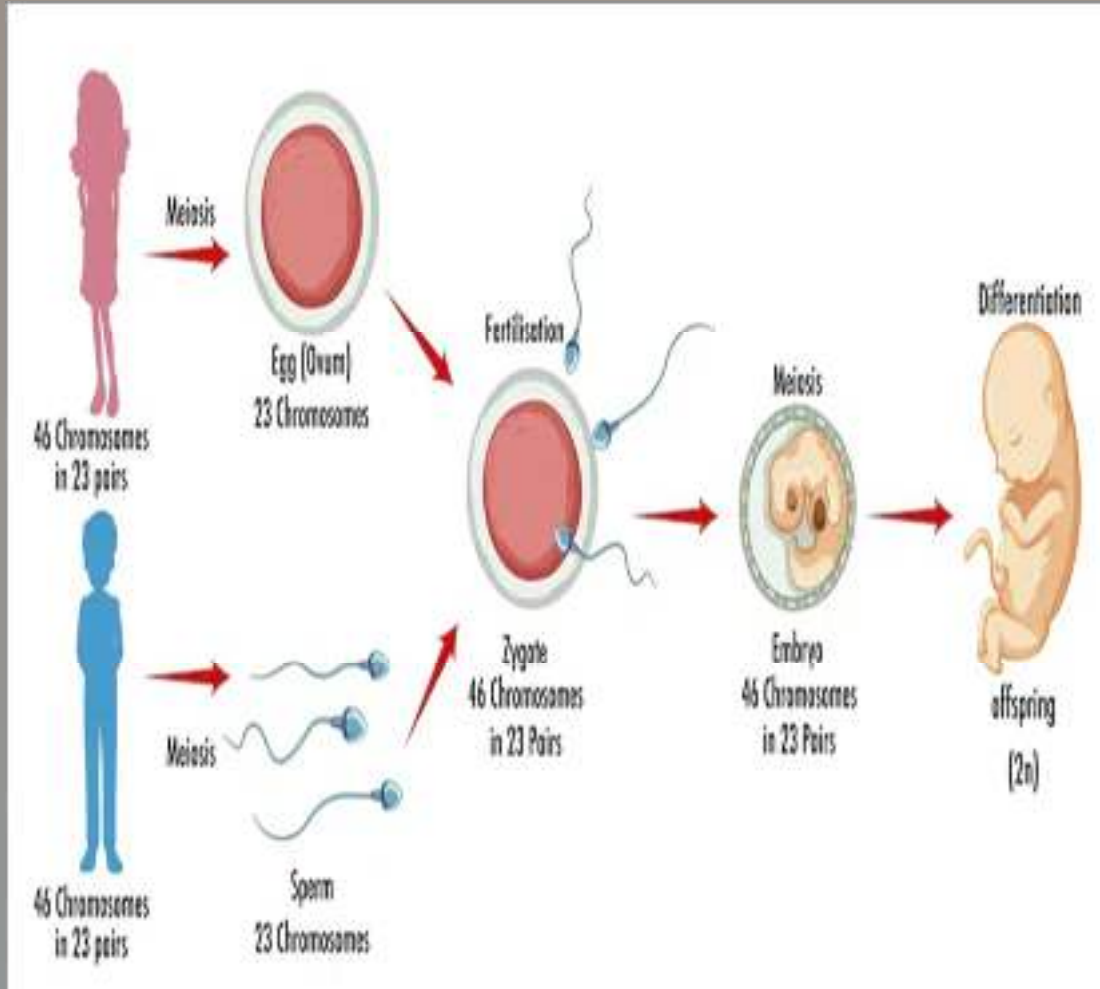


Block GAD-102

# Growth and Development

## STUDENT STUDY GUIDE



2024-2025

**Sohag Faculty of Medicine**  
**Sohag University**

**Prepared and revised  
by**

**Staff Members of Anatomy  
Department**

**Under supervision of**

**Medical Education  
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## Block specification

### A-Basic Information:

**Program on which the course is given:** bachelor of medicine and surgery (M.B., B.Ch.).

**Elements (major or minor) of the program: (undergraduate):**

**Departments offering the course: (Anatomy)**

**Academic year/level:** 1<sup>st</sup> year, 1<sup>st</sup> semester.

**Date of specification approval:** 2024-2025

⊕ **Title:** Growth and development.

⊕ **Code:** GAD-102

⊕ **Credit points:** 6

⊕ **Weeks:** 4 weeks.

⊕ **Lecture:** 38 hours (36 hours lectures + 2 hours revision )

⊕ **Practical:** 12 hours

⊕ **Case- based group discussion:** 12 hours

**Student learning activities** 80 hrs. and **Formative assessment and quizzes:** 10 hrs.

⊕ **Total:** 152 hours

## Block Map

### General Anatomy and Embryology

| Block                         | points   | days/week | learning activities  |                            |
|-------------------------------|----------|-----------|----------------------|----------------------------|
|                               |          |           | contact hours/points | Non - contact hours/points |
| <b>Growth and development</b> | 6 points | 4 weeks   | 2.06 points          | 3.94 points                |

Semester 1

General Anatomy and Embryology

5

**Study guide**

**B- Professional Information****i- Block Aims****Overall aim of the block:**

By the end of the block, the student will be able to: understand the main principles of studying human body in terms of gross anatomy and general embryology.

**By the end of this block, the students are expected to be able to:**

NARS competencies covered by the block

### NARS areas covered by the block

The competency areas of the NARS- Medicine competency framework

- are 1- The graduate as a health care provider.
- 2- The graduate as a health promoter.
- 3- The graduate as a professional.
- 4- The graduate as a scholar and scientist.
- 5- The graduate as a member of the health team and a part of the health care system.
- 6- The graduate as a lifelong learner and researcher.

### Sub competencies

#### Competency Area 1: The graduate as a health care provider

- 1.1 Take and record a structured, patient centered history.
- 1.2 Adopt an empathic and holistic approach to the patients and their problems.
- 1.3 Assess the mental state of the patient.
- 1.4 Perform appropriately-timed full physical examination of patients, appropriate to the age, gender, and clinical presentation of the patient while being culturally sensitive.
- 1.5 Prioritize issues to be addressed in a patient encounter.
- 1.6 Select the appropriate investigations and interpret their results taking into consideration cost/ effectiveness factors.
- 1.7 Recognize and respond to the complexity, uncertainty, and ambiguity inherent in medical practice.
- 1.8 Apply knowledge of the clinical and biomedical sciences relevant to the clinical problem at hand.
- 1.9 Retrieve, analyze, and evaluate relevant and current data from literature, using information technologies and library resources, in order to help solve a clinical problem based on evidence (EBM).
- 1.10 Integrate the results of history, physical examination and laboratory test findings into a meaningful diagnostic formulation.
- 1.11 Perform diagnostic and therapeutic procedures in a skillful and safe manner, adapting to unanticipated findings or changing clinical circumstances.
- 1.12 Adopt strategies and apply measures that promote patient safety.
- 1.13 Establish patient-centered management plans in partnership with the patient, his/her family and other health professionals as appropriate, using Evidence Based Medicine in management decisions.
- 1.14 Respect patients' rights and involve them and /or their families / carers in management decisions.
- 1.15 Provide the appropriate care in cases of emergency, including resuscitation, immediate life support measures and basic first aid procedures.
- 1.16 Apply the appropriate pharmacological and non-pharmacological approaches to alleviate pain and provide palliative care for seriously ill people, aiming to relieve their suffering and improve their quality of life.
- 1.17 Contribute to the care of patients and their families at the end of life, including management of symptoms, practical issues of death and certification.

