

## Detailed Licensing

### Overview

**Title:** Chem 4320/5320: Biochemistry 1

**Webpages:** 95

**Applicable Restrictions:** Noncommercial

#### All licenses found:

- [CC BY-NC-SA 4.0](#): 77.9% (74 pages)
- [Undeclared](#): 13.7% (13 pages)
- [CC BY-NC 4.0](#): 4.2% (4 pages)
- [CC BY-SA 4.0](#): 2.1% (2 pages)
- [CC BY 4.0](#): 2.1% (2 pages)

### By Page

- [Chem 4320/5320: Biochemistry 1 - CC BY-NC-SA 4.0](#)
  - [Front Matter - CC BY-NC-SA 4.0](#)
    - [TitlePage - Undeclared](#)
    - [InfoPage - Undeclared](#)
    - [Table of Contents - Undeclared](#)
    - [Licensing - Undeclared](#)
  - [1: Properties of the Twenty Common Amino Acids - CC BY-NC-SA 4.0](#)
    - [1.1: Nomenclature of Amino acids - CC BY-NC-SA 4.0](#)
    - [1.2: Structure of Amino Acids - CC BY-NC-SA 4.0](#)
    - [1.3: Properties of Amino Acids - CC BY-NC-SA 4.0](#)
      - [1.3.1. Charged Nature of Amino Acid - CC BY-NC-SA 4.0](#)
      - [1.3.2. Stereochemistry of Amino Acids - CC BY-NC-SA 4.0](#)
    - [1.4: Reactions of Amino Acids - CC BY-NC-SA 4.0](#)
      - [1.4.1 Acid-base Chemistry of Amino Acids - CC BY-NC-SA 4.0](#)
      - [1.4.2. Acid-Base Reactions of Amino Acids - CC BY-NC 4.0](#)
  - [2: Proteins Structure: from Amino Acid Sequence to Three Dimensional Structure - CC BY-NC-SA 4.0](#)
    - [2.1: The Structure of Proteins - CC BY-NC 4.0](#)
    - [2.2: Protein Sequencing - CC BY-SA 4.0](#)
    - [2.3: Protein Structural Determination - CC BY-NC-SA 4.0](#)
    - [2.4: Protein Folding and Prions - CC BY-NC-SA 4.0](#)
    - [2.5: Denaturation of proteins - CC BY-NC-SA 4.0](#)
    - [2.6: Amino Acids and Proteins \(Exercises\) - CC BY-NC-SA 4.0](#)
  - [3: Methods of Protein Purification and Characterization - CC BY-NC-SA 4.0](#)
    - [3.1: Protein Purification - CC BY-NC-SA 4.0](#)
    - [3.2: Cell Disruption - CC BY-NC-SA 4.0](#)
    - [3.3: Cell Fractionation and Centrifugation - CC BY-NC-SA 4.0](#)
    - [3.4: Chromatography - CC BY-NC-SA 4.0](#)
      - [3.4.1. Affinity Chromatography - CC BY-NC-SA 4.0](#)
      - [3.4.2. Gel Exclusion Chromatography - CC BY-NC-SA 4.0](#)
      - [3.4.3. Ion Exchange Chromatography - CC BY-NC-SA 4.0](#)
    - [3.5: Electrophoresis - CC BY-NC-SA 4.0](#)
      - [3.5.1: Blotting - CC BY-SA 4.0](#)
      - [3.5.2: Exercises - CC BY-NC-SA 4.0](#)
  - [4: Overview of Hemoglobin and Myoglobin - CC BY-NC-SA 4.0](#)
    - [4.1: Myoglobin, Hemoglobin, and their Ligands - CC BY-NC-SA 4.0](#)
    - [4.2: Oxygen Transport by the Proteins Myoglobin and Hemoglobin - CC BY-NC-SA 4.0](#)
    - [4.3: Exercises - CC BY-NC-SA 4.0](#)
  - [5: Michaelis-Menten Enzyme Kinetics, Inhibitors, pH optima; Bi-Substrate Reactions - CC BY-NC-SA 4.0](#)
    - [5.1: Catalytic Efficiency of Enzymes - CC BY-NC-SA 4.0](#)
    - [5.2: Enzyme Parameters - CC BY-NC-SA 4.0](#)
    - [5.3: Michaelis-Menten Kinetics - CC BY-NC-SA 4.0](#)
    - [5.4: Enzyme Inhibition - CC BY-NC-SA 4.0](#)
    - [5.5: Temperature, pH, and enzyme concentration on the rate of a reaction - CC BY-NC-SA 4.0](#)
    - [5.6: Multi-Substrate Sequential Mechanisms - CC BY-NC-SA 4.0](#)
    - [5.7: Double displacement reaction - CC BY 4.0](#)

