COURSE CODE: PHYCHE2

COURSE TITLE: Physical Principles 2

DEPARTMENT: Chemical Engineering

TEXTBOOK:

Atkins, P. W. and de Paula, J. (2014). Physical Chemistry, 10th Ed. New York: Oxford University Press.

REFERENCES:

- Kral, A., Aplin, F., Maier H. (2021). Chapter10 - Advanced concepts physical chemistry: Electrodes and electrolytes, Editor(s): Andrej Kral, Felix Aplin, Hannes Maier, Prostheses for the Brain, Academic Press,Pages 167-208.
- OpenStax, Chemistry. OpenStax CNX. Jun 20, 2016 http://cnx.org/contents/85abf193-2bd2-4908-8563-90b8a7ac8df6@9.311.
- Chang, Raymond Thoman, John W. Jr.. (2014). Physical Chemistry for the Chemical Sciences. University Science Books. Retrieved from https://app.knovel.com/hotlink/toc/id:kpPCCS0002/physical-chemistry-chemical/physical-chemistry-chemical
- Engel, T., Reid, P., Hehre, W. (2013). *Physical Chemistry*. Glenview, IL : Pearson Education.
- Silberberg, M. (2013). *Principles of General Chemistry*. New York : McGraw-Hill
- Metzger, R. (2012). *The Physical Chemist's Toolbox*. Hoboken, New Jersey : Wiley.
- Shillady, D. (2012). *Essentials of Physical Chemistry*. Boca Raton: CRC Press.
- Online: Manahan, Stanley E. (2010). Environmental Chemistry (9th Edition) - 1.1.2 Back to the Sun. Taylor & Francis. Retrieved from https://app.knovel.com/hotlink/pdf/id:kt00CA5OV1/environmental-chemistry/back-to-the-sun
- Online: Chemistry Libretexts at https://chem.libretexts.org/Bookshelves/Physical_and_Theoretical_Chemistry_Textbook_Maps
- Online: Boundless Chemistry at https://courses.lumenlearning.com/boundless-chemistry/chapter/the-rate-law-concentration-and-time/

READING LIST:

Atkins, P. W. and de Paula, J. (2014). Physical Chemistry, 10th Ed. New York: Oxford University Press.

Chapter 4 Physical transformations of pure substances
Chapter 5 Simple Mixtures
Chapter 6 Chemical Equilibrium
Chapter 7 Introduction to Quantum Theory
Chapter 17 Macromolecules and Self-assembly
Chapter 20 Chemical Kinetics

REQUISITE EQUIPMENT/MATERIALS FOR THE COURSE:

Calculator, app for pdf maker