

Course Title	Proteomic: Principle and techniques	
Course Code	BC5103	
Course type	Obligatory	
Academic Year	2016/ 2017	
Coordinator	Prof Tarek Mostafa M Ali	
Other Staff		
Semester	Semester 1	
Level	Level one	
Pre-Requisite		
Course Delivery	Lecture	14 x 1h lectures
	Practical	14 x 3h practicals
	Credit	3h
Parent Department	Chemistry Department	

Contents

Part – 1	Lecture (An hour/week)
Lecture 1	Chemical reactions of amino acids
Lecture 2	Important of protein in biology
Lecture 3	Structure of protein
Lecture 4	Three-Dimensional Structure of Proteins
Lecture 5	Extraction of Proteins
Lecture 6	Important of protein purification
Lecture 7	Precipitation steps
Lecture 8	Determination of primary structure protein
Lecture 9	Purification procedures
Lecture 10	Selective technique of protein purification
Lecture 11	Amino acid composition
Lecture 12	Methods of protein sequence
Lecture 13	Characterization of purified protein
Lecture 14	Characterization of purified protein
Practical	
Week 1	Qualitative analysis of protein
Week 2	Quantitative analysis of protein by Biurut methods
Week 3	Qualitative analysis of proteins by Bradford and lawory methods
Week 4	Tissue extract
Week 5	Precipitation of protein
Week 6	Precipitation of protein
Week 7	Ion exchange chromatography
Week 8	Gel filtration chromatography
Week 9	PAGE electrophoresis
Week 10	Protein staining
Week 11	Western blot
Week 12	Revision