anatomy 2

Course Code. (____)

2024



T4: This Template is Developed and Approved by CAQA-Yemen, 2023

Prepared by:

Reviewed by:

Dr. -----

Head of the Department:

Dr. Awadh Al-Kubati

Quality Unit:

Dr. Mohammed
Al-shamahi

Dean:

Dr. Abdulsalam
Dalaq

I. General Information:

1.	Course Title:	Anatomy and histology 2				
2.	Course Code:					
3.	Credit Hours:	Credit Hours	Theory Contact Hours		Practical Contact Hours	
			Lecture	Tutorial/ Seminar	Lab	Clinical
		3	2	--	2	--
4.	Level/ Semester at which this Course is offered:	1 st Level / 2 nd Semester				
5.	Pre –Requisite (if any):	Anatomy and histology 1				
6.	Co –Requisite (if any):	None				
7.	Program (s) in which the Course is Offered:	Bachelor of Radiologic Technology and Medical Imaging				
8.	Language of Teaching the Course:	English				
9.	Location of Teaching the Course:	Faculty of Applied Medical Science				
10.	Prepared by:					
11.	Date and Number of Approval by Council:					

II. Course Description:

provides an advanced exploration of human anatomy, focusing on detailed structures and their implications for radiologic technology and medical diagnosis. Emphasizing the integration of theoretical knowledge and practical application, the course covers complex anatomical systems and their visualization through various imaging techniques. Students will enhance their understanding of anatomical relationships and improve their diagnostic skills essential for their professional roles.

III. Course Intended Learning Outcomes (CILOs) :
Upon successful completion of the course,
students will be able to:

Referenced PILOs

Prepared by:

Reviewed by:

Dr. -----

Head of the Department:

Dr. Awadh Al-Kubati

Quality Unit:

Dr. Mohammed
Al-shamahi

Dean:

Dr. Abdulsalam
Dalaq

A. Knowledge and Understanding:		I, P or M/A		
a1	Analyze detailed anatomical structures	I	A1	Demonstrate an understanding of fundamental knowledge of Biomedical sciences (including Anatomy).
a2	Explain the correlation between anatomy and diagnostic imaging	I	A2	Explanation of the principles and procedures of medical imaging acquisitions, medical imaging technique, and Radiological Technology Sciences.
B. Intellectual Skills:				
b1	Evaluate anatomical variations critically	I	B3	Analyze and evaluate evidence-based information needed in medical imaging practice.
b2	Interpret complex radiographic images accurately	I	B1	Assess the radiation exposure times and intensity of exposure to ensure imaging technique accuracy while adapting to patient needs.
C. Professional and Practical skills:				
c1	Apply anatomical knowledge in advanced radiographic positioning	P	C4	Utilize appropriate manual and automated techniques in radiological imaging investigations.
c2	Demonstrate proficiency in anatomical terminology	P	C2	Apply technical skills in using medical imaging devices, tools, and materials in radiological technology practice.
D. Transferable Skills:				
d1	Communicate anatomical information effectively	P	D1	Communicate effectively with clinicians, patients, and support staff.
d2	Collaborate in interdisciplinary healthcare settings	P	D4	Function effectively as an individual, as a member, or leader of a team engaged in appropriate activities to the radiologic

				technology disciplines to accomplish a common goal.
I= Introduced, P=Practiced or M/A= Mastered/Advanced				

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:				
Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies	
a1	Analyze detailed anatomical structures	▪ Lectures, Interactive discussions	▪ Written exams, Lab quizzes	
a2	Explain the correlation between anatomy and diagnostic imaging	▪ Case studies, Group projects	▪ Research papers, Oral presentations	
(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:				
Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies	
b1	Evaluate anatomical variations critically	▪ Problem-based learning, Seminars	▪ Critical essays, Case reports	
b2	Interpret complex radiographic images accurately	▪ Image interpretation sessions	▪ Image analysis tests, Diagnostic projects	
(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:				
Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies	
c1	Apply anatomical knowledge in advanced radiographic positioning	▪ Practical labs, Simulations	▪ Practical exams, Competency assessments	
c2	Demonstrate proficiency in anatomical terminology	▪ Labelling exercises, Flashcards	▪ Terminology quizzes, Presentations	
(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:				
Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies	
d1	Communicate anatomical information effectively	▪ Group discussions, Assignments	▪ Oral presentations, Written reports	

