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|--|---|--|--|--|--|--|--|--|--|--|--|--|--|
| | Republic of Iraq - Ministry of Higher Education and Scientific Research | | | | | | جمهورية العراق - وزارة التعليم العالي والبحث العلمي | | | | | | |
| | Tikrit University | | | | | | جامعة تكريت | | | | | | |
| | Bachelor's degree in Chemical Engineering (First Batch) | | | | | | بكالوريوس في الهندسة الكيماوية (الدورة الأولى) | | | | | | |
| | Four years (Eight semesters) - 240 ECTS credits - 1 ECTS = 25hr | | | | | | أربع سنوات (ثمانية فصول دراسية) - ٢٤٠ وحدة اوروبية - كل وحدة اوروبية = ٢٥ ساعة | | | | | | |
| | Program Curriculum (2023 - 2024) | | | | | | المنهاج الدراسي للعام ٢٠٢٣-٢٠٢٤ | | | | | | |

| Level | Semester | No. | Module Code | Module Name in English | اسم المادة الدراسية | Language | SSWL (hr/w) | | | | | | Exam hr/sem | SSWL hr/sem | USSWL hr/sem | SWL hr/sem | ECTS | Module Type | Prerequisite Module(s) Code | |
|-------|----------|-----|--------------|--------------------------------------|-------------------------|----------------------------|----------------------------|-------------|------------|-----------|------------|-------------|-------------|-------------|--------------|------------|-------|-------------|-----------------------------|---|
| | | | | | | | CL (hr/w) | Lect (hr/w) | Lab (hr/w) | Pr (hr/w) | Tut (hr/w) | Semn (hr/w) | | | | | | | | |
| UGI | One | 1 | CHEM_ENG 101 | Introduction to Chemical Engineering | مقدمة للهندسة الكيماوية | English | 4 | 0 | 0 | 0 | 2 | 0 | 2 | 75 | 75 | 150 | 6 | C | - | |
| | | 2 | MATH 101 | Calculus I | رياضيات 1 | English | 4 | 0 | 0 | 0 | 2 | 0 | 2 | 90 | 60 | 150 | 6 | B | - | |
| | | 3 | CHEM_101 | Organic Chemistry | الكيمياء العضوية | English | 2 | 0 | 2 | 0 | 1 | 0 | 2 | 75 | 75 | 150 | 6 | B | - | |
| | | 4 | ENG-102 | Engineering Mechanics | الميكانيك الهندسي | English | 3 | 0 | 0 | 0 | 1 | 0 | 2 | 60 | 65 | 125 | 5 | B | - | |
| | | 5 | CHEM_ENG 102 | Laboratory Safety | السلامة المختبرية | English | 2 | 0 | 0 | 1 | 0 | 0 | 2 | 45 | 30 | 75 | 3 | B | - | |
| | | 6 | ENG-107 | English I | اللغة الانكليزية 1 | English | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 45 | 30 | 75 | 2 | B | - | |
| | | | | | | Democracy and Human Rights | الديمقراطية و حقوق الانسان | Arabic | 2 | 0 | 0 | 0 | 0 | 2 | 30 | 20 | 50 | 2 | S | - |
| | | | | | | | Total | 16 | 0 | 2 | 2 | 6 | 0 | 12 | 390 | 360 | 750 | 30.00 | | - |
| | Two | 1 | CHEM_ENG 103 | Mass Balance | موازنة المادة | English | 4 | 0 | 0 | 0 | 2 | 0 | 2 | 90 | 60 | 150 | 6.00 | C | CHEM_ENG-102 | |
| | | 2 | MATH-102 | Calculus II | رياضيات 2 | English | 4 | 0 | 0 | 0 | 2 | 0 | 2 | 90 | 60 | 150 | 6.00 | C | MATH-102 | |
| | | 3 | CHEM_102 | Analytical Chemistry | الكيمياء التحليلية | English | 3 | 0 | 2 | 0 | 1 | 0 | 2 | 90 | 60 | 150 | 6.00 | B | - | |
| | | 4 | ENG-106 | Engineering Workshops | الورش الهندسية | English | 1 | 0 | 0 | 2 | 0 | 0 | 2 | 45 | 30 | 75 | 3.00 | S | - | |
| | | 5 | ENG-104 | Computer Science | علوم الحاسبات | English | 2 | 0 | 0 | 2 | 0 | 0 | 2 | 60 | 15 | 75 | 3.00 | S | - | |
| | | 6 | ENG-101 | Engineering Drawing | رسم هندسي | English | 2 | 0 | 0 | 2 | 0 | 0 | 2 | 65 | 35 | 100 | 4.00 | S | - | |
| | | | | | Arabic Language 1 | اللغة العربية 1 | Arabic | 2 | 0 | 0 | 0 | 0 | 2 | 30 | 20 | 50 | 2.00 | B | - | |
