

T6. Course Specification (CS) توصيف المقرر

Course Specifications

Institution: Najran University	Date of Report: 22/8/1438
College/Department : Faculty of Applied Medical science- Department of Clinical Laboratories Sciences	

A. Course Identification and General Information

1. Course title and code: Histopathology-1 (path- 214)		
2. Credit hours: 2 credit hours(1+1)		
3. Program(s) in which the course is offered: Clinical laboratory sciences program		
4. Name of faculty member responsible for the course: Dr.Saadalnour Abusail Mustafa		
5. Level/year at which this course is offered: Level (4).		
6. Pre-requisites for this course: Anatomy(especially histology).		
7. Co-requisites for this course: No		
8. Location: on main campus		
9. Mode of Instruction (mark all that apply)		
a. Traditional classroom	<input checked="" type="checkbox"/>	What percentage? 100% <input type="text"/>
b. Blended (traditional and online)	<input type="checkbox"/>	What percentage? <input type="text"/>
c. e-learning	<input type="checkbox"/>	What percentage? <input type="text"/>
d. Correspondence	<input type="checkbox"/>	What percentage? <input type="text"/>
f. Other	<input type="checkbox"/>	What percentage? <input type="text"/>
Comments:		

B Objectives

<p>1. What is the main purpose for this course? By the end of the course, students should be able to demonstrate <u>knowledge</u> and understanding of :-</p> <p>a) -The basic histological techniques upon which they will be able to build the further knowledge they will learn in later years so as to make them better practitioners for tomorrow.</p> <p>b) -Basic principles and concepts of histological techniques.</p>
<p>2. Briefly describe any plans for developing and improving the course that are being implemented. (e.g. increased use of IT or web based reference material, changes in content as a result of new research in the field).....</p> <ul style="list-style-type: none"> The histology practical sessions will be delivered using a student centered approach guided by a specially designed practical strategy that will motivate the students and help encourage self learning and group discussion. Tutorials based on quizzes and class competitions will be held at the end of each practical session to help deepen the understanding of the learnt material and to cast an atmosphere of competitiveness and help break boring study routine as well as enhance intra- and intergroup communication. Histology lectures using state of the art animated software will be given in advance of the practical sessions to brain storm the students and encourage them to go and learn beforehand, as well as introduce them to the applied concepts of the subject. All written assessments would be of the single best answer multiple choice questions. They will mainly focus on cognitive skills and problem solving but also cater for basic knowledge.

C. Course Description (Note: General description in the form to be used for the Bulletin or handbook should be attached):

1. Topics to be Covered : <u>Theory</u>		
List of Topics	No. of Weeks	Credits hours
1-Laboratory safety	1	1
2-Methods of preparation of cells and tissues for microscopical examination	2	1
3-Fixation	3	1
4-Fixatives	4	1
5-Fixatives	5	1
6-Decalcification	6	1
7-Frozen techniques	7	1
8-Tissue processing	8	1
9-Microtomy	9	1

10-Microtomy	10	1
11-Theory of staining	11	1
12-Haematoxylin and Eosin	12	1
13-Haematoxylin and Eosin	13	1
14-Steps of preparation of electron microscope specimens	14	1
15-Revision	15	1
Total		15

1. Topics to be Covered : <u>Practical</u>		
List of Topics	No. of Weeks	Credits hours
1-Laboratory safety	1	1
2-Methods of preparation of cells and tissues for microscopical examination	2	1
3-Fixation	3	1
4-Fixatives	4	1
5-Fixatives	5	1
6-Decalcification	6	1
7-Frozen techniques	7	1
8-Tissue processing	8	1
9-Microtomy	9	1
10-Microtomy	10	1
11-Theory of staining	11	1
12-Haematoxylin and Eosin	12	1
13-Haematoxylin and Eosin	13	1
14-Steps of preparation of electron microscope specimens	14	1
15-Revision	15	1
Total		15

2. Course components (total contact hours and credits per semester):						
	Lecture	Tutorial	Laboratory	Practical	Other:	Total
Contact Hours	15	0	30			45
Credit	15	0	15			30

3. Additional private study/learning hours expected for students per week. Seminars and Assignments, 2hours/week.

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

Course Learning Outcomes, Assessment Methods, and Teaching Strategy work together and are aligned. They are joined together as one, coherent, unity that collectively articulate a consistent agreement between student learning, assessment, and teaching.

The *National Qualification Framework* provides five learning domains. Course learning outcomes are required. Normally a course has should not exceed eight learning outcomes which align with one or more of the five learning domains. Some courses have one or more program learning outcomes integrated into the course learning outcomes to demonstrate program learning outcome alignment. The program learning outcome matrix map identifies which program learning outcomes are incorporated into specific courses.

On the table below are the five NQF Learning Domains, numbered in the left column.