**Competency Area II: The graduate as a health promoter**

- 2.1 Identify the basic determinants of health and principles of health improvement.
- 2.2 Recognize the economic, psychological, social, and cultural factors that interfere with wellbeing.
- 2.3 Discuss the role of nutrition and physical activity in health.
- 2.4 Identify the major health risks in his/her community, including demographic, occupational and environmental risks; endemic diseases, and prevalent chronic diseases.
- 2.5 Describe the principles of disease prevention, and empower communities, specific groups or individuals by raising their 2170/2101055 and building their capacity.
- 2.6 Recognize the epidemiology of common diseases within his/her community, and apply the systematic approaches useful in reducing the incidence and prevalence of those diseases

**Competency Area III: The graduate as a professional**

- 3.1 Exhibit appropriate professional behaviors and relationships in all aspects of practice, demonstrating honesty, integrity, commitment, compassion, and respect.
- 3.2 Adhere to the professional standards and laws governing the practice, and abide by the national code of ethics issued by the Egyptian Medical Syndicate.
- 3.3 Respect the different cultural beliefs and values in the community they serve.
- 3.4 Treat all patients equally, and avoid stigmatizing any 62168017/ regardless of their social, cultural or ethnic backgrounds, or their disabilities.
- 3.5 Ensure confidentiality and privacy of patients' information.

**Plans for developing and improving the course:**

- 1) Continuous updating of the information, knowledge and skills included in the course through the continuous search for new knowledge and skills available in recent publications (books, researches, internet and others).
- 2) Continuous improvements in teaching methods to encourage the students to participate effectively in the various academic activities.
- 3) Continuous evaluation of the course content, students' performance and establish plans accordingly.

**ii- Intended Learning Outcomes****A- Knowledge**

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

- A1- Comprehend the anatomical terms, use them correctly.
- A2- Reproduce general anatomic criteria of internal organs
- A3- Record structures derived from fascia.
- A4- Describe anatomical aspects of bones and cartilages.
- A5- Outline types of body joints and general joint structures.
- A6- Recall general structures of the skeletal, nervous, cardiovascular, lymphatic, respiratory, digestive and urogenital system.

- A7- Identify the process of formation of human gametes.
- A8- List stages of fertilization and zygote formation
- A9- State stages of implantation and formation of embryonic germ discs.
- A10. Memorize different stages of embryonic development in utero.
- A11- Name structures developed from the three germ layers.
- A12- Describe different types of fetal membranes.
- A13- Identify the process of formation of human gametes. A34- List stages of fertilization and zygote formation.
- A14- State stages of implantation and formation of embryonic germ discs.
- A15- Memorize different stages of embryonic development in utero.
- A16- Describe different types of fetal membranes.
- A17- List different types of human twins.
- A18- Name common birth defects (the etiology, mechanism and clinical presentation of congenital malformations).
- A19- Name common birth defects (the etiology, mechanism and clinical presentation of congenital malformations).

**B-Intellectual Skills**

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

- B1- Demonstrate the ability to gain dissection and practical skills guiding him to recognize and differentiate vessels, nerves and viscera of the body.
- B2- Compare between different types of bones, cartilages, and muscles.
- B3- Illustrate the general anatomical characters of internal organs.
- B4-. Summarize stages of fertilization and zygote formation.
- B5- Recognize clinical correlates about chromosomes.
- B6- Differentiate between the normal and abnormal sites of implantation.
- B7- Explain abnormal Gametes.
- B8- Identify time of Ovulation.
- B9- Recognize infertility (male and female factors based on topics studied).
- B10- Illustrate formation of embryonic germ discs and embryonic development.
- B11- Distinguish different birth defects & embryonic stem cells.
- B12- Identify Fetal membranes.

**C- Psychomotor Skills**

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

- C1- Illustrate anatomical aspects of bones and cartilages.
- C2- Demonstrate general structures of joints, muscles, nervous, cardiovascular, respiratory, digestive and urinary system.
- C18- Construct stages of oogenesis, implantation and formation of embryonic germ discs, and embryonic development.
- C19- Show different birth defects & embryonic stem cells.

**D- General skills**

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

- D1- Practice the skill of self-learning.
- D2- Demonstrate personal responsibility.
- D3- Practice the skill of respect colleagues.
- D4- Adhere the value of team work by acting in small group.
- D5- Qualify adequate cooperation with his/her colleagues.
- D6- Justify the efforts required to accomplish the tasks in specified time.
- D7- Set the use of sources of biomedical information to remain current with advances in knowledge and practice.
- D8- Display freely, keeping an ethical behavior
- D9- Share in the work efficiently with the instruments and equipments of the department in a responsible manner keeping them intact and clean.
- D10- Modify his capability to describe, discuss and solve problems.
- D11- Reflect on and assess his/her performance using various performance indicators and information sources.

**Teaching and learning methods:**

- 1- Lectures for knowledge and intellectual skill outcomes.
- 2- Practical sessions to gain psychomotor skills and using practical book.
- 3- Self-directed learning (SDL) and case-based group discussion for the topics studied in lectures or related topics; including libraries, E-learning (photographs, reading cases and solving of questions - available online) as well as consulting professors for gathering of information.

**Student Assessment:****1. Formative:**

This is used to monitor student's learning to provide ongoing feedback that can be used by instructors to improve their teaching and by students to improve their learning.

It's given at least once in the form of quizzes that is made available for the students at the E-learning site at the end of the block.

Answers are presented instantly after the attempts and discussed on the students groups or in person with the teaching staff

Questions should be consistent with the level of the final exam. The student's attendance is a condition for entering the summative exams. The electronic or paper achievement file must be used to follow up on the students' evaluation, and its completion is a condition for entering the final exams

**2. Summative**

It is used to evaluate student's achievements at the end of the block. The grades tell whether the student achieved the learning goal or not.

| Assessment task                                                     | Proportion of Total Assessment | Marks |
|---------------------------------------------------------------------|--------------------------------|-------|
| Portfolio assessment                                                | 10%                            | 9     |
| Midterm examination (MCQs,)                                         | 20%                            | 18    |
| OSPE exam for practical                                             | 30%                            | 27    |
| Final written Exams ( 50%MCQ+ 50% short answer questions and MEQs ) | 40%                            | 36    |
| Total                                                               | 100                            | 90    |

