**Ministry of Higher Education and Scientific Research**

**Scientific Supervision and Scientific Evaluation Apparatus**

**Directorate of Quality Assurance and Academic Accreditation**

**Accreditation Department**

**Academic Program and Course Description Guide Academic Program and Course Description Guide**

**2024**

**Course Description Form Theoretical**

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| 1. Course Name:
 |
| Theoretical cell biology  |
| 1. Course Code:
 |
| 102 BCB |
| 1. Semester / Year:
 |
| 2023-2024 |
| 1. Description Preparation Date:
 |
| 14/3/2024 |
| 1. Available Attendance Forms:
 |
| Daily attendance |
| 1. Number of Credit Hours (Total) / Number of Units (Total)
 |
| 2 hours theory And (total units 6 Hours) |
| 1. Course administrator's name (mention all, if more than one name)
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| Name: Professor Dr. Hanady Salim Abd Al-SahibEmail: Hanadi.s.as@ihcoedu.uobaghdad.edu.iqAssistant Professor Dr. Worood Kamil ShalashEmail: worood.k@ihcoedu.uobaghdad.edu.iq Assistant Professor .Samira Muayed Yaseen Email: samira.m.y @ihcoedu.uobaghdad.edu.iq Lecturer Dr. Shyma SabahEmail:drshaimaasb @ihcoedu.uobaghdad.edu.iq   |
| 1. Course Objectives
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| **Course Objectives** | **Teaching students of the first stage / Department of Life Sciences the basics and principles of cell science and the scientific developments that have occurred in this field to enable them to teach this subject in the middle and middle school stages.** |
| 1. Teaching and Learning Strategies
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| **Strategy** | a- Knowledge and understanding a1- For the student to become familiar with the biological scientific concepts of the plant cell.a2- For the student to become familiar with the biological scientific concepts of the animal cell. a3- the student becomes familiar with the behavioral scientific concepts related to the cell learning process.a4- The student should know how to benefit from and use laboratory equipment. a5- the student learns to use various methods in teaching.  a6- Preparing trained and qualified cadres to work in educational institutions. a7- Preparing trained and qualified cadres to work in health institutions.  b - The skills objectives of the courseb1 - Teaching skill in biology.b2 - The student must have the ability to describe laboratory models and environments.b3 - The student must have the ability to link causes to natural environmental causes.Teaching and learning methods 1. Method of thinking and discussion.2. Practical tests used in laboratories.3. Teaching through exploratory lecture.4. E-learning (electronic tests and explanatory videos). C-Evaluation methods  1. Submit weekly reports.2. Daily and semester exam grades.3. Research in the field of cell science.D - General and transferable skills (other skills related to employability and personal development 1- That the student is able to use the knowledge he has received.2- That the student acquires the skill of the teaching and learning profession.3- That the student can consolidate what he has acquired in professional development. |
| 1. Course Structure
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| **Week**  | **Hours**  | **Required Learning Outcomes**  | **Unit or subject name**  | **Learning method**  | **Evaluation method**  |
| 1 | 2 | Knowledge  | A historical Introduction onCell biology | Use the whiteboard and display screen Use the software  Electronic educational Google classroom | Daily exam and oral questions |
| 2 | 2 | Knowledge | Prokaryotic and eukaryotic cells | Use the Whiteboard and displayscreen Use the software  Electronic educational Google classroom | Daily exam and oral questions |
| 3 | 2 | Knowledge | Plasma membrane and membrane models | Use the Whiteboard and display screen Use the software  Electronic educational  Google classroom | Daily exam and oral questions |
| 4 | 2 | Knowledge | Functions of the plasma membraneAnd types of transportation | Use the Whiteboard and display screen Use the software  Electronic educational Google classroom | Daily exam and oral questions |
| 5 | 2 | Knowledge | Exciocytosis and eEndocytosis And osmosis | Use the Whiteboard and display screen Use the software Electronic educational  Google classroom | Daily exam and oral questions |
| 6 | 2 | Knowledge | Cellular –Junctions | Use the Whiteboard and displayscreen Use the software Electronic educational Google classroom | Daily exam and oral questions |
| 7 | 2 | Knowledge | Nucleus structure | Use the Whiteboard and display screen Use the software  Electronic educational  Google classroom | Daily exam and oral questions |
| 8 | 2 | Knowledge | Cell cycle and mitosis | Use the Whiteboard and display screen Use the software Electronic educational Google classroom | Daily exam and oral questions |
| 9 | 2 | Knowledge | Endoplasmic reticulum and  Colgi bodies | Use the Whiteboard and displayscreen Use the software  Electronic educational  Google classroom | Daily exam and oral questions |
| 10 | 2 | Knowledge | Mitochondria and lysosomes | Use the Whiteboard and displayscreen Use the software Electronic educational Google classroom | Daily exam and oral questions |
| 11 | 2 | Knowledge | Chromosomes | Use the Whiteboard and displayscreen Use the software Electronic educational  Google classroom | Daily exam and oral questions |
| 12 | 2 | Knowledge | Chromosomal abberations | Use the Whiteboard and display screen Use the software  Electronic educational Google class room | Daily exam and oral questions |
| 13 | 2 | Knowledge | DNA structure | Use the Whiteboard and display screen Use the software Electronic educational Google class room |  |
| 14 | 2 | Knowledge | Protien synthesis | Use the Whiteboard and display screen Use the software Electronic educational Google class room | Daily exam and oral questions |
| 15 | 2 | Knowledge | Microtubules | Use the Whiteboard and display screen Use the software Electronic educational Google classroom | Daily exam and oral questions |
| 16 | 2 | Knowledge | Apoptosis | Use the Whiteboard and display screen Use the software Electronic educational Google class room | Daily exam and oral questions |
| 17 | 2 | Knowledge | Cancer cells.  | Use the Whiteboard and display screen Use the software  Electronic educational Google classroom | Daily exam and oral questions |
| 1. Course Evaluation
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| Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc  |
| 1. Learning and Teaching Resources
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| Required textbooks (curricular books, if any) | Cell Biology book written by Najah Shamo Oraha, Hanaa Fadel Khalil, and Laila Abdel Wahab Al-Sheikh.⮚ **The world of the cell .Wayne M.Becker2000** |
| Main references (sources) | 1. **Cell Biology book written by Najah Shamo Oraha, Hanaa Fadel Khalil, and Laila Abdel Wahab Al-Sheikh.**
 |
| Recommended books and references (scientific journals, reports...) | 1. **Not found**
 |
| Electronic References, Websites | Websites  |

Curriculum development plan: Some curricula need some changes that suit the developments taking place at the local and regional levels in the field of cell science. Getting acquainted with the most important developments in teaching methods and modern technologies. And adding modern sources.