

Schedule for B.Eng. (ChE) Students in the Chemical Sciences Programme (AY2016-17)

Semester 1 (20-24 MCs)	Semester 2 (24 MCs)	Semester 3 (20 MCs)
¹ ES1531 Critical Thinking & Writing (4)	GE on QR (4)	CN2121 Chemical Engineering Thermodynamics (4)
CM1501 Organic Chemistry for Engineers (4)	CM2121 Organic Chemistry (4)	CN2122 Fluid Mechanics (4)
IT1005 Introduction to Programming with Matlab (4)	LSM1106 Molecular Cell Biology (4)	LSM1102 Molecular Mechanics (4)
MA1505 Mathematics I (4)	MA1506 Mathematics II (4)	LSM2211 Metabolism and Regulation (4)
GE on HC (4) or CN1111 Chemical Engineering Principles (4)	MLE1101 Intro Materials Science and Engrg (4)	LSM2191 Laboratory Techniques in Life Sciences (4)
LSM1301 General Biology (4) - if no A-Level Biology	CN1111 Chemical Engineering Principles (4) or GE on HC (4)	
Semester 4 (21 MCs)	Semester 5 (19 MCs)	Semester 6 (19 MCs)
CN2108 Chemical Eng Lab I (2)	CN3108 Chemical Engineering Lab II (4)	CM2142 Analytical Chemistry 1 (4)
CN2116 Chemical Kinetics and Reactor Design (4)	CN3121 Process Dynamics and Control (4)	LSM2232 Genes and Genomes (4)
CN2125 Heat and Mass Transfer (4)	CN3132 Separation Processes (4)	LSM2233 Cell Biology (4)
CN3124 Fluid-Solid Systems (3)	CN3135 Safety, Health and Environment (3)	GE on T&E (4)
ES2331 Communicating Engineering (4)	CN3421 Process Modeling & Numerical Simulation (4)	EG2401 Engineering Professionalism (3)
GE on SS (4)		
Semester 7 (19-22 MCs)	Semester 8 (17-20 MCs)	*Electives (choose 3): LSM3211 Fundamentals Pharmacology LSM3224 Molecular Basis of Human Diseases LSM3231 Protein Structure & Function LSM3232 Microbiology LSM4211 Toxicology LSM4221 Drug Discovery & Clinical Trials
CN4118 B.Eng. Dissertation (7) or ChE Technical Elective (4) (<i>related to Biomolecular Engineering</i>)	CN4118 B.Eng. Dissertation (1) or ChE Technical Elective (4) (<i>related to Biomolecular Engineering</i>)	
CN4122 Process Synthesis and Simulation (3)	CN4123R Final Year Design Project (6)	
CM3221 Organic Synthesis & Spectroscopy (4)	*LSMx2xx Elective 2 (4)	
*LSMx2xx Elective 1 (4)	*LSMx2xx Elective 3 (4)	
GE on Asking Questions (4)	CN3109 Chemical Eng Lab III (2)	

¹ Students who score a Band 1 or Band 2 in Qualifying English Test (QET) will need to take ES1103 English for Academic Purposes (4 MC) before taking ES1531 Critical Thinking & Writing. ES1103 will be counted as extra UEM

Study Plan for 2016/2017 intake
(Department of Chemistry, Faculty of Science)

Semester 1 (24 MC)	Semester 2 (20-24 MC)	Semester 3 (20 MC)	Semester 4 (20 MC)
SSxxxx Singapore Studies GEMxxxx (Unrestricted) - 2 * CM1191 Experiments in Chemistry I CM1111 Basic Inorganic Chemistry CM1131 Basic Physical Chemistry LSM1301 General Biology (if no A-level Biology) MA1421 Basic Applied Mathematics for Sciences	GEMxxxx# (Unrestricted) – GEMxxxx (Unrestricted) - 1 CM1121 Organic Chemistry 1 LSM1102 Molecular Genetics LSM1106 Molecular Cell Biology CN1111 Chemical Engineering Principles (4MC)	CM2101 Principles of Spectroscopy CM2121 Organic Chemistry CM2192 Experiments in Chemistry II LSM2211 Metabolism & Regulation CN2121 Chemical Engineering Thermodynamics	CM2191 Experiments in Chemistry III CM2111 Inorganic Chemistry CM3242 Instrumental Analysis II LSM2232 Genes and Genomes LSM2233 Cell Biology
Semester 5 (20 MC)	Semester 6 (20 MC)	Semester 7 (24 MC)	Semester 8 (16 MC)
CM3221 Organic Synthesis & Spectroscopy CM3292@ Analytical & Physical Lab CM3xxx** (Elective) – 2 LSM2191 Laboratory Techniques in Life Sciences LSM3231 Protein Structure & Function	CM3291@ Inorganic & Organic Lab. CM3222 Organic Reaction Mechanisms CM3xxx** (Elective) - 1 CN2116 Chemical Kinetics & Reactor Design LSM3211 Fundamental Pharmacology	CM4199A+ Honours Project in Chemistry (16 MC) LSM4211 Toxicology CM42xx	CM4228 Catalysis CM4271 Medicinal Chemistry LSM4221 Drug Discovery & Clinical Trials PR5212 Advanced Topics in Medicinal Chemistry

* Need to be taken if not taking LSM1301

@ Option to read module in Special term after Semester 4

Not necessary if done 2 GEMs in 1st Semester

+ 1 year honours project

** Student can use 4 MC of CM4xxx prefix

Total MC = 166 (if student has "A" Level Biology)

Total MC = 170 (if student has no "A" Level Biology)

(instead of the usual 160 for usual B.Sc.(Hons.))