**General information**

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| --- | --- | --- | --- |
| **College**  | Engineering | **Department**  | Civil and Construction Engineering |

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| --- | --- | --- |
| **Program Name** | **English** | Bachelor of Science in Construction Engineering |
| **Arabic** | بكالوريس العلوم في هندسة التشييد |
| **Degree Awarded** | **English** | Bachelor of Science in Construction Engineering |
| **Arabic** | بكالوريس العلوم في هندسة التشييد |

<https://www.iau.edu.sa/en/colleges/college-of-engineering/programs/bachelor-of-science-in-construction-engineering>

**3.3 Distribution of Courses according to the Semester**

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| --- |
| **3rd Semester** |
| # | **Course Code** | **Course Title** | **اسم المقرر** | **Credit Units\*** | **Credit Units** | **Contact Hours** | **Add (✓) if applicable to course** | **Prerequisites** |
| Theory | Lab/Practical | Clinic, Field … | Theory | Lab/Practical | Clinic, Field … | Minor | Double Major | **Course Code** |
| 1 | ISLM 282 | Islamic Ethics and Values | الأخلاق والقيم الإسلامية | 2 | 2 | 0 | 0 | 2 | 0 | 0 |  |  | None |
| 2 | MATH 261 | Calculus (1) | تفاضل وتكامل (1) | 4 | 4 | 0 | 0 | 4 | 0 | 0 |  |  | None |
| 3 | PHYS 271 | Physics (1) | فيزياء (1) | 4 | 3 | 1 | 0 | 3 | 2 | 0 |  |  | None |
| 4 | CHEM 221 | General Chemistry  | كيمياء عامة | 3 | 2 | 1 | 0 | 2 | 2 | 0 |  |  | None |
| 5 | ENG 251 | Introduction to Engineering | مقدمة الى الهندسة | 1 | 0 | 1 | 0 | 0 | 2 | 0 |  |  | None |
| 6 | ENGL 211 | English Composition | انشاء انجليزي | 3 | 3 | 0 | 0 | 3 | 0 | 0 |  |  | None |
| 7 | HUMN 201 | Library Skills | مهارات مكتبية | 1 | 1 | 0 | 0 | 1 | 0 | 0 |  |  | None |
| **Total** | 18 | 15 | 3 | 0 | 15 | 6 | 0 |  |  |  |
| **Total No. of courses having applied (partial/full) component (practical/lab/clinic/field etc.):** | 2 |

*\*Mention “IP” in credit units if course completing in next semester.*

* **Second Year**

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| **4th Semester** |
| # | **Course Code** | **Course Title** | **اسم المقرر** | **Credit Units\*** | **Credit Units** | **Contact Hours** | **Add (✓) if applicable to course** | **Prerequisites** |
| Theory | Lab/Practical | Clinic, Field … | Theory | Lab/Practical | Clinic, Field … | Minor | Double Major | **Course Code** |
| 1 | HIST 281 | History and Civilization of Kingdom | تاريخ وحضارة المملكة العربية السعودية | 2 | 2 | 0 | 0 | 2 | 0 | 0 |  |  | None |
| 2 | COMP 212 | Computer Programming | برمجة حاسب آلي | 2 | 1 | 1 | 0 | 1 | 2 | 0 |  |  | None |
| 3 | ENG 232 | Statics | استاتيكا | 3 | 3 | 0 | 0 | 3 | 0 | 0 |  |  | PHYS 271 |
| 4 | ENG 222 | Engineering Drawings | رسومات هندسية | 3 | 3 | 0 | 0 | 3 | 0 | 0 |  |  | None |
| 5 | MATH 262 | Calculus (2) | حساب تفاضل وتكامل  | 4 | 4 | 0 | 0 | 4 | 0 | 0 |  |  | MATH 261 |
| 6 | PHYS 272 | Physics (2) | فيزياء (2) | 4 | 3 | 1 | 0 | 3 | 2 | 0 |  |  | PHYS 271 |
| **Total** | 18 | 16 | 2 | 0 | 16 | 4 | 0 |  |  |  |
| **Total No. of courses having applied (partial/full) component (practical/lab/clinic/field etc.):** | 3 |