| | | | | | | Total | 16 | 0 | 2 | 6 | 5 | 0 | 12 | 440 | 310 | 750 | 30.00 | | - | |
| UGII | Three | 1 | MATH-201 | Engineering Analysis | تحليلات هندسية | English | 4 | 0 | 0 | 0 | 1 | 0 | 2 | 75 | 75 | 150 | 6.00 | B | MATH-102 | |
| | | 2 | CHEM_ENG-201 | Energy Balance | موازنة الطاقة | English | 3 | 0 | 0 | 0 | 2 | 0 | 2 | 75 | 75 | 150 | 6.00 | C | CHEM_ENG-103 | |
| | | 3 | CHEM_ENG-202 | Fluid Flow I | جريان موائع 1 | English | 4 | 0 | 0 | 0 | 2 | 0 | 2 | 90 | 60 | 150 | 6.00 | C | CHEM_ENG-103 | |
| | | 4 | CHEM-201 | Physical Chemistry | الكيمياء الفيزيائية | English | 3 | 0 | 2 | 0 | 1 | 0 | 2 | 90 | 60 | 150 | 6.00 | B | - | |
| | | 5 | CHEM_ENG-203 | Pollution | التلوث | English | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 45 | 55 | 100 | 4.00 | C | - | |
| | | 6 | ENG-108 | Al Bath Crimes in Iraq | جرائم البعث في العراق | Arabic | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 30 | 20 | 50 | 2.00 | S | - | |
| | | | | | | Total | 17 | 0 | 2 | 0 | 7 | 2 | 12 | 420 | 330 | 750 | 30.00 | | - | |

| | Semester | No. | Module Code | Module Name in English | اسم المادة الدراسية | Language | SSWL (hr/w) | | | | | | Exam hr/sem | SSWL hr/sem | USSWL hr/sem | SWL hr/sem | ECTS | Module Type | Prerequisite Module(s) Code |
|-------|----------|---------------|---|---|---------------------|----------|-------------|-------------|------------|-----------|------------|-------------|-------------|-------------|--------------|------------|-------|----------------------------|-----------------------------|
| | | | | | | | CL (hr/w) | Lect (hr/w) | Lab (hr/w) | Pr (hr/w) | Tut (hr/w) | Semn (hr/w) | | | | | | | |
| Four | 1 | CHEM-ENG-204 | Industrial & Petrochemical Processes | صناعات كيميائية و بتروكيميائية | English | 3 | 0 | 0 | 0 | 0 | 2 | 2 | 75 | 50 | 150 | 6.00 | C | - | |
| | 2 | MATH 202 | Numerical Analysis | طرق عددية | English | 2 | 0 | 0 | 2 | 2 | 0 | 2 | 90 | 60 | 150 | 6.00 | B | MATH-201 | |
| | 3 | CHEM-ENG-206 | Fluid Flow II | جريان الموائع 2 | English | 3 | 0 | 2 | 0 | 1 | 0 | 2 | 90 | 60 | 150 | 6.00 | C | CHEM_ENG-202 | |
| | 4 | CHEM-ENG-207 | Engineering Materials | المواد الهندسية | English | 2 | 0 | 2 | 0 | 1 | 0 | 2 | 75 | 50 | 125 | 5.00 | C | ENG-102 | |
| | 5 | ENG-105 | Computer Programming | برمجة حاسوبية | English | 2 | 0 | 0 | 2 | 0 | 0 | 2 | 50 | 25 | 75 | 3.00 | S | ENG-104 | |
| | 6 | ENG-109 | English II | اللغة الانكليزية 2 | English | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 30 | 20 | 50 | 2.00 | S | ENG-107 | |
| | | | | Arabic Language 2 | اللغة العربية 2 | Arabic | 2 | 0 | 0 | 0 | 0 | 2 | 30 | 20 | 50 | 2.00 | B | | |
| | 7 | | | | | Total | 15 | 0 | 4 | 4 | 4 | 3 | 14 | 440 | 285 | 750 | 30.00 | | |
| Level | Semester | No. | Module Code | Module Name in English | اسم المادة الدراسية | Language | SSWL (hr/w) | | | | | | Exam hr/sem | SSWL hr/sem | USSWL hr/sem | SWL hr/sem | ECTS | Module Type | Prerequisite Module(s) Code |
| UGII | 1 | CHEM-ENG-301 | Process Modelling | تمثيل العمليات | English | 2 | 0 | 0 | 0 | 2 | 0 | 2 | 60 | 65 | 125 | 5.00 | C | CHEM_ENG-201 | |
| | 2 | CHEM_ENG-302 | Thermodynamic I | ديناميك الحرارة 1 | English | 3 | 0 | 0 | 0 | 1 | 0 | 2 | 60 | 65 | 125 | 5.00 | C | MATH-201 | |
