

## Syllabus

BIO 215 – Introductory Developmental Cell Biology (Credit Units: 2)

Department of Biological Sciences

Faculty of Sciences, University of Delta, Agbor, Nigeria

**Lead Lecturer:** Dr (Mrs) E.O. Oduma

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**Office Hours:** Fridays 10-2pm. You can reach any of the lecturers teaching this course immediately after classes. You are always welcomed to ask questions during or after classes. You can also communicate with your lecturer through the general WhatsApp platform for Biology BIO 215. If you are not yet on the platform you can reach out to your class representatives

**Meeting Time and Place:** Friday 8- 10am Faculty of Science Lecture Room 4 or 5

**Attendance:** Attendance is mandatory. You are expected to attend every class. If you must miss a class, class, you must please notify your lecturer and class representative in advance.

**Methods of Instruction:** This syllabus contains an overview of what will be covered in class.

**Overview:** BIO 215 – Introductory Developmental Cell Biology gives an insight into the history and developments in cell biology. It seeks to explore the trends in cell biology. This course will focus on cell organelles and their functions. Modes of cell division will be discussed as well as innovations. The course will also take a look at cell differentiation and growth. There will be a brief introduction of the molecular basis of cell structure and development.

**Objective:** The objectives of this course is to enable students i) Give account of the history of cell and highlight the present trends in cell biology. ii) Draw the Ultra-structure of the plant and animal cells. iii) identify the basic structures of cell organelles iv) discuss the functions of cell organelles v) Use models to illustrate the mitosis and meiosis. vi) explain cell differentiation and growth.

**Learning Outcome:** At the end of the lectures, students should be able to: i) Give account of the history of cell and highlight the present trends in cell biology. ii) Draw the Ultra-structure of the plant and animal cells. iii) identify the basic structures of cell organelles iv) discuss the functions of cell organelles v) Use models to illustrate the mitosis and meiosis. vi) explain cell differentiation and growth.

### **Course Contents: BIO 215 Developmental Biology**

History and present trends in cell biology. Ultra-structure of the plant and animal cells. Organelles and their basic structures and functions. Mitosis and meiosis. Cell differentiation and growth of cells. A brief study of the molecular basis of cell structure and development.

## Lecture Schedules Week Content Lecture notes/slides

<b>WEEK</b>	<b>TOPIC</b>	<b>Lecture Notes/ Slides</b>
1	Introduction and History of developmental cell biology	
2	Present trends in cell biology	
3	Ultrastructure of the plant and animal cell	
4	Basic structure and function of cell organelles	
5	Mitosis and meiosis	
6	Comparison between Mitosis and meiosis	
7 and 8	Cell differentiation and its growth	
9 and 10	A brief study of molecular basis of cell structure and development	
11	Continuous assessments	
12	Revision	

### Examination schedule

- Attendance
- Homework
- Class Test
- End of Semester Exam

### Grading

Attendance: 5% of grade

Homework: 5% of grade

Midterm Exam: 20% of grade

Final Exam: 70% of grade

### References

**Alberts B, Bray D, Johnson a et al., (1997) Essential Cell biology, London: Garland publishing.**

### Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behaviour conducive to a positive learning environment. The code of student conduct is described in detail in the student handbook or University website.

Academic Honesty "All students enrolled at the University shall follow the tenets of common decency and acceptable behaviour conducive to a positive learning environment." It is the policy of the University, that no form of plagiarism or cheating will be tolerated. Plagiarism is defined as the deliberate use of another's work and claiming it as one's own. This means ideas as well as text or code, whether paraphrased or presented verbatim (word-for-word). Cheating is defined as obtaining unauthorised assistance on any assignment. Proper citation of sources must always be utilised thoroughly and accurately. If you are caught sharing or using other people's work in this class, you will receive a 0 grade and a warning on the first instance. A subsequent instance will result in receiving an F grade for the course, and possible disciplinary proceedings. If you are unclear about what constitutes academic dishonesty, ask.