**543 ZOO Contents  
 Biological membranes and their functions. The chemical nature of genetic material, the cellular and molecular basis of chromosomes. DNA replication, gene expression and its regulation in prokaryotes, cellular tissue contents of bone marrow, brain and kidneys, macrophages, mast cells and the general functions of these tissues**

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| **Introduction** | **27/8/2023** |
| **Lecture 1** | **3/9/2023** |
| **Lecture 2** | **10/9/2023** |
| **Lecture 3** | **17/9/2023** |
| **HOMEWORK 1** | **1/10/2023** |
| **Lecture 4** | **8/10/2023** |
| **Lecture 5** | **15/10/2023** |
| **Midterm exam** | **22/10/2023** |
| **Lecture 6** | **29/10/2023** |
| **Lecture 7** | **5/11/2023** |
| **HOMEWORK 2** | **12/11/2023** |
| **Lecture 8** | **19/11/2023** |
| **Lecture 9** | **26/11/2023** |
| **General discussion** | **3/12/2023** |
| **Final exam** | **10/12/2023** |

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| **1/10/2023** | **HOMEWORK 1 (10 درجات)** |
| **22/10/2023** | **(10 درجات) MIDTERM EXAM** |
| **12/11/2023** | **HOMEWORK 2 (10 درجات)** |

**TAKE HOME EXAM**

**Include the following**

1. **Table of content**
2. **Introduction**
3. **Mechanism of action**
4. **Applications**
5. **References**

**First take home**

1. **DNA replication errors and diseases.**
2. **Gene regulation errors and diseases.**

**Second take home**

1. **cellular tissue contents of brain and function.**
2. **cellular tissue contents of liver and function.**