| | 3 | CHEM_ENG-303 | Heat Transfer I | انتقال الحرارة 1 | English | 3 | 0 | 0 | 0 | 2 | 0 | 2 | 75 | 75 | 150 | 6.00 | C | CHEM_ENG-201, CHEM_ENG-206 | |
| | 4 | CHEM_ENG-304 | Mass Transfer I | انتقال المادة 1 | English | 3 | 0 | 0 | 0 | 2 | 0 | 2 | 75 | 75 | 150 | 6.00 | C | CHEM_ENG-103 | |
| | 5 | CHEM_Eng -305 | Chemical Process Safety and Professional Ethics | سلامة العمليات الكيميائية والاخلاقيات المهنية | English | 2 | 0 | 0 | 0 | 2 | 1 | 2 | 60 | 65 | 125 | 5.00 | C | CHEM_ENG-102, CHEM_ENG-204 | |
| | 6 | MATH -302 | Statistics and Probability | الاحصاء و الاحتمالية | English | 2 | 0 | 0 | 0 | 1 | 0 | 2 | 45 | 30 | 75 | 3.00 | B | - | |
| | | | | | | Total | 15 | 0 | 0 | 0 | 10 | 1 | 12 | 375 | 375 | 750 | 30.00 | | |
| | Semester | No. | Module Code | Module Name in English | اسم المادة الدراسية | Language | SSWL (hr/w) | | | | | | Exam hr/sem | SSWL hr/sem | USSWL hr/sem | SWL hr/sem | ECTS | Module Type | Prerequisite Module(s) Code |
| Six | 1 | CHEM_Eng -306 | Process Simulation | محاكاة العمليات | English | 2 | 0 | 0 | 2 | 0 | 0 | 2 | 60 | 65 | 125 | 5.00 | C | CHEM_ENG-204 | |
| | 2 | CHEM_ENG-307 | Thermodynamic II | ديناميك الحرارة 2 | English | 3 | 0 | 0 | 0 | 1 | 0 | 2 | 60 | 65 | 125 | 5.00 | C | CHEM_ENG-302 | |
| | 3 | CHEM_ENG-308 | Heat Transfer II | انتقال الحرارة 2 | English | 3 | 0 | 2 | 0 | 2 | 0 | 2 | 90 | 60 | 150 | 6.00 | C | CHEM_ENG-303 | |
| | 4 | CHEM_ENG-309 | Mass Transfer II | انتقال المادة 2 | English | 3 | 0 | 0 | 1 | 2 | 0 | 2 | 90 | 60 | 150 | 6.00 | C | CHEM_ENG-304 | |
| | 5 | CHEM_Eng -310 | Unit Operations | الوحدات الصناعية | English | 3 | 0 | 2 | 0 | 1 | 0 | 2 | 90 | 60 | 150 | 6.00 | C | CHEM_ENG-103, CHEM_ENG-206 | |
| | 6 | ENG-110 | Engineering Economics | الاقتصاد الهندسي | English | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 30 | 20 | 50 | 2.00 | S | CHEM_ENG-204 | |
| | | | | | | Total | 15 | 0 | 4 | 3 | 6 | 1 | 12 | 420 | 330 | 750 | 30.00 | | |
| Level | Semester | No. | Module Code | Module Name in English | اسم المادة الدراسية | Language | SSWL (hr/w) | | | | | | Exam hr/sem | SSWL hr/sem | USSWL hr/sem | SWL hr/sem | ECTS | Module Type | Prerequisite Module(s) Code |
| | | | | | | | CL (hr/w) | Lect (hr/w) | Lab (hr/w) | Pr (hr/w) | Tut (hr/w) | Semn (hr/w) | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | |
|------|-------|----------|--------------------|-----------------------------------|---------------------------------|---------------------|----------|-------------|-------------|------------|-----------|------------|-------------|-------------|-------------|--------------|------------|------------------|----------------------------|-----------------------------|
| UGIV | Seven | 1 | CHEM_Eng -401 | Chemical Reactor I | تصميم المفاعلات 1 | English | 3 | 0 | 0 | 0 | 1 | 0 | 2 | 60 | 65 | 125 | 5.00 | C | CHEM-201, CHEM_ENG-103 | |
| | | 2 | CHEM_Eng -402 | Petroleum Refining I | تكرير النفط 1 | English | 3 | 0 | 2 | 0 | 1 | 0 | 2 | 90 | 60 | 150 | 6.00 | C | CHEM-101, CHEM_ENG-103 | |
| | | 3 | CHEM_Eng -403 | Chemical Eng. Equipment Design I | تصميم معدات الهندسة الكيماوية 1 | English | 2 | 0 | 0 | 0 | 2 | 0 | 2 | 60 | 65 | 125 | 5.00 | C | CHEM_ENG-206, CHEM_ENG-308 | |
