Histology 1
Course Specifications

Code: AMED 03

First year of M.B.B.Ch. Program
# Course specifications:

<table>
<thead>
<tr>
<th>Programme(s) on which the course is given:</th>
<th>M.B.B.Ch. program</th>
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</thead>
<tbody>
<tr>
<td>Major or minor element of programmes:</td>
<td>Major</td>
</tr>
<tr>
<td>Department offering the programme:</td>
<td>Department of Histology</td>
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<tr>
<td>Department offering the course:</td>
<td>Department of Histology</td>
</tr>
<tr>
<td>Academic year / Level:</td>
<td>First year</td>
</tr>
<tr>
<td>Date of specification approval:</td>
<td>20/5 /2006</td>
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## A- Basic information

<table>
<thead>
<tr>
<th>Title:</th>
<th>Histology 1</th>
<th>Code: Amed03</th>
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<tbody>
<tr>
<td>Lecture:</td>
<td>60 hours</td>
<td>Tutorial/practical: 60 hours</td>
</tr>
<tr>
<td>Total:</td>
<td>120 hours</td>
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## 1-Overall aims

*By the end of the course, students should be able to:*

- Describe the methods of studying cells and tissues
- Mention and describe the different types of tissues
- Mention and describe the specific characteristic of cell components in relation to the functions of each component.
- Appreciate (explain) the reflection of the method used on the picture observed and become familiar (with the various methods and their applications.
- Understand (explain) the scientific basis of tissue preparation and be able to apply that understanding to the Practice of the subjects such as making films, spreads and counting.
- Demonstrate knowledge of the structure and function of the body and its major organ systems and of the molecular and cellular mechanisms.

## 2- Intended learning outcomes (ILOs)

### A- Knowledge and understanding

*By the end of the course, students should be able to:*

A1- Mention the basic steps in preparing specimens for light and electron microscopy.

A 2- Define and describe the histological characteristics of normal cells

A3- Define and describe the structure and functions of the cytoplasmic components.

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A4- Describe the subunits of each nuclear component and their role in its function

A5- Explain the process of cell division and identify the activities that control the transition from each phase of the cell cycle to the other.

A6- Differentiate between normal and abnormal karyotyping

A7- Describe the structural characteristics of the four basic tissue types

A8- Describe the functional capabilities of each tissue type and relate them to the structure.

A9- Describe and compare between different blood elements and their development.

A10- Define and discuss the basic histological structure of some systems (Vascular, Lymphatics, & skin)

**B- Intellectual skills**

**By the end of the course, students should be able to:**

B1- Correlate between histological structure & function of any cell or tissue

B2- Select appropriate methods to reveal specific microscopic features of cells and tissues.

B3- Diagnose slides different from those seen during his course but of the same organs or tissues previously studied.

B4- Distinguish between normal and abnormal karyotyping

B5- Interpret a complete blood picture report

**C- Professional skills**

**By the end of the course, students should be able to:**

C1- Name the instruments and techniques used to prepare and study histological specimens.

C2 - Use the microscope efficiently.

C3- Handle the histological glass slides and examine them using the maximum microscopic facilities.
C4- Identify various types of stains & micro techniques
C5- Identify different cell organelles
C6- Identify different blood cells in blood films
C7- Identify and differentiate between different types of epithelium, connective tissue cells, connective tissue proper & bone cells
C8- Differentiate between different tissues and organs in histological slide seen under the microscope
C10- Make a differential leucocytic count using the blood film

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C11- Draw and label the structures they have seen in electron photomicrographs and under light microscope during practical classes

D- General skills

By the end of the course, students should be able to:

D1- Appreciate the importance of life long learning and show a strong commitment to it.
D2- Use the sources of biomedical information to remain current with advances in knowledge and practice

3-Course Contents

<table>
<thead>
<tr>
<th>Topic</th>
<th>No. of Hours</th>
<th>Lecture</th>
<th>Tutorial / Practical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method of studying cells and tissues</td>
<td>12</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Cell biology (cytology &amp; cytogenetics)</td>
<td>24</td>
<td>16</td>
<td>8</td>
</tr>
<tr>
<td>Hematology</td>
<td>18</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Epithelial Tissues</td>
<td>10</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Connective tissues</td>
<td>10</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Cartilage and Bone</td>
<td>12</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Muscular tissues</td>
<td>8</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Nervous tissues</td>
<td>10</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>The blood circulatory system</td>
<td>8</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Lymphatic system</td>
<td>8</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>120</strong></td>
<td><strong>60</strong></td>
<td><strong>60</strong></td>
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</table>

4- Teaching and learning Methods
4.1- Lectures
4.2- Discussion sessions
4.3- Practical sessions to gain practical skills
4.4- Practical book for drawing

- **Student assessment Methods**

5.1- Written exams (short essays and MCQs) to assess (a1-a9, b1-5)
5.2- Oral exam to assess (a1-a9, b1-b5)
5.3- Practical exam (Identification of histological slides) to assess (c1-c11)
5.4- Course assignment and (practical) book to assess (c1-c11, D1, D2)
5.5- Attendance Criteria: The minimal acceptable attendance is 75%

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**Assessment schedule**

**Assessment 1:** Periodic MCQ assessment by the end of the 10th week

**Assessment 2:** Periodic MCQ assessment by the end of the 11th Week

**Assessment 3:** Mid term MCQ assessment

**Assessment 4:** Final practical examination by the end of the 20th Week

**Assessment 5:** Final written examination by the end of the 24th Week

**Assessment 6:** Final oral examination by the end of the 24th Week

**Assessment 7:** Course assignment (practical book)

**Weighting of assessments**

Assessment (1,2,3 and 6) 20%
Final written Examination 50%
Final Oral Examination 13.4%
Final Practical Examination 16.6%
Total 100%

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**6- List of references**

6.1-Course Notes
    Notes on histology and Colored Atlas of Histology by staff members of histology Department
6.2- Essential Books (Text Books):

6.3-Recommended Books:
Bloom & Fawcett: Concise Histology A Hodder Arnold Publication; 1st edition

6.4- Periodicals and Web Sites of histology, [http://www.med-ed-online.org/](http://www.med-ed-online.org/)

7- Facilities required for teaching and learning

7.1- White board
7.2- Overhead projectors
7.3- Microscopes
7.4- Closed circuit
7.5- Data show power point

Course coordinator: Dr. Amal Taha Abo-Elghait
Head of Department: Prof. Dr. Sanaa Abdel-Lateef

Date: 20/5/2006