

Chapter 4 – Amino Acids

Objective	In-text reading	Pre-class materials/activities	In-class materials/activities	Practice problems from text
1. Use the acid/base characteristics (pKa data) of the 20 amino acids found in proteins to determine the charge of an amino acid at a given pH	4-1	Ch. 4 – Amino Acids (Dr. Hayden's Lecture) Amino Acids (video)	S2 – Amino Acids and the Primary Structure of Proteins (POGIL)	5 th Ed: 7, 8, 9 4 th Ed: 7, 8, 10 3 rd Ed: 3,
2. Determine the pI of a small peptide	4-1d	Ch. 4 – Amino Acids (Dr. Hayden's Lecture) Isoelectric points and zwitterions (video)	S2 – Amino Acids and the Primary Structure of Proteins (POGIL)	5 th Ed: 22, 24, 26 4 th Ed: 14, 16 3 rd Ed: 6, 7, 17
3. Identify the peptide bond and describe the structural features that characterize a peptide bond	4-2	Ch. 4 – Amino Acids (Dr. Hayden's Lecture) The Peptide Bond- Formation and Cleavage (video)	S2 – Amino Acids and the Primary Structure of Proteins (POGIL)	5 th Ed: 21, 29 4 th Ed: 9, 21 3 rd Ed: 4, 16
4. Use informational processing skills to draw conclusions about chemical characteristics of complex molecules	NA	Working backwards to solve a problem (video)	S2 – Amino Acids and the Primary Structure of Proteins (POGIL)	POGIL S2 Post activity 1 - 3