**Teaching unit 01**

1. Proliferation.
2. Basic characteristics of the S and M phases of the cell cycle.
3. Basic characteristics of the G1 and G2 phases of the cell cycle.
4. Basic characteristics of the G0 phase of the cell cycle.
5. Proliferative phase. Resting phase.
6. Mechanisms of cell cycle regulation.
7. Cyclins. Cyclin-dependent kinases. Basic characteristics.
8. Cell cycle inhibition.
9. DNA damage control mechanisms. Control points. p53
10. Extracellular control of the cell cycle.
11. Cell differentiation.
12. Exit of the cell from the cell cycle.
13. Housekeepingand tissue-specific genes.
14. The role of transcription factors in cell differentiation.