**Course contents**

|                    |                                                         | <b>Topics to be Covered</b> |                 |                      |
|--------------------|---------------------------------------------------------|-----------------------------|-----------------|----------------------|
| <b>A. Lectures</b> |                                                         | <b>ILOs</b>                 | <b>Week No.</b> | <b>Contact Hours</b> |
| 1.                 | Overview and introduction to anatomy. Anatomical terms. | A1,B1                       | 1 <sup>st</sup> | 1 hour               |
| 2.                 | Skin and Fascia                                         | A3,B4                       | 1 <sup>st</sup> | 1 hour               |

|     |                                                   |         |                 |        |
|-----|---------------------------------------------------|---------|-----------------|--------|
| 3.  | Skeletal system                                   | A4,B3,1 | 1 <sup>st</sup> | 1 hour |
| 4.  | Skeletal system(continued)                        | A4,B5   | 1 <sup>st</sup> | 1 hour |
| 5   | Bones and Cartilage                               | A5,B2   |                 |        |
| 6.  | Joints                                            | A3,4,B3 | 1 <sup>st</sup> | 1 hour |
| 7.  | Muscles                                           | A5,B6   | 1 <sup>st</sup> | 1 hour |
| 8.  | Cardiovascular system                             | A4,B4   | 1 <sup>st</sup> | 1 hour |
| 9.  | Respiratory System                                | A3,B5   | 1 <sup>st</sup> | 1 hour |
| 10. | Digestive System                                  | A6,B5   | 1 <sup>st</sup> | 1 hour |
| 11. | Digestive System (continued)                      | A7,B3   | 2 <sup>nd</sup> | 1 hour |
| 12. | Urinary system                                    | A5,B2   | 2 <sup>nd</sup> | 1 hour |
| 13. | Genital system                                    | A6,B4   | 2 <sup>nd</sup> | 1 hour |
| 14. | Lymphatic system<br>Nervous system                | A4,B5   | 2 <sup>nd</sup> | 1 hour |
| 15. | Nervous system(continued)                         | A8,B7   | 2 <sup>nd</sup> | 1 hour |
| 16. | Spermatogenesis                                   | A2,B6   | 2 <sup>nd</sup> | 1 hour |
| 17. | Oogenesis                                         | A9,B7   | 2 <sup>nd</sup> | 1 hour |
| 18. | Ovarian cycle- Ovulation                          | A6,B9   | 2 <sup>nd</sup> | 1 hour |
| 19  | Menstrual cycle                                   | A5,B8   | 2 <sup>nd</sup> | 1 hour |
| 20  | 1st week developments (Fertilization)             | A7,B1,7 | 2 <sup>nd</sup> | 1 hour |
| 21  | 1st week developments (Cleavage-morula formation) | A5,B7   | 3 <sup>rd</sup> | 1 hour |

|     |                                                                                             |       |                 |        |
|-----|---------------------------------------------------------------------------------------------|-------|-----------------|--------|
| 22. | 1st week developments (Blastocyst Formation and Implantation )                              | A4,B5 | 3 <sup>rd</sup> | 1 hour |
| 23. | 2 <sup>nd</sup> week developments (Embryonic disc and trophoblast changes)                  | A7,B8 | 3 <sup>rd</sup> | 1 hour |
| 24. | 2 <sup>nd</sup> week developments(extraembryonic mesoderm and chorionic vesicle formation ) | A4,B9 | 3 <sup>rd</sup> | 1 hour |

|                            |                                                                                                                         |       |                 |         |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------|-------|-----------------|---------|
| 25                         | 3 <sup>rd</sup> week developments (gastrulation and intraembryonic mesoderm formation )                                 | A9,B5 | 3 <sup>rd</sup> | 1 hour  |
| 26                         | 3 <sup>rd</sup> week developments (notocord and neural tube formation )                                                 | A8,B4 | 3 <sup>rd</sup> | 1 hour  |
| 27                         | Derivatives of ectoderm , mesoderm and endoderm.                                                                        | A9,B7 | 3 <sup>rd</sup> | 1 hour  |
| 28                         | 4 <sup>th</sup> week developments (folding )                                                                            | A6,B9 | 3 <sup>rd</sup> | 1 hour  |
| 29                         | Decidua formation                                                                                                       | A5,B3 | 3 <sup>rd</sup> | 1 hour  |
| 30                         | Placenta formation and associated congenital anomalies                                                                  | A9,B8 | 3 <sup>rd</sup> | 1 hour  |
| 31                         | umbilical cord formation and associated congenital anomalies                                                            | A8,B5 | 4 <sup>th</sup> | 1 hour  |
| 32.                        | Yolk sac developments                                                                                                   | A7,B5 | 4 <sup>th</sup> | 1 hour  |
| 33                         | Amnion formation and associated congenital anomalies                                                                    | A4,B9 | 4 <sup>th</sup> | 1 hour  |
| 34.                        | Twins development and associated congenital anomalies                                                                   | A3,B4 | 4 <sup>th</sup> | 1 hour  |
| 35                         | Birth defects and prenatal diagnosis                                                                                    | A7,B9 | 4 <sup>th</sup> | 1 hour  |
| 36                         | Revision                                                                                                                | A9,B8 | 4 <sup>th</sup> | 3hrs    |
| Total                      |                                                                                                                         |       |                 | 38hrs   |
|                            |                                                                                                                         |       |                 |         |
|                            |                                                                                                                         | ILOs  | week            | Hours   |
| Anatomy<br>1 <sup>st</sup> | Demonstration of <u>anatomical position</u> , <u>terms</u> , <u>different movements</u> , <u>skin</u> , <u>fascia</u> . | C3,D4 | 1 <sup>st</sup> | 1 hours |

|                                   |                                                                                                                                                                                                                                                                                                 |       |                 |         |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----------------|---------|
| <b>Anatomy<br/>2<sup>nd</sup></b> | Demonstration of <u>muscles, bones and joints</u> (classifications of bones and joints, their general features, structure and functions - important joints of the body, their movements and the muscles producing these movements- Interpret normal radiological images of the bones and joints | C5,D3 | 1 <sup>st</sup> | 1 hours |
| <b>Anatomy<br/>3<sup>rd</sup></b> | <u>Demonstration of parts of the nervous , cardiovascular and respiratory systems .</u>                                                                                                                                                                                                         | C2,D6 | 1 <sup>st</sup> | 1 hours |
| <b>Anatomy 1<sup>st</sup></b>     | <u>Demonstration of parts of the digestive , urinary and genital systems .</u>                                                                                                                                                                                                                  | C1,D3 | 2 <sup>nd</sup> | 1 hours |

|                                   |                                                                                                                                                           |       |     |             |             |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|-------------|-------------|
| <b>Anatomy</b><br>2 <sup>nd</sup> | <u>Demonstration of miosis ,mitosis ,<br/>spermatogenesis and oogenesis.</u>                                                                              | C3,D2 | 2nd | 1hours      | 3<br>marks  |
| <b>Anatomy</b><br>3 <sup>rd</sup> | <u>Demonstration of ovarian cycle ,<br/>ovulation and menstrual cycle.</u>                                                                                | C9,D8 | 2nd | 1 hours     | 3<br>marks  |
| <b>Anatomy</b><br>1 <sup>st</sup> | Demonstration of cleavage, morula<br>formation , fertilization , blastocyst<br>and implantation .                                                         | C7,D5 | 3rd | 1 hours     | 3<br>marks  |
| <b>Anatomy</b><br>2 <sup>nd</sup> | Demonstration of<br>gastrulation,notocord and neural<br>tube formation<br>Derivatives of ectoderm ,<br>mesoderm and endoderm<br><br>folding               | C9,D4 | 3rd | 1 hours     | 3<br>marks  |
| <b>Anatomy</b><br>3 <sup>rd</sup> | Placenta formation and associated<br>congenital anomalies<br><br>umbilical cord formation and<br>associated congenital anomalies<br>Yolk sac developments | C6,D7 | 3rd | 1hours      | 3<br>marks  |
| <b>Anatomy</b>                    | revision                                                                                                                                                  | C9,D6 | 4th | 2hours      |             |
|                                   | total                                                                                                                                                     |       |     | 12hour<br>s | 27<br>Marks |