*\*Mention “IP” in credit units if course completing in next semester.*

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| **5th Semester** |
| # | **Course Code** | **Course Title** | **اسم المقرر** | **Credit Units\*** | **Credit Units** | **Contact Hours** | **Add (✓) if applicable to course** | **Prerequisites** |
| Theory | Lab/Practical | Clinic, Field … | Theory | Lab/Practical | Clinic, Field … | Minor | Double Major | **Course Code** |
| 1 | HUMN 301 | Oral Communication & Public Speaking | تواصل لفظي وخطابة عامة | 1 | 0 | 1 | 0 | 1 | 0 | 0 |  |  | ENGL 211 |
| 2 | ENG 311 | Dynamics | ديناميكا  | 2 | 2 | 0 | 0 | 2 | 0 | 0 |  |  | ENG 232 |
| 3 | ENG 321 | Fluid Mechanics | ميكانيكا الموائع | 3 | 2 | 1 | 0 | 2 | 2 | 0 |  |  | MATH 262 |
| 4 | ENG 341 | Engineering Surveying |   | 3 | 2 | 1 | 0 | 2 | 2 | 0 |  |  | NONE |
| 5 | ENG 351 | Strength of Materials |  مقاومة المواد | 3 | 2 | 1 | 0 | 2 | 2 | 0 |  |  | ENG 232 |
| 6 | MATH 331 | Differential Equations | معادلات التفاضلية   | 3 | 2 | 1 | 0 | 2 | 2 | 0 |  |  | MATH 262 |
| **Total** | 15 | 10 | 5 | 0 | 11 | 8 | 0 |  |  |  |
| **Total No. of courses having applied (partial/full) component (practical/lab/clinic/field etc.):** | 4 |

*\*Mention “IP” in credit units if course completing in next semester.*

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| **6th Semester** |
| # | **Course Code** | **Course Title** | **اسم المقرر** | **Credit Units\*** | **Credit Units** | **Contact Hours** | **Add (✓) if applicable to course** | **Prerequisites** |
| Theory | Lab/Practical | Clinic, Field … | Theory | Lab/Practical | Clinic, Field … | Minor | Double Major | **Course Code** |
| 1 | MATH 302 | Linear Algebra | الجبر الخطى | 3 | 3 | 0 | 0 | 3 | 0 | 0 |  |  | MATH 262 |
| 2 | GEOL 312 | Geology | جيولوجيا | 2 | 2 | 0 | 0 | 2 | 0 | 0 |  |  | NONE |
| 3 | ENG 352 | Thermodynamics | الديناميكا الحرارية | 3 | 3 | 0 | 0 | 3 | 0 | 0 |  |  | ENG 311 |
| 4 | CONEN 322 | Building Construction | تشييد المباني | 2 | 2 | 0 | 0 | 2 | 0 | 0 |  |  | None |
| 5 | CONEN 332 | Concrete Material | [مواد الخرسانة](https://www.iau.edu.sa/ar/courses/concrete-material) | 2 | 1 | 1 |  0 | 1 | 2 |  0 |  |  | ENG 351 |
| 6 | CONEN 342 | Analysis of Determinate Structures | تحلبل المنشات المحددة استاتيكيا | 3 | 3 | 0 |  0 | 3 | 0 |  0 |  |  | ENG 351 |
| 7 | BUS 381 | Entrepreneurship | ريادة الأعمال | 2 | 2 | 0 | 0 | 2 | 0 | 0 |  |  | NONE |
| **Total** | 17 | 16 | 1 | 0 | 16 | 2 | 0 |  |  |  |
| **Total No. of courses having applied (partial/full) component (practical/lab/clinic/field etc.):** | 1 |