First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and intended learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy ought to reasonably fit and flow together as an integrated learning and teaching process. **Fourth**, if any program learning outcomes are included in the course learning outcomes, place the @ symbol next to it.

Every course is not required to include learning outcomes from each domain.

	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	Knowledge: By the end of this course, the student should be able to:		
1.1	Define the aims of fixation	(ii) Teaching strategies to be used to develop that knowledge <ul style="list-style-type: none"> • Interactive lectures • Structured practical sessions for demonstration of pathological processes, gross pathological changes and histopathological changes using projections, gross specimen and microscopes. • Tutorials and clinicopathological correlation (CPC) as problems • Seminar presentations. • Writing assignments on selected integrated topics. Formative quizzes at the end/beginning of each practical session	a- Exams : final exam which is composed of 1-written short notes and multiple choice question of best choice format b-Continuous course assessment: <ol style="list-style-type: none"> Class tests Attendance Seminar presentation Assignments
1.2	Describe the types of fixatives		
2.0	Cognitive Skills: By the end of this course, the student should be able to:		
2.1	Explain the function of the different steps employed in specimen preparation in the various techniques.	(ii) Teaching strategies to be used to develop these cognitive skills Interactive lectures using powerful software simulations for all parts of the subject <ul style="list-style-type: none"> • Structured practical sessions. • Tutorials integrated during practical sessions. • Presentations during tutorial sessions. • Formative quizzes at the end/beginning of each practical session. 	(iii) Methods of assessment of students cognitive skills a- Exams : Integrated questions in a form of 1-written short notes and multiple choice question of best choice format, and 2-objective structured practical exam (OSPE)
2.2	Write the mechanism(s) of action of the different types of microscopes.		
3.0	Interpersonal Skills & Responsibility: By the end of this course, the student should be able to:		

3.1	Evaluate the cause(s) of artefacts in tissue sections and suggest ways to circumvent these.	<p>(ii) Teaching strategies to be used to develop these skills and abilities: Seminars and assignments Interactive lectures using powerful software simulations for all parts of the subject</p> <ul style="list-style-type: none"> • Interactive practical sessions • Weekly tutorials integrated during practical sessions during which students will take turn in presenting selected topics and answer questions from their peers as well as receiving feedback from them on their performance. • Formative quizzes at the end/beginning of each practical session. • Observation and guidance and feedback from the staff members during the various activities 	<p>(iii) Methods of assessment of students interpersonal skills and capacity to carry responsibility: As part of Continuous course assessment: i. Seminar presentation Assignments</p>
3.2	Evaluate the different techniques of specimen preparation for different purposes.		
4.0	Communication, Information Technology, Numerical: By the end of this course, the student should be able to:		
4.1	Interpret the advantages, disadvantages, and limitations of the different histological techniques.	<p>(ii) Teaching strategies to be used to develop these skills Interactive lectures using powerful software simulations for all parts of the subject. The lecturer will encourage student participation to enhance concentration, gauge understanding, alleviate shyness from speaking in front of the class, etc.</p> <ul style="list-style-type: none"> • Discussions during 	<p>(iii) Methods of assessment of students numerical and communication skills</p>

		practical sessions • Tutorials and class discussions integrated during practical sessions. • Presentations during tutorial sessions.	
4.2	Assess the principle of tissue processing, theory of staining and principle of frozen techniques		
5.0	Psychomotor		
5.1		(ii) Teaching strategies to be used to develop these skills: Practical sessions in microscopic anatomy and histological techniques.	(iii) Methods of assessment of students psychomotor skills: a- Exams : final exam which is composed of objective structured practical exam (OSPE) Continuous course assessment: Attendance of OSPE sessions
5.2			

Suggested Guidelines for Learning Outcome Verb, Assessment, and Teaching

NQF Learning Domains	Suggested Verbs
Knowledge	list, name, record, define, label, outline, state, describe, recall, memorize, reproduce, recognize, record, tell, write
Cognitive Skills	estimate, explain, summarize, write, compare, contrast, diagram, subdivide, differentiate, criticize, calculate, analyze, compose, develop, create, prepare, reconstruct, reorganize, summarize, explain, predict, justify, rate, evaluate, plan, design, measure, judge, justify, interpret, appraise
Interpersonal Skills & Responsibility	demonstrate, judge, choose, illustrate, modify, show, use, appraise, evaluate, justify, analyze, question, and write
Communication, Information Technology, Numerical	demonstrate, calculate, illustrate, interpret, research, question, operate, appraise, evaluate, assess, and criticize
Psychomotor	demonstrate, show, illustrate, perform, dramatize, employ, manipulate, operate, prepare, produce, draw, diagram, examine, construct, assemble, experiment, and reconstruct

Suggested **verbs not to use** when writing measurable and assessable learning outcomes are as follows:

Consider	Maximize	Continue	Review	Ensure	Enlarge	Understand
Maintain	Reflect	Examine	Strengthen	Explore	Encourage	Deepen

Some of these verbs can be used if tied to specific actions or quantification.