| | | 4 | CHEM_Eng -404 | Chemical Process Dynamic | ديناميك العمليات الكيماوية | English | 3 | 0 | 0 | 0 | 1 | 0 | 2 | 60 | 65 | 125 | 5.00 | C | CHEM_ENG-301, MATH-201 | |
| | | 5 | CHEM_ENG-405 | Graduation Project Part I | مشروع التخرج الجزء 1 | English | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 30 | 95 | 125 | 5.00 | C | CHEM_ENG-103, CHEM_ENG-201 | |
| | | 6 | CHEM_Eng -406, 407 | Elective course | مادة اختيارية 1 او 2 | English | 2 | 0 | 0 | 2 | 0 | 0 | 2 | 60 | 40 | 100 | 4.00 | C | CHEM201, CHEM_ENG-207 | |
| | | | | | | Total | | 13 | 0 | 2 | 4 | 5 | 0 | 12 | 360 | 390 | 750 | 30.0 | | |
| | | | Elective course 1 | Corrosion Engineering | CHEM_Eng-406 | | | | | | | | | | | | | | | |
| | | | Elective course 2 | Polymer Technology | CHEM_Eng-407 | | | | | | | | | | | | | | | |
| | | Semester | No. | Module Code | Module Name in English | اسم المادة الدراسية | Language | SSWL (hr/w) | | | | | | Exam hr/sem | SSWL hr/sem | USSWL hr/sem | SWL hr/sem | ECTS | Module Type | Prerequisite Module(s) Code |
| | | | | | | | | CL (hr/w) | Lect (hr/w) | Lab (hr/w) | Pr (hr/w) | Tut (hr/w) | Semn (hr/w) | | | | | | | |
| | | Eight | 1 | CHEM_Eng -408 | Chemical Reactor II | تصميم المفاعلات 2 | English | 3 | 0 | 0 | 0 | 1 | 0 | 2 | 60 | 65 | 125 | 5.00 | C | CHEM_ENG-401 |
| | | | 2 | CHEM_Eng -409 | Petroleum Refining I I | تكرير النفط 2 | English | 3 | 0 | 0 | 0 | 1 | 0 | 2 | 60 | 65 | 125 | 5.00 | C | CHEM_ENG-402 |
| | 3 | | CHEM_Eng -410 | Chemical Eng. Equipment Design II | تصميم معدات الهندسة الكيماوية 2 | English | 2 | 0 | 0 | 0 | 2 | 0 | 2 | 60 | 65 | 125 | 5.00 | C | CHEM_ENG-403 | |
| | 4 | | CHEM_Eng -411 | Chemical Process Control | سيطرة العمليات الكيماوية | English | 3 | 0 | 2 | 0 | 1 | 0 | 2 | 90 | 60 | 150 | 6.00 | C | CHEM_ENG-404 | |
| | 5 | | CHEM_ENG-412 | Graduation Project Part II | مشروع التخرج الجزء 2 | English | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 30 | 95 | 125 | 5.00 | C | CHEM_ENG-405, CHEM_ENG-403 | |
| | 6 | | CHEM_Eng -413, 414 | Elective course | مادة اختيارية 3 او 4 | English | 2 | 0 | 0 | 0 | 2 | 0 | 2 | 60 | 40 | 100 | 4.00 | C | CHEM_ENG-401, CHEM_ENG-408 | |
| | | | | Elective course 1 | Sustainable Energy | CHEM_Eng-412 | | | | | | | | | | | | | | |
| | | | Elective course 2 | Biochemical Engineering | CHEM_Eng-413 | Total | 13 | 0 | 2 | 2 | 7 | 0 | 12 | 360 | 390 | 750 | 30.0 | | | |
| | | | | | Total | 118 | 0 | 18 | 24 | 50 | 5 | 96 | 3200 | 2800 | 6000 | 240.0 | | Must be 240 ECTS | | |

Note: The student should complete 4 weeks of Summer Internships to fulfill the requirements of the Bachelor's degree

| | | | | | | | | | | |
|----------------------------|------|--------------------|---|---|-------------------------------------|--------|------------------|--|--|---|
| Structured SWL (hr/w) type | CL | Class Lecture | Module type | B | Basic learning activities | SWL: | Student Workload | | |  |
| | Lab | Laboratory | | C | Core learning activity | SSWL: | Structured SWL | | | |
| | Pr | Practical Training | | S | Suport or related learning activity | USSWL: | Unstructured SWL | | | |
| | Tut | Tutorial | | E | Elective learning activity | | | | | |
| | Lect | Online lecture | | | | | | | | |
| | Semn | Seminar | Note: Columns O, Q and R are prograamed, protected and should not be edited | | | | | | | |