d2	Collaborate in interdisciplinary healthcare settings	- Team projects, Role-plays - Team evaluations
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IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Relevant Learning Outcomes
1	Skeletal System Part II	– Detailed Bone Structure	1	2	a1, b1
2	Muscular System Part II	– Muscle Groups and Functions	1	2	a1, b1
3	Cardiovascular System	– Heart, Blood Vessels	1	2	a1, a2, b1
4	Respiratory System	– Lungs, Airway Structures	1	2	a1, a2
5	Digestive System	– Organs, Functions	1	2	a2, b2
6	Urinary System	– Kidneys, Bladder	1	2	a2, b2
7	Reproductive System	– Male, Female Anatomy	1	2	a1, a2
8	Mid-Term Exam	– In all previous Topics	1	2	a1, a2, b1
9	Nervous System Part II	– Brain, Spinal Cord	1	2	a1, a2, b1
10	Endocrine System	– Hormones, Glands	1	2	a1, b2
11	Lymphatic System	– Lymph Nodes, Vessels	1	2	a1, b1
12	Integumentary System	– Skin, Appendages	1	2	a1, a2
13	Sensory Organs	– Eyes, Ears	1	2	a1, b1
14	Anatomical Variations	– Common Variants	1	2	b1, b2
15	Final Practical Exam	– All practical topics		2	a2, b1, b2, c1, c2

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Relevant Learning Outcomes
16	Final Theoretical Exam	– All theoretical topics	1	2	a1, a2, b1, b2
Number of Weeks /and Units Per Semester			16	32	

B. Practical Aspect (Lab/Clinical) (if any):

No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	Cadaver Dissection: Regional Anatomy	1	2	a1, c1, c2
2	Radiographic Imaging Techniques: X-ray, CT, MRI	2	4	a2, b2, c1
3	Anatomical Model Analysis: Organ Systems	1	2	a1, b1
4	Histological Examination: Tissue Samples	1	2	a1, c2
5	Virtual Dissection: Digital Anatomy Tools	2	4	a2, c1, c2
6	Clinical Case Studies: Diagnostic Imaging	1	2	a2, b2, d2
7	Functional Anatomy: Biomechanics	1	2	a1, b1, c1
8	Pathological Anatomy: Disease Manifestations	2	4	a2, b2, c2
9	Surgical Anatomy: Operative Procedures	2	4	a1, c1, c2
10	Research Project: Current Trends in Anatomy	1	2	a2, b1, d1
Number of Weeks /and Units Per Semester		14	28	

C. Tutorial Aspect (if any):

No.	Tutorial	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	None			
2				

No.	Tutorial	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
Number of Weeks /and Units Per Semester				

VII. Teaching Strategies:

- Lectures
- Interactive Discussions
- Practical Labs
- Virtual Simulations
- Case-Based Learning
- Problem-Solving Exercises
- Collaborative Projects

VII. Assessment Methods:

- Written Exams
- Practical Assessments
- Laboratory Reports
- Research Projects
- Oral Presentations

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	Histology Lab Report	10	3	a1, c2
2	Functional Anatomy Presentation	12	2	a1, d2
3	Virtual Dissection Assignment	4	2	a2, c1, c2
4	Team Research Project	14	3	a2, b1, d1, d2
Total			10	

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	Midterm Written Exam	8	10	10%	a1, a2
2	Practical Lab Exam	15	30	30%	c1, c2
3	Final Written Exam	16	50	50%	a1, a2, b1, b2
4	Assignments and Quizzes	During semester	10	10%	a1, a2, b1, b2, c1, c2, d1, d2
Total			100	100 %	

IX. Learning Resources:

1- Required Textbook(s) (maximum two):

1. Moore, K.L., Dalley, A.F., & Agur, A.M.R. (2018). *Clinically Oriented Anatomy* (8th ed.). Lippincott Williams & Wilkins.
2. Netter, F.H. (2019). *Atlas of Human Anatomy* (7th ed.). Elsevier.

2- Essential References:

1. Gray, H. (2020). *Gray's Anatomy: The Anatomical Basis of Clinical Practice* (42nd ed.). Elsevier.
2. Drake, R.L., Vogl, W., & Mitchell, A.W.M. (2020). *Gray's Anatomy for Students* (4th ed.). Elsevier.

3- Electronic Materials and Web Sites etc.:

Electronic Materials

- Access to online anatomy databases (e.g., Anatomy.TV)
- Online journal subscriptions (e.g., Journal of Anatomy, Clinical Anatomy)

Websites:

[Visible Body](#)
[Kenhub](#)

X. Course Policies: (Based on the Uniform Students' By law (2007))

1	Class Attendance: Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	Tardiness: A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
4	Assignments & Projects: Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	Cheating:

	Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	Forgery and Impersonation: Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
7	Other policies: The University official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the Department, Faculty and University Administration.
3	Exam Attendance/Punctuality: No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.

Faculty of Applied Medical Science

Department of **Medical Radiology and Imaging Technology**

Program of Radiologic Technology and Medical Imaging

Course Plan (Syllabus) of Anatomy 2 Course Code.