## Blue Print of the block

| No. | List of top                                             | hours | Weight | Total marks | Mid-block | Final of the block |
|-----|---------------------------------------------------------|-------|--------|-------------|-----------|--------------------|
| 1   | Overview and introduction to anatomy. Anatomical terms. | 1     | 3%     | 2           | 1         | 1                  |
| 2   | Skin and Fascia                                         | 1     | 3%     | 1           | 1         |                    |
| 3   | Skeletal system                                         | 1     | 3%     | 2           | 1         | 1                  |
| 4   | Skeletal system(continued)                              | 1     | 3%     | ----        | -----     | -----              |
| 5   | Bones and Cartilage                                     | 1     | 3%     | 2           | 1         | 1                  |
| 6   | Joints                                                  | 1     | 3%     | 2           | 1         | 1                  |
| 7   | Muscles                                                 | 1     | 3%     | 2           | 1         | 1                  |
| 8   | Cardiovascular system                                   | 1     | 3%     | 1           | 1         | -----              |
| 9   | Respiratory System                                      | 2     | 3%     | 1           | 1         | -----              |
| 10  | Digestive System                                        | 1     | 3%     | 2           | 1         | 1                  |
| 11  | Digestive System (continued)                            | 1     | 3%     | 1           | -----     | 1                  |
| 12  | Urinary system                                          | 1     | 3%     | 1           | 1         | -----              |
| 13  | Genital system                                          | 1     | 3%     | 1           | 1         |                    |
| 14  | Lymphatic system<br>Nervous system                      | 1     | 3%     | 2           | 1         | 1                  |
| 15  | Nervous system(continued)                               | 1     | 3%     | 1           | -----     | 1                  |
| 16  | Spermatogenesis                                         | 1     | 3%     | 2           | 1         | 1                  |

| Semester 1 |                                                                                             |   |    | General Anatomy and Embryology |       |       |
|------------|---------------------------------------------------------------------------------------------|---|----|--------------------------------|-------|-------|
| 17         | <b>Oogenesis</b>                                                                            | 1 | 3% | 2                              | 1     | 1     |
| 18         | <b>Ovarian cycle- Ovulation</b>                                                             | 1 | 3% | 2                              | 1     | 1     |
| 19         | <b>Menstrual cycle</b>                                                                      | 1 | 3% | 2                              | 1     | 1     |
| 20         | <b>1st week developments (Fertilization)</b>                                                | 1 | 3% | 2                              | 1     | 1     |
| 21         | 1st week developments (Cleavage-morula formation)                                           | 1 | 3% | 1                              | 1     | ----- |
| 22         | 1st week developments (Blastocyst Formation and Implantation )                              | 1 | 3% | 1                              | ----- | 1     |
| 23         | 2 <sup>nd</sup> week developments (Embryonic disc and trophoblast changes)                  | 1 | 3% | 1                              | ----- | 1     |
| 24         | 2 <sup>nd</sup> week developments(extraembryonic mesoderm and chorionic vesicle formation ) | 1 | 3% | 1                              | ----- | 1     |
| 25         | 3 <sup>rd</sup> week developments (gastrulation and intraembryonic mesoderm formation )     | 1 | 3% | 1                              | ----- | 1     |
| 26         | 3 <sup>rd</sup> week developments (notocord and neural tube formation )                     | 1 | 3% | 1                              | ----- | 1     |
| 27         | Derivatives of ectoderm , mesoderm and endoderm                                             | 2 | 3% | 3                              | ----- | 3     |
| 28         | 4 <sup>th</sup> week developments (folding )                                                | 1 | 3% | 2                              | ----- | 2     |
| 29         | Decidua formation                                                                           | 1 | 3% | 2                              | ----- | 2     |
| 30         | Placenta formation and associated congenital anomalies                                      | 1 | 3% | 2                              | ----- | 2     |
| 31         | umbilical cord formation and associated congenital anomalies                                | 1 | 3% | 2                              | ----- | 2     |

| Semester 1   |                                                       |           | General Anatomy and Embryology |           |           |           |
|--------------|-------------------------------------------------------|-----------|--------------------------------|-----------|-----------|-----------|
| 32           | Yolk sac developments                                 | 2         | 3%                             | 2         | -----     | 2         |
| 33           | Amnion formation and associated congenital anomalies  | 1         | 3%                             | 2         | -----     | 2         |
| 34           | Twins development and associated congenital anomalies | 1         | 3%                             | 1         | -----     | 1         |
| 35           | Birth defects and prenatal diagnosis                  | 1         | 3%                             | 2         | -----     | 2         |
| 36           | revision                                              | 1         | 3%                             | -----     | -----     |           |
| <b>Total</b> |                                                       | <b>38</b> | <b>100%</b>                    | <b>54</b> | <b>18</b> | <b>36</b> |

### الدور الأول

| Exam         | Mid- block<br>20% | Practical<br>30% | Portfolio<br>10% | Total<br>100% |
|--------------|-------------------|------------------|------------------|---------------|
| GAD-102      | 18                | 27               | 9                | 90            |
| <b>Total</b> | <b>18</b>         | <b>27</b>        | <b>9</b>         | <b>90</b>     |

### الدور الثاني

| Exam         | Final<br>60% | Practical<br>40% | Total<br>100% |
|--------------|--------------|------------------|---------------|
| GAD-102      | 54           | 36               | 90            |
| <b>Total</b> | <b>54</b>    | <b>36</b>        | <b>90</b>     |

## Case Based Learning (CBL) and Group Discussion (GD)

|                |                                                                                                                                                                                                                                                  | week                                 | ILOs         | hours          |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|--------------|----------------|
| <b>Anatomy</b> | *Clinical correlates about chromosomes (B22-D1, 2, 3&4)<br>*Chromosomal abnormalities (numerical or structural)<br>* Down syndrome-trisomy 18-trisomy 13-<br>klinefelter syndrome-turner syndrome-<br>triple x syndrome- <i>gene mutations</i> ) | 1 <sup>st</sup> &<br>2 <sup>nd</sup> | <b>C5,D7</b> | <b>6 hours</b> |

|                |                                                                                                                                                                                                                             |                                            |              |                |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|--------------|----------------|
| <b>Anatomy</b> | * Abnormal Gametes (B24-D1, 2, 3&4).<br>* Detection of time of Ovulation (B25- D1, 2, 3&4).<br>*Infertility (male and female factors based on topics studied) (B21-D1, 2, 3&4).<br>*Abnormal Implantation (B23-D1, 2, 3&4). | <b>2<sup>nd</sup> &amp; 3<sup>rd</sup></b> | <b>C7,D6</b> | <b>6 hours</b> |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|--------------|----------------|

|              |                    |  |                 |
|--------------|--------------------|--|-----------------|
| 1            | Revisions and Exam |  |                 |
| <b>TOTAL</b> |                    |  | <b>12 hours</b> |

## Formative assessment

This is used to monitor student's learning to provide ongoing feedback that can be used by instructors to improve their teaching and by students to improve their learning.