*\*Mention “IP” in credit units if course completing in next semester.*

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| **Summer training**  |
| # | **Course Code** | **Course Title** | **اسم المقرر** | **Credit Units** | **Credit Units** | **Contact Hours** | **Prerequisites** |
| Theory | Practical | Clinic, Field, … | Theory | Practical | Clinic, Field, … | **Course Code** |
| CONEN 333 | Summer Training I | التدريب الصيفي | 0 | 0 | 0 |   |   | 0 |   | ENG 341 |

* **Third Year**

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| **7th Semester** |
| # | **Course Code** | **Course Title** | **اسم المقرر** | **Credit Units\*** | **Credit Units** | **Contact Hours** | **Add (✓) if applicable to course** | **Prerequisites** |
| Theory | Lab/Practical | Clinic, Field … | Theory | Lab/Practical | Clinic, Field … | Minor | Double Major | **Course Code** |
| 1 | CONEN 431 | Fundamental of Soil Mechanics | أساسيات ميكانيكا التربة | 3 | 2 | 1 | 0 | 2 | 2 | 0 |  |  | None |
| 2 | ENG 401 | Technical Writing | الكتابة التقنية | 2 | 0  | 2 | 0 | 0  | 4 | 0 |  |  | ENGL 211 |
| 3 | MATH 411 | Probability & Statistics | الأحتمالات والاحصاء | 3 | 2 | 1 | 0 | 2 | 2 | 0 |  |  | MATH 302, MATH331 |
| 4 | CONEN 421 | Analysis of Indeterminate Structures | تحليل المنشات غير محدده استاتيكيا | 2 | 2 | 0 | 0 | 3 | 0 | 0 |  |  | CONEN 342 |
| 5 | CONEN 441 | Cost Estimating | [تقدير تكلفة](https://www.iau.edu.sa/ar/courses/cost-estimating) | 2 | 1 | 1 | 0 | 2 | 2 | 0 |  |  | CONEN 322 |
| 6 | CONEN 451 | Design of RC Structures | تصميم المنشآت الخرسانية  | 3 | 3 | 0 | 0  | 3 | 0 | 0  |  |  |  CONEN 342 |
| 7 | CONEN 461 | Formwork Design & Construction Methods | [تصميم الشدات الخشبية وطرق التنفيذ](https://www.iau.edu.sa/ar/courses/formwork-design-and-construction-methods) | 2 | 2 | 0 | 0 | 2 | 0 | 0 |  |  | ENG 322 |
| **Total** | 17 | 12 | 5 | 0 | 14 | 10 | 0 |  |  |  |
| **Total No. of courses having applied (partial/full) component (practical/lab/clinic/field etc.):** | 4 |