I. Information about Faculty Member Responsible for the Course:						
Name of Faculty Member:		Office Hours				
Location& Telephone No.:	-----					
E-mail:	--@--.--	SAT	SUN	MON	TUE	WED THU

2024/2025

I. General Information:

12.	Course Title:	Anatomy and histology 2				
13.	Course Code:					
14.	Credit Hours:	Credit Hours	Theory Contact Hours		Practical Contact Hours	
			Lecture	Tutorial/ Seminar	Lab	Clinical
		3	2	--	2	--
15.	Level/ Semester at which this Course is offered:	1 st Level / 2 nd Semester				
16.	Pre –Requisite (if any):	Anatomy and histology 1				
17.	Co –Requisite (if any):	None				
18.	Program (s) in which the Course is Offered:	Bachelor of Radiologic Technology and Medical Imaging				
19.	Language of Teaching the Course:	English				
20.	Location of Teaching the Course:	Faculty of Applied Medical Science				
21.	Prepared by:					
22.	Date and Number of Approval by Council:					

II. Course Description:

provides an advanced exploration of human anatomy, focusing on detailed structures and their implications for radiologic technology and medical diagnosis. Emphasizing the integration of theoretical knowledge and practical application, the course covers complex anatomical systems and their visualization through various imaging techniques. Students will enhance their understanding of anatomical relationships and improve their diagnostic skills essential for their professional roles.

III. Course Intended Learning Outcomes (CILOs) :

Upon successful completion of the course, students will be able to:

A. Knowledge and Understanding:

- | | |
|----|--|
| a1 | Analyze detailed anatomical structures |
| a2 | Explain the correlation between anatomy and diagnostic imaging |

B. Intellectual Skills:

- | | |
|----|--|
| b1 | Evaluate anatomical variations critically |
| b2 | Interpret complex radiographic images accurately |

C. Professional and Practical skills:

- | | |
|----|---|
| c1 | Apply anatomical knowledge in advanced radiographic positioning |
| c2 | Demonstrate proficiency in anatomical terminology |

D. Transferable Skills:

- | | |
|----|--|
| d1 | Communicate anatomical information effectively |
| d2 | Collaborate in interdisciplinary healthcare settings |

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
1	Skeletal System Part II	– Detailed Bone Structure	1	2
2	Muscular System Part II	– Muscle Groups and Functions	1	2
3	Cardiovascular System	– Heart, Blood Vessels	1	2
4	Respiratory System	– Lungs, Airway Structures	1	2
5	Digestive System	– Organs, Functions	1	2
6	Urinary System	– Kidneys, Bladder	1	2
7	Reproductive System	– Male, Female Anatomy	1	2

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
8	Mid-Term Exam	– In all previous Topics	1	2
9	Nervous System Part II	– Brain, Spinal Cord	1	2
10	Endocrine System	– Hormones, Glands	1	2
11	Lymphatic System	– Lymph Nodes, Vessels	1	2
12	Integumentary System	– Skin, Appendages	1	2
13	Sensory Organs	– Eyes, Ears	1	2
14	Anatomical Variations	– Common Variants	1	2
15	Final Practical Exam	– All practical topics	1	2
16	Final Theoretical Exam	– All theoretical topics	1	2
Number of Weeks /and Units Per Semester			16	32

B. Practical Aspect (Lab/Clinical) (if any):

No.	Tasks/ Experiments	Number of Weeks	Contact Hours
1	Cadaver Dissection: Regional Anatomy	1	2
2	Radiographic Imaging Techniques: X-ray, CT, MRI	2	4
3	Anatomical Model Analysis: Organ Systems	1	2
4	Histological Examination: Tissue Samples	1	2
5	Virtual Dissection: Digital Anatomy Tools	2	4
6	Clinical Case Studies: Diagnostic Imaging	1	2
7	Functional Anatomy: Biomechanics	1	2
8	Pathological Anatomy: Disease Manifestations	2	4
9	Surgical Anatomy: Operative Procedures	2	4

No.	Tasks/ Experiments	Number of Weeks	Contact Hours
10	Research Project: Current Trends in Anatomy	1	2
Number of Weeks /and Units Per Semester		15	30

C. Tutorial Aspect (if any):

No.	Tutorial	Number of Weeks	Contact Hours
1	None		
2			
Number of Weeks /and Units Per Semester			

VII. Teaching Strategies:

- Lectures
- Interactive Discussions
- Practical Labs
- Virtual Simulations
- Case-Based Learning
- Problem-Solving Exercises
- Collaborative Projects

VII. Assessment Methods:

- Written Exams
- Practical Assessments
- Laboratory Reports
- Research Projects
- Oral Presentations

VII. Assignments:

No.	Assignments	Week Due	Mark
1	Histology Lab Report	10	3
2	Functional Anatomy Presentation	12	2

No.	Assignments	Week Due	Mark
3	Virtual Dissection Assignment	4	2
4	Team Research Project	14	3
Total			10

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

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment
1	Midterm Written Exam	8	10	10%
2	Practical Lab Exam	15	30	30%
3	Final Written Exam	16	50	50%
4	Assignments and Quizzes	During semester	10	10%
Total			100	100 %

IX. Learning Resources:

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