

CELL BIOLOGY, BIOCHEMISTRY THEORY COURSE topics, 2019/2020 II. – SPARE  
Room: C11

Week	Day	Time	Lecture	Topic	Progress exam	Lectr
2 week	Wednesday	11.45-12.50 13.00-14.00	1	Introduction to cell biology. The structure of pro-and eukaryote cell.		ZA
3 week	Wednesday	11.45-12.50 13.00-14.00	2	Biomolecules of the cell: Saccharides. Mono- and disaccharides. Polysaccharides.		ZA
4 week	Wednesday	11.45-12.50 13.00-14.00	2	Biomolecules of the cell: Saccharides. Mono- and disaccharides. Polysaccharides. Lipids.		ZA
6 week	Wednesday	11.45-12.50 13.00-14.00	3	The structure of amino acids and proteins. Function of Proteins. Peptides with biological properties. The structure and func. of enzymes. Regulation of enzyme activity.		ZA
7 week	Wednesday	11.45-12.50 13.00-14.00	4	Biomembranes: lipid composition and structural organization. Overview of membrane transport. ATP-powered pumps and the intracellular ionic environment. Nongated ion channels and the resting membrane potential.		ZA
8 week	Wednesday	11.45-12.50 13.00-14.00	5	Integrating cells into tissues. Cell adhesion molecules and junctions.		ZA
9 week	Wednesday	11.45-12.50 13.00-14.00	6-7	The cytoplasm. The cell skeleton. Microfilaments and microtubules.		ZA
10 week	Wednesday	11.45-12.50 13.00-14.00	8-9	Rough and smooth endoplasmatic reticulum. Lysosomes. Golgi body. Reactive oxygen species and antioxidant molecules.	Wednesday: 1 PE 11.45-12.15 Material: 1-6 L	ZA
11 week	Wednesday	11.45-12.50 13.00-14.00	10	Mitochondria. Principles of Bioenergetics. Glycolysis. Gycogen breakdown.		ZA
12 week	Wednesday	HOLIDAY				ZA
13 week	Wednesday	11.45-12.50 13.00-14.00	11	The structure and properties of nucleus. Nuclear transport processes. Chromosomes and DNA structure. mRNA, t RNA, rRNA structure		ZA
14 week	Wednesday	11.45-12.50 13.00-14.00	12	Cell cycle. Mitosis and meiosis.	Wednesday: Corr. PE 15.10-16.10	ZA
15 week	Wednesday	11.45-12.50 13.00-14.00	13	DNA replication, transcription and translation.		ZA