Suggested assessment methods and teaching strategies are:

According to research and best practices, multiple and continuous assessment methods are required to verify student learning. Current trends incorporate a wide range of rubric assessment tools; including web-based student performance systems that apply rubrics, benchmarks, KPIs, and analysis. Rubrics are especially helpful for qualitative evaluation. Differentiated assessment strategies include: exams, portfolios, long and short essays, log books, analytical reports, individual and group presentations, posters, journals, case studies, lab manuals, video analysis, group reports, lab reports, debates, speeches, learning logs, peer evaluations, self-evaluations, videos, graphs, dramatic performances, tables, demonstrations, graphic organizers, discussion forums, interviews, learning contracts, antidotal notes, artwork, KWL charts, and concept mapping.

Differentiated teaching strategies should be selected to align with the curriculum taught, the needs of students, and the intended learning outcomes. Teaching methods include: lecture, debate, small group work, whole group and small group discussion, research activities, lab demonstrations, projects, debates, role playing, case studies, guest speakers, memorization, humor, individual presentation, brainstorming, and a wide variety of hands-on student learning activities.

5. Schedule of Assessment Tasks for Students During the Semester

	Assessment task (e.g. essay, test, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1-Final exam:		End of the term	60%
Theory	multiple choice question of one correct choice format	End of the term	(30 mark)
Practical	(Staining protocols & Microscope examinations)	End of the term	(30 mark)
	objective structured practical exam (OSPE)		
2- Continuous course assessment		During the course	40% (10% for each)
	Med theory test and Quizzes (written short notes and multiple choice question	3 rd & 15 th	20 mark

	of best choice format) and assignments		
	practical tests (Staining protocols & Microscope examinations)	3 rd & 15 th	20 mark
Total marks			100

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice. (include amount of time teaching staff are expected to be available each week) Office hours whereby the teacher will be available at office for the students for further clarification and discussion of the taught topics (3 members each accounts for least 2 hours a week)

Day	Time
Sunday:	10am – 12 pm
Monday	
Tuesday	11 am – 12 pm
Wednesday	
Thursday	10-11 pM

E. Learning Resources

1-List Required Textbooks

- 1-Theory and practice of Histological Techniques By: John D. Bancroft. Fifth Edition.
Eroschenko: Di Fiores Atlas of Histology with Clinical Correlations 11th ed
- Kerr: Functional Histology 2nd ed
- Kiernan: Histological and Histochemical Methods: Theory and Practice 4th ed
- Ovalle: Netter's Essential Histology 1st ed
- Young: Wheater's Functional Histology 5th ed
- Junqueira: Basic Histology 10th ed
- Jensch : Questions and Answers in Microscopic Anatomy 1st ed
- Tesler: Elseviers Integrated Histology 1st ed
- Snell: Clinical and Functional Histology for Medical Students (latest ed)

2. List Essential References Materials (Journals, Reports, etc.)

Theory and practice of Histological Techniques

2. List Recommended Textbooks and Reference Material (Journals, Reports, etc)

Theory and practice of Histological Techniques (Carleton's)

Bancroft: Theory and practice of histopathological techniques

3. List Electronic Materials:

(eg. Web Sites, Social Media, Blackboard, etc.)

5. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

Hollinger: Microscopic Anatomy Institutional Version CD/ROM 3rd ed

- Gartner: Interactive Color Atlas of Histology CD/ROM 1st ed

- Kerr: Functional Histology CD-ROM 1st ed

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access etc.)

There is a need for one classroom, one dissection room, and one museum.

1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)

There is a need for 25 computers with networking and internet access in the museum for student learning. As well as a number of computers and multimedia projectors in the other rooms.

2. Computing resources (AV, data show, Smart Board, software, etc.)
3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list) Pathology museum gross specimens, microscopes, illustrating microscope slides, illustrating boosters, ...etc.

G Course Evaluation and Improvement Processes

1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching a-Confidential completion of standard course evaluation questionnaire. b-Focus group discussion with small groups of students.
2 Other Strategies for Evaluation of Teaching by the Program/Department Instructor
3 Processes for Improvement of Teaching: Workshops on teaching methods, review of recommended teaching strategies
4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution) -Degrees according to the university grading system -intradepartmental discussion of the student results -discussion of student results with the higher organizing body e.g. dean or college board

5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.

- Staff members views and feedback
- Students feedback obtained for example through, confidential completion of standard course evaluation questionnaire and focus group discussion with small groups of students.

Evaluation of the student result with the degree of toughness of the exam

Faculty or Teaching Staff: __Saadalnour Abusail Mustafa

Signature:



Date Report Completed 22.8.1438_____

Received by: _____ Dean/Department Head

Signature: _____ Date: _____