It's given at least once in the form of quizzes that is made available for the students at the E-learning site at the end of the block.

Answers are presented instantly after the attempts and discussed on the students groups or in person with the teaching staff

Questions should be consistent with the level of the final exam. The student's attendance is a condition for entering the summative exams. The electronic or paper achievement file must be used to follow up on the students' evaluation, and its completion is a condition for entering the final exams

## Assignments/ learning activities

| No. | Title of activities                                | Week number     | % of points |
|-----|----------------------------------------------------|-----------------|-------------|
| 1   | CBL & group discussion of the 2 <sup>nd</sup> week | 2 <sup>nd</sup> |             |
| 2   | CBL & group discussion of the 3 <sup>rd</sup> week | 3 <sup>rd</sup> |             |

### Course components (total contact hours and credits per semester)

|                      | Lecture | Practical | SDL | Tutorial<br>(Discussion) | Total |
|----------------------|---------|-----------|-----|--------------------------|-------|
| <b>Contact Hours</b> | 38      | 22        | 12  |                          | 72    |
| <b>Credit</b>        |         |           |     |                          |       |

**Learning Methods**

- 1- Lectures for knowledge and intellectual skill outcomes.
- 2- Practical sessions to gain practical skills and using Practical book for drawing
- 3-Self directed learning (SDL) for the topics studied in lectures or related topics; including libraries, E learning (practical photographs and questions of different topics available online for student's assessments) and consulting professors for gathering of information.
- 4- Group discussion.

**Student Assessment**

| Assessment task                                                                 | Proportion of Total Assessment |
|---------------------------------------------------------------------------------|--------------------------------|
| Mid-term examination (MCQs)                                                     | 20%                            |
| Final Exams (50%MCQs , 50% short answer questions and modified essay questions) | 40%                            |
| OSPE exam                                                                       | 30%                            |
| Portfolio                                                                       | 10%                            |

**List of references (Recommended books)**

1-Course Notes:

Hand out of the lectures

2- Essential Books: (Text Books):

- \* Clinical Anatomy for Medical Students, Richard Snell.
- \* Clinically Oriented Anatomy, by: Keith L. Moore
- \* Human anatomy, Saladin.
- \* Gray's anatomy for students.
- \* Langman's Medical Embryology.
- \* The developing human, Clinically oriented embryology by Keith Moore.
- \* Grant's Atlas of Anatomy, Grant J.C.B., Williams & Wilkins.

Anatomical website on the internet.

Web site of anatomy department

Lecture notes

Department book

**Facilities required for learning**

- 1- White boards.
- 2- Cadavers.
- 3- Closed circuit Monitors in labs.
- 4- Data show for power point presentations.
- 5- Computer club in the faculty with net access.
- 6- Libraries with available textbooks for gathering of information.

## Topic Outlines

### Overview and Introduction to Anatomy

#### Learning objectives

After this lecture, student should be able to:

- Know the anatomical position and terms.
- Reproduce general anatomic criteria of internal organs
- Know the different types of movements of the human body.

#### Content of the lecture

- Definition of Anatomy and the difference between basic and clinical anatomy.
- Divisions of Anatomy: Gross Anatomy (Macroscopic Anatomy), Embryology (Developmental Anatomy), Clinical Anatomy, Surface Anatomy & Radiological Anatomy.
- Identification of different regions, system & tissues of the human body.
- Definition of: Anatomical position, anatomical planes and terms.
- Explanation of different movements of the body:
  - Flexion & Extension
  - Adduction & Abduction
  - Medial rotation & Lateral rotation
  - Pronation & Supination
  - Inversion & Eversion.

#### Sources

- Clinical Anatomy for Medical Students, Richard Snell.
- Clinically Oriented Anatomy, By: Keith L. Moore
- Gray's anatomy for students.
- Grant's Atlas of Anatomy, Grant J.C.B., Williams & Wilkins.
- Anatomical website.

## **Coverings of the body (Skin & Fascia)**

### **Learning objectives**

After this lecture, student should be able to:

- Know the structure of the skin.
- Know the appendages of the skin (Nails, Hairs, sebaceous glands, sweat glands).
- Describe the cleavage lines of the skin.
- Know the structure and function of fascia.
- Know the division of fascia (superficial and deep fasciae)
- Know Fascial planes, fascial compartments and potential spaces.
- Understand important clinical conditions e.g. skin incisions, skin infections, sebaceous cyst, burns and fascia and infections.

### **Content of the lecture**

- Structure and function of the skin.
- Cleavage lines and creases of the skin.
- Appendages of the skin (Nails, Hairs, sebaceous glands, sweat glands).
- Division of fascia (superficial and deep fasciae).
- Contents of the superficial fascia.

### **Sources**

- Clinical Anatomy for Medical Students, Richard Snell.
- Clinically Oriented Anatomy, By: Keith L. Moore
- Gray's anatomy for students.
- Grant's Atlas of Anatomy, Grant J.C.B., Williams & Wilkins.
- Anatomical website.

## **Muscles**

### **Learning objectives**

After this lecture, student should be able to:

- Know the different types of muscles (skeletal, smooth and cardiac).
- Know the difference between muscle origin and insertion.
- Know the belly, tendons, aponeurosis and raphe.
- Describe the internal structure of skeletal muscle.
- Describe the shapes and arrangement of muscle fibers.
- Describe the tone of the muscle and its nerve supply.
- Understand the mechanism of action of the muscles (agonism, antagonism & synergism).
- Understand the role of muscles in muscle tone and muscle dysfunction (paralysis).

### **Content of the lecture**

- Types of muscles (skeletal, smooth and cardiac).
- Different parts of the skeletal muscles and its internal structure.
- Muscle origin & insertion.
- Shapes and arrangement of muscle fibers.
- Mechanism of action of muscles (agonism, antagonism & synergism).
- Nerve supply of the muscles.
- Action of the muscles.
- Naming of the muscles.

**Sources**

- Clinical Anatomy for Medical Students, Richard Snell.
- Clinically Oriented Anatomy, By: Keith L. Moore
- Gray's anatomy for students.
- Grant's Atlas of Anatomy, Grant J.C.B., Williams & Wilkins.
- Anatomical website.

## **Bones & Cartilage**

### **Learning objectives**

After this lecture, student should be able to:

- Know the structure of bone.
- Describe the different of types of bones.
- Know the growth and ossification of bones..
- Identify the bone marrow and periosteum.
- Identify the different types of cartilage in the body.
- Understand the role of bones in support and locomotion.
- Understand the definition and types of bone fractures.

### **Content of the lecture**

- Functions of bones.
- Structure of bone.
- Growth, ossification and blood supply of the bones.
- Types of bones.
- Different types of cartilage.

**Sources**

- Clinical Anatomy for Medical Students, Richard Snell.
- Clinically Oriented Anatomy, By: Keith L. Moore
- Gray's anatomy for students.
- Grant's Atlas of Anatomy, Grant J.C.B., Williams & Wilki
- Anatomical website.

