

# **OIL SANDS**

Option for the

**B.Sc. Degree Program in Chemical Engineering**

**UNIVERSITY OF ALBERTA**

**Department of Chemical and Materials Engineering**

# **UNIVERSITY OF ALBERTA**

## **FIRST YEAR ENGINEERING**

### **TERM 1**

CHEM 103 – Introductory University Chemistry I

ENGG 100 – Orientation to the Engineering Profession I

ENGG 130 – Engineering Mechanics

MATH 100 – Calculus I

PHYS 130 – Wave Motion, Optics & Sound

COMPLEMENTARY STUDIES ELECTIVE

### **TERM 2**

CHEM 105 – Introductory University Chemistry II

ENGG 101 – Orientation to the Engineering Profession II

ENCMP 100 – Computer Programming for Engineers

EN PH 131 - Mechanics

MATH 101 – Calculus II

MATH 102 – Applied Linear Algebra

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**TERM 3**

CME 200 – Introduction to Chemical & Materials Engineering

CME 265 – Process Analysis

CH E 243 – Engineering Thermodynamics

CHEM 261 – Organic Chemistry I

ENGLISH ELECTIVE

MATH 209 – Calculus III

COMPLIMENTARY STUDIES ELECTIVE

**TERM 4**

MAT E 252 – Materials Science II

E E 239 – Fundamentals of Electrical Engineering

MATH 201 – Differential Equations

STAT 235 – Introductory Statistics for Engineers

COMPLIMENTARY STUDIES ELECTIVE

IMPACT OF TECHNOLOGY ON SOCIETY ELECTIVE

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**TERM 5**

CH E 312 – Fluid Mechanics

CH E 343 – Chemical Engineering Thermodynamics

CH E 351 – Chemical Engineering Laboratory

CH E 374 – Computational Methods in Engineering

ENGG 310 – Engineering Economy      **or**

ENGG 401 – Fundamentals of Engineering Management

**TERM 6**

CH E 314 – Heat Transfer

CH E 318 – Mass Transfer

CH E 345 – Chemical Reactor Analysis I

CH E 358 – Process Data Analysis

***CH E 522 – Hydrocarbon Fluid Properties & Processing***

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**TERM 7**

CME 481 – Colloquium I

CH E 416 – Equilibrium Stage Processes

CH E 445 – Chemical Reactor Analysis II

CH E 446 – Process Dynamics & Control

CH E 464 – Chemical Engineering Design I

TECHNICAL ELECTIVE

**TERM 8**

CME 483 – Colloquium II

***CH E 435 – Oil Sands Engineering Design***

CH E 454 – Chemical Engineering Project Laboratory

***CH E 534 – Fundamentals of Oil Sands Extraction***

ENGG 400 – The Practice of the Engineering Profession

TECHNICAL ELECTIVE