

## Study Plan for ID 613 XXX XX23-633 XXX XX23

### Material Chemistry (127 Credit)

#### First year

Semester 1				Semester 2			
Code	Subject	Credits	Condition	Code	Subject	Credits	Condition
2301107	CALCULUS I	3		2301108	CALCULUS II	3	PRER 2301107
2302107	COMP APP CHEM	1		2302102	GEN CHEM II	3	PRER 2302101 OR C.F.
2302101	GEN CHEM I	3		2303109	GENERAL BIOLOGY	3	
2302103	GEN CHEM LAB	1		2303110	GEN BIO LAB	1	
5503111	ENG COMM SCI I	3		2304151	ESSENTIAL PHYS	3	
xxxxxxx	Gen Ed (Interdisciplinary)	3		2304191	PHYSICS LAB FOR CHEM	1	
xxxxxxx	Gen Ed (Humanities)	3		5503122	ENG COMM SCI II	3	PRER 5500181 OR 5503111
				xxxxxxx	Gen Ed (Social Sciences)	3	
<b>Total</b>			<b>17</b>	<b>Total</b>			<b>20</b>

#### Second year

Semester 1				Semester 2			
Code	Subject	Credits	Condition	Code	Subject	Credits	Condition
2301286	PROBABILITY AND STATISTICS	3	PRER 2301113 OR 2301107 OR 2301117	2302203	ORG CHEM LAB	1	PRER 2302103
2302104	CHEM HAZ MGT	3		2302206	ANAL CHEM II	3	PRER 2302205 OR C.F.
2302204	INORG CHEM	3	PRER 2302102	2302272	ORG CHEM II	3	PRER 2302271 OR C.F.
2302205	ANAL CHEM I	3	PRER 2302102	2302232	PHYS CHEM II	3	PRER 2302231 OR C.F.
2302231	PHYS CHEM I	3	PRER 2302112 OR 2302102 OR 2302105 OR C.F.	2302305	PRAC CHEM	1	PRER 2302103 and 2302205 OR C.F.
2302271	ORG CHEM I	3	PRER 2302112 OR 2302102 OR C.F.	2302393	CHEM INFO TECH	2	
5503213	COMMUNICATION AND PRESENTATION SKILLS FOR SCIENCE	3	PRER 5503122	2302281	FUND MAT CHEM	3	
				xxxxxxx	Language:Non-native	3	
<b>Total</b>			<b>21</b>	<b>Total</b>			<b>19</b>

#### Third year

Semester 1				Semester 2			
Code	Subject	Credits	Condition	Code	Subject	Credits	Condition
2302399	PROJECT PROPOSAL	1		2302302	INTEG CHEM LAB	2	PRER 2302305
2302303	SPECT CHEM	2	PRER 2302202 OR 2302272	2302307	INTER SCI SOC PROJ	4	COREQ 2302399
2302384	MACROMOL CHEM	3	PRER 2302202 OR 2302272	2302334	SURF COLL D CHEM (Module)	2	
2302385	MAT ID	3		xxxxxxx	Elective (Module)	3	
2302480	BIOPOLYMER	2		xxxxxxx	Elective (Module)	3	
2302380	INORGANIC MATERIALS	2	PRER 2302204 OR C.F.	xxxxxxx	Free Elective (Module)	3	
xxxxxxx	Gen Ed (Science & Math)	3					
xxxxxxx	Gen Ed (Special Group)	3					
<b>Total</b>			<b>19</b>	<b>Total</b>			<b>17</b>

#### Fourth year

Semester 1				Semester 2			
Code	Subject	Credits	Condition	Code	Subject	Credits	Condition
2302402	APP CHEM PROJ	2		2302301	SEMINAR	1	
				2302352	IND CHEM TECH	3	
				2302404	CURR PROB APP CHEM	2	
				xxxxxxx	Free Elective	3	
				xxxxxxx	Gen Ed (Special Group)	3	
<b>Total</b>			<b>2</b>	<b>Total</b>			<b>12</b>

Remark: General Education (Special Group) = All courses of Chulalongkorn University General Education Center, which taught in English (International Study Program)