**Joints****Learning objectives**

After this lecture, student should be able to:

- Know the definition and structure of the joints.
- Know the different divisions of the joints.
- Describe the fibrous joints.
- Describe the cartilaginous joints.
- Describe the synovial joints and its stability.
- Understand the role of the joints in body movements.
- Understand the definition and types of joint dislocations.

**Content of the lecture**

- Definition and structure of the joints.
- Different types of the joints.
- Types of fibrous joints.
- Types of cartilaginous joints.
- Types of synovial joints.
- Structures related to the joints (ligaments, menisci, and bursae).
- Nerve supply of joints.
- The role of the joints in body movements.
- Definition and types of joint dislocations.

**Sources**

- Clinical Anatomy for Medical Students, Richard Snell.
- Clinically Oriented Anatomy, By: Keith L. Moore
- Gray's anatomy for students.
- Grant's Atlas of Anatomy, Grant J.C.B., Williams & Wilkins.
- Anatomical website.

## **Skeletal system**

### **Learning objectives**

After this lecture, student should be able to:

- Know the division of the human skeleton.
- Identify the different bones of axial skeleton.
- Identify the different bones of appendicular skeleton.
- Identify the major features of bones of the upper and lower limbs.

### **Content of the lecture**

- Divisions of the human skeleton.
- Bones of axial skeleton.
- Bones of appendicular skeleton.
- Bones of the upper limb
- Bones of the lower limb.

### **Sources**

- Clinical Anatomy for Medical Students, Richard Snell.
- Clinically Oriented Anatomy, By: Keith L. Moore
- Gray's anatomy for students.
- Grant's Atlas of Anatomy, Grant J.C.B., Williams & Wilkins.
- Anatomical website.

## **Digestive system**

### **Learning objectives**

After this lecture, student should be able to:

- Know the components of digestive system .
- Know the functions of the digestive system.
- Describe the differences small and large intestine.
- Describe the accessory gland of digestive system.

### **Content of the lecture**

- The components of the digestive system.
- Structure of the stomach (surfaces, borders and parts).
- Differences small and large intestine.
- Parts of small and large intestine.

### **Sources**

- Human anatomy, Saladin.
- Clinical Anatomy for Medical Students, Richard Snell.
- Clinically Oriented Anatomy, By: Keith L. Moore
- Gray's anatomy for students.
- Grant's Atlas of Anatomy, Grant J.C.B., Williams & Wilkins.
- Anatomical website.

## **Respiratory system**

### **Learning objectives**

After this lecture, student should be able to:

- Know the components of the respiratory system.
- Know the functions of the respiratory systems.
- Describe the differences between right and left lung.
- Know clinical notes about metastases.

### **Content of the lecture.**

- Components of the respiratory system (conducting and respiratory portion).
- Differences between right and left lung.

### **Sources**

- Human anatomy, Saladin.
- Clinical Anatomy for Medical Students, Richard Snell.
- Clinically Oriented Anatomy, By: Keith L. Moore
- Gray's anatomy for students.
- Grant's Atlas of Anatomy, Grant J.C.B., Williams & Wilkins.
- Anatomical website.

## **Nervous system**

### **Learning objectives**

After this lecture, student should be able to:

- Know the structure of the nervous tissues.
- Know the division of the nervous system.
- Describe the components of the central nervous system (brain & spinal cord) and the peripheral nervous system.
- Know the structure of spinal nerve.
- Differentiate between motor and cutaneous nerves.
- Know the autonomic nervous system (function & components).
- Know the effects of nerve lesion (motor & sensory).

### **Content of the lecture**

- Structure of the nervous tissues.
- Division of the nervous system.
- Components of the central nervous system.
- Components of the peripheral nervous system.
- Structure of spinal nerve.
- Motor and cutaneous nerves.
- Autonomic nervous system (Sympathetic and Parasympathetic)
- Effects of nerve lesion (motor & sensory).

### **Sources**

- Clinical Anatomy for Medical Students, Richard Snell.
- Clinically Oriented Anatomy, By: Keith L. Moore
- Gray's anatomy for students.
  - Grant's Atlas of Anatomy, Grant J.C.B., Williams & Wilkins.
- Anatomical website.

## **Cardiovascular and lymphatic systems**

### **Learning objectives**

After this lecture, student should be able to:

- Know the components of these systems.
- Know the functions of these systems.
- Describe the differences between afferent and efferent lymph vessels.
- Describe the differences between arteries and veins.
- Know wavy (tortuous) arteries, end arteries, anastomosis.
- Know systemic, pulmonary and portal circulations.

### **Content of the lecture**

- Structure of the heart (surfaces, borders and chambers) and division of blood vessels.
- Differences between arteries and veins.
- The wavy (tortuous) arteries, end arteries, anastomosis.
- Systemic, pulmonary and portal circulations.
- Functions of the lymphatic system.
- Structure of the lymph nodes and division of lymph vessels.

### **Sources**

- Human anatomy, Saladin.
- Clinical Anatomy for Medical Students, Richard Snell.
- Clinically Oriented Anatomy, By: Keith L. Moore
- Gray's anatomy for students.
- Grant's Atlas of Anatomy, Grant J.C.B., Williams & Wilkins.
- Anatomical website.

## **Urinary system**

### **Learning objectives**

After this lecture, student should be able to:

- Know the components of the urinary system.
- Know the functions of the urinary system.
- Describe the differences between male and female urethra.

### **Content of the lecture**

- The components of the urinary system.
- The kidney (relations and its capsules), ureter and urinary bladder.
- Female urethra and parts of male urethra.

### **Sources**

- Human anatomy, Saladin.
- Clinical Anatomy for Medical Students, Richard Snell.
- Clinically Oriented Anatomy, By: Keith L. Moore
- Gray's anatomy for students.
- Grant's Atlas of Anatomy, Grant J.C.B., Williams & Wilkins.
- Anatomical website.

## **Male and female genital systems**

### **Learning objectives**

After this lecture, student should be able to:

- Know parts of the male genital system.
- Know the structure of the testis.
- Know parts of the female genital system.
- Know the structure of the ovary.

### **Content of the lecture**

- Parts of the male genital system.
- Structure of the testis.
- Parts of the female genital system.
- Structure of the ovary.

### **Sources**

- Human anatomy, Saladin.
- Clinical Anatomy for Medical Students, Richard Snell.
- Clinically Oriented Anatomy, By: Keith L. Moore
- Gray's anatomy for students.
- Grant's Atlas of Anatomy, Grant J.C.B., Williams & Wilkins.
- Anatomical website.

## **The Chromosome Theory of Inheritance**

### **Learning objectives**

After this lecture, student should be able to:

- Know that new individual is determined by specific genes on chromosomes inherited from the father and the mother.
- Know the number of chromosomes in somatic cells and Gametes.
- Know the **autosomes** and the **sex chromosomes**.
- Describe the **mitosis** and **meiosis**.
- Know the **Crossover** and **polar bodies**.
- Know the birth defects that may arise through abnormalities in chromosome number or structure.

### **Content of the lecture**

- Structure of chromosomes and their types.
- **Mitosis** and **meiosis**.
- **Crossover** and **polar bodies**.
- Birth defects that may arise through abnormalities in chromosome number or structure.

