



**Chulabhorn Graduate Institute**  
**0401402 Essential Chemistry for Life Sciences**

---

**Course Description:**

Essential fundamental chemistry will be reviewed with special emphasis to living systems. The course will cover the basic structures of macromolecules includes carbohydrates, proteins, lipids, DNA and RNA, and their roles in living systems. Interactions of biomolecules with receptor targets, and basic reaction mechanisms focusing on chemical reactions with biological significance will also be covered.

**Course Coordinator:** Chatchakorn Eurtivong, Ph.D.

**Course Category:** Required Course

**Duration:** 4<sup>th</sup> June 2019 to 27<sup>th</sup> June 2019

**Time:** See Schedule

**Place:** 3<sup>rd</sup> Floor, CGI Building

<b>Grading Scheme:</b>	Final Examination	90%
	Attendance	10%

**Tentative Schedule**

Date	Topic	Lecturer
4 <sup>th</sup> June, 2019 13:00 – 16:00	Introduction to Chemistry for Life Sciences Structure and Chemistry of Nucleic Acids	WJ
6 <sup>th</sup> June, 2019 13:00 – 16:00	Structure and Chemistry of Carbohydrates, Proteins and Lipids	PK

10 <sup>th</sup> June, 2019 13:00 – 16:00	Ligand-Target Interactions	CE
11 <sup>th</sup> June, 2019 13:00 – 16:00	Thermodynamics for Biologists Acid-Base Equilibria Redox Reactions	WJ
25 <sup>th</sup> June, 2019 09:00 – 16:00	Writing Reaction Mechanisms	PP, NT
27 <sup>th</sup> June, 2019 09:00 – 12:00	Final Examination	Staff

**Lecturers:**

Chatchakorn Eurtivong, Ph.D. (CE)

Watthanachai Jumpathong, Ph.D. (WJ)

Prasat Kittakoop, Ph.D. (PK)

Poonsakdi Ploypradith, Ph.D. (PP)

Nopporn Thasana, Ph.D. (NT)