- 6: Classification and Catalytic Strategies of Enzymes - CC BY-NC-SA 4.0
  - 6.1: Serine proteases - CC BY-NC-SA 4.0
  - 6.2: Transition State Analogs and Catalytic Antibodies - CC BY-NC-SA 4.0
  - 6.3: Restriction Endonuclease - CC BY-NC-SA 4.0
- 7: Regulation of Enzyme Activity - CC BY 4.0
  - 7.1: Control of Metabolism Through Enzyme Regulation - CC BY-NC-SA 4.0
  - 7.2: Amino Acids, Proteins, and Enzymes (Summary) - CC BY-NC-SA 4.0
  - 7.3: Exercises - CC BY-NC-SA 4.0
- 8: Carbohydrate Structures, Stereochemistry, and Glycosides - CC BY-NC-SA 4.0
  - Front Matter - Undeclared
    - TitlePage - Undeclared
    - InfoPage - Undeclared
  - 8.1: Carbohydrates Fundamentals - CC BY-NC-SA 4.0
  - 8.2: Monosaccharides - CC BY-NC-SA 4.0
  - 8.3: Disaccharides - CC BY-NC-SA 4.0
  - 8.4: Oligosaccharides - CC BY-NC-SA 4.0
  - 8.5: Polysaccharides - CC BY-NC-SA 4.0
  - 8.6: Exercises - CC BY-NC-SA 4.0
  - Back Matter - Undeclared
    - Index - Undeclared
- 9: Glycolysis and Gluconeogenesis - CC BY-NC-SA 4.0
  - 9.1: Glycolysis - Reaction and Regulation - CC BY-NC-SA 4.0
  - 9.2 Gluconeogenesis: Reaction and regulation - CC BY-NC-SA 4.0
  - 9.3: Exercises - CC BY-NC-SA 4.0
- 10: Pyruvate Dehydrogenase Links Glycolysis to Krebs Cycle - CC BY-NC-SA 4.0
  - 10.1: The Krebs Cycle (Citric Acid Cycle) - CC BY-NC-SA 4.0
  - 10.2: Exercises - CC BY-NC-SA 4.0
- 11: Electron Transport Chain and Oxidative Phosphorylation - CC BY-NC-SA 4.0
  - 11.1: ETC and Oxidative Phosphorylation - Undeclared
  - 11.1: Exercises - CC BY-NC-SA 4.0
- 12: The Flow of Genetic Information: from DNA to RNA and Proteins - CC BY-NC-SA 4.0
  - 12.1: The Structure of DNA - CC BY-NC 4.0
  - 12.2: DNA Replication - CC BY-NC-SA 4.0
  - 12.3: DNA Repair - CC BY-NC-SA 4.0
  - 12.4: RNA - CC BY-NC-SA 4.0
    - 12.4.1 Types of RNA - CC BY-NC-SA 4.0
    - 12.4.2. RNA - Transcription - CC BY-NC-SA 4.0
    - 12.4.3. Regulation of Transcription - CC BY-NC-SA 4.0
  - 12.5: The Genetic Code - CC BY-NC 4.0
  - 12.6: Translation - CC BY-NC-SA 4.0
  - 12.7: Exercises - CC BY-NC-SA 4.0
- 13: Integrated chapter (HIV) - CC BY-NC-SA 4.0
  - 13.1: Envelope glycoprotein GP120 - CC BY-NC-SA 4.0
  - 13.2: HIV-1 protease (PR) - CC BY-NC-SA 4.0
  - 13.3: HIV vaccine - CC BY-NC-SA 4.0
  - 13.4: Exercises - CC BY-NC-SA 4.0
- Back Matter - CC BY-NC-SA 4.0
  - Index - Undeclared
  - Glossary - Undeclared
  - Detailed Licensing - Undeclared