### **Sources**

- Langman's Medical Embryology.
- The developing human, Clinically oriented embryology by Keith Moore.
- Anatomical website on the Internet.
- Web site of anatomy department

## **Spermatogenesis**

### **Learning objectives**

After this lecture, student should be able to:

- Describe the components of the spermatogenesis (meiosis and cytodifferentiation).
- Describe the hormonal control of the spermatogenesis.
- Know the forms of abnormal spermatozoa.
- Know the birth defects that may arise through abnormalities in chromosome number or structure.

### **Content of the lecture**

- Parts of the male genital system.
- Structure of the testis.
- Components of the spermatogenesis (meiosis and cytodifferentiation).
- Hormonal control of the spermatogenesis.
- Abnormal spermatozoa.
- Birth defects that may arise through abnormalities in chromosome number or structure.

### **Sources**

- Langman's Medical Embryology.
- The developing human, Clinically oriented embryology by Keith Moore.
- Anatomical website on the Internet.
- Web site of anatomy department

## **Oogenesis**

### **Learning objectives**

After this lecture, student should be able to:

- Describe the components of the oogenesis.
- Describe maturation of oocytes at puberty.
- Describe the hormonal control of the oogenesis.
- Know the forms of abnormal gametes.
- Know the birth defects that may arise through abnormalities in chromosome number or structure.

### **Content of the lecture**

- Components of the oogenesis (meiosis and cytodifferentiation).
- Hormonal control of the oogenesis.
- Abnormal gametes.
- Birth defects that may arise through abnormalities in chromosome number or structure.

### **Sources**

- Langman's Medical Embryology.
- The developing human, Clinically oriented embryology by Keith Moore.
- Anatomical website on the Internet.
- Web site of anatomy department

**First Week of Development**

Ovarian cycle, Ovulation, Fertilization, cleavage, blastocyst formation and the uterus at time of implantation

**Learning objectives**

After this lecture, student should be able to:

- Know ovarian cycle and ovulation (corpus luteum, oocyte transport, corpus albicans).
- Know the oocyte transport.
- Describe the process of fertilization and its phases.
- Describe cleavage.
- Describe the blastocyst formation.
- Describe the uterus at time of implantation.
- Know the hormonal control of the uterine cycle.
- Know the middle pain (pain near the middle of the menstrual cycle).
- List the consequences of abnormal implantation of the embryo.
- Know the notes about contraceptive methods and IVF.

**Content of the lecture**

- Ovarian cycle and ovulation.
- Oocyte transport.
- Phases of fertilization.
- Cleavage and blastocyst formation.
- Uterine cycle and its hormonal control.
- Pain near the middle of the menstrual cycle.
- Notes about contraceptive methods and IVF.

**Sources**

- Langman's Medical Embryology.
- The developing human, Clinically oriented embryology by Keith Moore.
- Anatomical website on the Internet.
- Web site of anatomy department

## **Second Week of Development**

### **Learning objectives**

After this lecture, student should be able to:

- Know the formation of the bilaminar germ disc.
- Know the changes in the 8<sup>th</sup> day up to the end of this week.
- Describe the process of implantation.
- Know abnormal implantation.

### **Content of the lecture**

- Formation of the bilaminar germ disc.
- Sequences of development during the 2nd week.
- Normal and abnormal implantation.
- Decidua and decidua reaction.
- The secondary yolk sac.
- Chorionic cavity and plate.

### **Sources**

- Langman's Medical Embryology.
- The developing human, Clinically oriented embryology by Keith Moore.
- Anatomical website on the Internet.
- Web site of anatomy department

### **Third Week of Development**

#### **Learning objectives**

After this lecture, student should be able to:

- Know Gastrulation (formation of embryonic mesoderm and endoderm).
- Know formation of the Notochord.
- Describe the further development of the trophoblast.

#### **Content of the lecture**

- Formation of the trilaminar germ disc.
- Formation of the Notochord.
- Further development of the trophoblast and development of a villus.

#### **Sources**

- Langman's Medical Embryology.
- The developing human, Clinically oriented embryology by Keith Moore.
- Anatomical website on the Internet.

**4<sup>th</sup> week events****Learning objectives**

After this lecture, student should be able to:

- Know the sequences that occur during the 4<sup>th</sup> week of development.
- Know derivatives of the ectodermal germ layer.
- Know neurulation.
- Know derivatives of the mesodermal germ layer.
- Know derivatives of the endodermal germ layer.
- Know folding process , the associated changes and the results .

**Content of the lecture**

- Sequences that occur from 3<sup>rd</sup> to 8<sup>th</sup> week of development.
- Derivatives of the ectodermal germ layer.
- Neurulation.
- Derivatives of the mesodermal germ layer.
- Derivatives of the endodermal germ layer.
- Folding process , the associated changes and the results.

**Sources**

- Langman's Medical Embryology.
- The developing human, Clinically oriented embryology by Keith Moore.
- Anatomical website on the Internet.

## **Twinning**

### **Learning objectives**

After this lecture, student should be able to:

- Know types of twins .
- Know charecters of each type and the process of formation.
- Know associated congenital anomalies.

### **Content of the lecture**

- types of twins .
- charecters of each type and the process of formation..
- Congenital anomalies associated with twinning and complications .

### **Sources**

- Langman's Medical Embryology.
- The developing human, Clinically oriented embryology by Keith Moore.
- Anatomical website on the Internet.

## **Fetal Membranes and placenta**

### **Learning objectives**

After this lecture, student should be able to:

- Know the changes in the trophoblast.
- Know chorion frondosum and decidua basalis.
- Know the structure of the placenta.
- Know the full-term placenta.
- Know the circulation of the placenta.
- Know the function of the placenta.
- Know the placental changes at the end of pregnancy.
- Know the amnion and umbilical cord.
- Know the amniotic fluid.
- Twins formation.
- Know the placental, umbilical cord and amniotic fluid abnormalities.

### **Content of the lecture**

- Changes in the trophoblast.
- Chorion frondosum and decidua basalis.
- Structure of the placenta and full-term placenta.
- Placental circulation.
- Function of the placenta.
- Placental changes at the end of pregnancy.
- Amnion and umbilical cord.
- Amniotic fluid.
- Twins formation.
- Placental, umbilical cord and amniotic fluid abnormalities.

### **Sources**

- Langman's Medical Embryology.
- The developing human, Clinically oriented embryology by Keith Moore.
- Anatomical website on the Internet.
- Web site of anatomy department

## **Birth Defects**

### **Learning objectives**

After this lecture, student should be able to:

- Know the types of abnormalities.
- Know environmental factors birth defect.
- Know the infectious agents birth defect.
- Know the radiation and birth defect.
- Know the chemical agents and birth defect.
- Know the maternal disease and birth defect.
- Know the hormones and birth defect.
- Know the nutritional deficiencies and birth defect.
- Know other factors for birth defect.
- Know male-mediated teratogenesis.
- Know prenatal diagnosis of birth defect.

### **Content of the lecture**

- Types of abnormalities.
- Environmental factors birth defect.
- Infectious agents birth defect.
- Radiation and birth defect.
- Chemical agents and birth defect.
- Maternal disease and birth defect.
- Hormones and birth defect.
- Nutritional deficiencies and birth defect.
- Other factors for birth defect
- Identify the possible causes of intrauterine growth restriction.
- Male-mediated teratogenesis.
- Prenatal diagnosis of birth defect.

### **Sources**

- Langman's Medical Embryology.
- The developing human, clinically oriented embryology by Keith Moore.
- Anatomical website on the Internet.
- Web site of anatomy department

## Schedule

| General anatomy and development (GAD-102) - 1st week |                    |                    |                     |                    |                                             |                                                             |                  |
|------------------------------------------------------|--------------------|--------------------|---------------------|--------------------|---------------------------------------------|-------------------------------------------------------------|------------------|
| 03:04                                                | 02:03              | 01:02              | 12:01               | 11:12              | 10:11                                       | 09:10                                                       | 08:09            |
| practical (1) G III                                  |                    | Practical (1) G II |                     | practical (1) G I  |                                             | Lecture (1): Introduction & Anatomical terms, bones, joints | السبت<br>10-5    |
| الفصول التفاعلية                                     |                    |                    |                     |                    |                                             | مدرج أ<br>المحاضر                                           |                  |
| practical (2) G II                                   |                    | practical (2) G I  |                     | practical (1) G IV |                                             | Lecture (2): Muscles, CVS, Respiratory system               | الأحد<br>10-6    |
| الفصول التفاعلية                                     |                    |                    |                     |                    |                                             | مدرج أ<br>المحاضر                                           |                  |
|                                                      | Practical (2) G IV |                    | Practical (2) G III |                    | Lecture (3): GIT, lymphatic, nervous system |                                                             | الاثنين<br>10-7  |
| الفصول التفاعلية                                     |                    |                    |                     |                    |                                             | مدرج أ<br>المحاضر                                           |                  |
|                                                      |                    |                    |                     |                    | Lecture (4): urinary and genital system (1) |                                                             | الثلاثاء<br>10-8 |
|                                                      |                    |                    |                     |                    |                                             | مدرج أ<br>المحاضر                                           |                  |
|                                                      |                    |                    |                     |                    | Lecture: (5) urinary and genital system (2) |                                                             | الأربعاء<br>10-9 |
|                                                      |                    |                    |                     |                    |                                             | مدرج أ<br>المحاضر                                           |                  |

القياس 10-10-2024 : أجلة عيد الفرائد المستقلة .

| General anatomy and development (GAD-102) - 2nd week |                        |                         |                        |                       |                                                      |                           |       |
|------------------------------------------------------|------------------------|-------------------------|------------------------|-----------------------|------------------------------------------------------|---------------------------|-------|
| 03:04                                                | 02:03                  | 01:02                   | 12:01                  | 11:12                 | 10:11                                                | 09:10                     | 08:09 |
| practical (3) G IV                                   | Practical (3) G III    |                         | Practical (3) G II     |                       | Lecture (6): Cell division and gametogenesis         |                           |       |
| مبنى الفصول التفاعلية                                |                        |                         |                        |                       | مدرج أ                                               |                           |       |
|                                                      |                        |                         |                        |                       | المحاضر                                              |                           |       |
| practical (4) G III                                  | practical (4) G II     |                         | practical (3) G I      |                       | Lecture (7): ovarian cycle, uterine cycle, ovulation |                           |       |
| مبنى الفصول التفاعلية                                |                        |                         |                        |                       | مدرج أ                                               |                           |       |
|                                                      |                        |                         |                        |                       | المحاضر                                              |                           |       |
|                                                      | Practical (4) G I      |                         | practical (4) G IV     |                       | Lecture (8): 1 <sup>st</sup> week events             |                           |       |
| مبنى الفصول التفاعلية                                |                        |                         |                        |                       | مدرج أ                                               |                           |       |
|                                                      |                        |                         |                        |                       | المحاضر                                              |                           |       |
|                                                      |                        |                         |                        |                       | Lecture (9) 2 <sup>nd</sup> week events              |                           |       |
|                                                      |                        |                         |                        |                       | مدرج أ                                               |                           |       |
|                                                      |                        |                         |                        |                       | المحاضر                                              |                           |       |
|                                                      |                        |                         |                        |                       |                                                      |                           |       |
|                                                      |                        |                         |                        |                       |                                                      |                           |       |
|                                                      |                        |                         |                        |                       |                                                      |                           |       |
|                                                      | Practical (1) PPS G IV | Practical (1) PPS G III | Practical (1) PPS G II | Practical (1) PPS G I | Lecture (2): Vertical PPS                            | Lecture (1): Vertical PPS |       |
| الفصول التفاعلية                                     |                        |                         |                        |                       | مدرج أ                                               |                           |       |
|                                                      |                        |                         |                        |                       |                                                      |                           |       |
|                                                      |                        |                         |                        |                       |                                                      |                           |       |

| <b>General anatomy and development (GAD-102) - 4th week</b> |                  |              |                    |              |              |                                           |                              |                          |
|-------------------------------------------------------------|------------------|--------------|--------------------|--------------|--------------|-------------------------------------------|------------------------------|--------------------------|
| <b>03:04</b>                                                | <b>02:03</b>     | <b>01:02</b> | <b>12:01</b>       | <b>11:12</b> | <b>10:11</b> | <b>09:10</b>                              | <b>08:09</b>                 |                          |
| practical (?) G II                                          | practical(?) G I |              | practical (?) G IV |              |              | Lecture (16) revision<br>مراجعة المحاضرات |                              | السبت<br><b>10-26</b>    |
|                                                             |                  |              |                    |              |              |                                           |                              |                          |
| الفصول التقاعلية                                            |                  |              | practical (7)G III |              |              |                                           |                              | الأحد<br><b>10-27</b>    |
|                                                             |                  |              |                    |              |              |                                           |                              |                          |
| القصور التفاعلية                                            |                  |              |                    |              |              |                                           |                              |                          |
|                                                             |                  |              |                    |              |              |                                           |                              |                          |
|                                                             |                  |              |                    |              |              |                                           |                              | الاثنين<br><b>10-28</b>  |
|                                                             |                  |              |                    |              |              |                                           |                              |                          |
|                                                             |                  |              |                    |              |              |                                           |                              |                          |
|                                                             |                  |              |                    |              |              |                                           |                              | الثلاثاء<br><b>10-29</b> |
|                                                             |                  |              |                    |              |              |                                           |                              |                          |
|                                                             |                  |              |                    |              |              |                                           |                              |                          |
|                                                             |                  |              |                    |              |              |                                           | <b>Practical Exam</b>        | الأربعاء<br><b>10-30</b> |
|                                                             |                  |              |                    |              |              |                                           |                              |                          |
|                                                             |                  |              |                    |              |              | Lecture (6):<br>Vertical PPS              | Lecture (5):<br>Vertical PPS | الخميس<br><b>10-31</b>   |
|                                                             |                  |              |                    |              |              | ملرج أ                                    | ملرج أ                       |                          |

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**Head of department :**

Prof. Ahmed Talaat Galal

**Block coordinators:**

Prof. Salwa Ouies

Dr.Noha Fouda

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**Staff members of Human Anatomy and Embryology.**