*\*Mention “IP” in credit units if course completing in next semester.*

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| **8th Semester** |
| # | **Course Code** | **Course Title** | **اسم المقرر** | **Credit Units\*** | **Credit Units** | **Contact Hours** | **Mention (yes) if applicable to course** | **Prerequisites** |
| Theory | Lab/Practical | Clinic, Field … | Theory | Lab/Practical | Clinic, Field … | Minor | Double Major | **Course Code** |
| 1 | ENG 402 | Research Methodology | منهجية البحث | 1 | 1 | 0 | 0 | 1 | 0 | 0 |  |  | ENG 401 |
| 2 | ENG 412 | Engineering Economics | الاقتصاد الهندسي | 2 | 2 | 0 | 0 | 2 | 0 | 0 |  |  | None |
| 3 | ENG 422 | Electro-Mechanical Systems | أنظمة كهروميكانيكية | 3 | 3 | 0 | 0 | 3 | 0 | 0 |  |  | ENG 321 |
| 4 | CONEN 432 | Planning, Scheduling & Control | [أساليب التخطيط والجدولة والتحكم](https://www.iau.edu.sa/ar/courses/planning-scheduling-and-control) | 3 | 3 | 0 | 0 | 3 | 0 | 0 |  |  | CONEN 441 |
| 5 | CONEN 452 | Foundation Design | تصميم الأساسات | 3 | 2 | 1 |   | 2 | 2 |   |  |  | CONEN 431 |
| 6 | CONEN 462 | Construction Contracts & Law | [عقود وقوانين التشييد](https://www.iau.edu.sa/ar/courses/construction-contracts-and-law) | 2 | 2 | 0 | 0 | 2 | 0 | 0 |  |  | CONEN 441 |
| 7 | MATH 472 | Numerical Methods | [الطرق العددية](https://www.iau.edu.sa/ar/courses/numerical-methods-1) | 3 | 3 | 0 | 0 | 3 | 0 | 0 |  |  | MATH 331 |
| **Total** | 17 | 16 | 1 | 0 | 16 | 2 | 0 |  |  |  |
| **Total No. of courses having applied (partial/full) component (practical/lab/clinic/field etc.):** |  |

*\*Mention “IP” in credit units if course completing in next semester.*

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| --- |
| **Summer training**  |
| # | **Course Code** | **Course Title** | **اسم المقرر** | **Credit Units** | **Credit Units** | **Contact Hours** | **Prerequisites** |
| Theory | Practical | Clinic, Field, … | Theory | Practical | Clinic, Field, … | **Course Code** |
| CONEN 444 | Summer Training II | التدريب الصيفي 2 | 0 | 0 | 0 |  | 0 | 0 |  | None |

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| **9th Semester** |
| # | **Course Code** | **Course Title** | **اسم المقرر** | **Credit Units\*** | **Credit Units** | **Contact Hours** | **Add (✓) if applicable to course** | **Prerequisites** |
| Theory | Lab/Practical | Clinic, Field … | Theory | Lab/Practical | Clinic, Field … | Minor | Double Major | **Course Code** |
| 1 | ENVEN 471 | Sanitary Engineering | هندسة صحية | 3 | 3 | 0 | 0 | 3 | 0 | 0 |  |  | ENG 321 |
| 2 | ENG 501 | Professional Practice & Ethics | [الممارسة والأخلاق المهنية](https://www.iau.edu.sa/ar/courses/professional-practice-and-ethics) | 2 | 2 | 0 | 0 | 2 | 0 | 0 |  |  | ENG 412 |
| 3 | CONEN 511 | Cash Flow Forecast & Finance Management | [تنبؤ بتدفق النقد وإدارة التمويل](https://www.iau.edu.sa/ar/courses/cash-flow-forecast-and-finance-management) | 2 | 2 | 0 | 0 | 2 | 0 | 0 |  |  | ENG 432 |
| 4 | CONEN 521 | Senior Design Project I | [مشروع تصميم نهائي 1](https://www.iau.edu.sa/ar/courses/senior-design-project-i-1) | 2 | 2 | 0 | 0 | 2 | 0 | 0 |  |  | HUMN 402 |
| 5 | CONEN 531 | Construction Safety & Protection | [سلامة وحماية التشييد](https://www.iau.edu.sa/ar/courses/construction-safety-and-protection) | 2 | 2 | 0 | 0 | 2 | 0 | 0 |  |  | None  |
| 6 | CONEN 541 | Design of Steel Structures | تصميم المنشآت المعدنية  | 3 | 2 | 1 | 0 | 2 | 2 | 0 |  |  |  CONEN 342 |
| 7 | CONEN xxx | Elective I | [مقرر إختيارى 1 \*](https://www.iau.edu.sa/ar/courses/elective-iii-2) | 3 | 3 | 0 | 0 | 3 | 0 | 0 |  |  | None  |
| 8 | CONEN xxx | Elective II | [مقرر إختيارى 2 \*](https://www.iau.edu.sa/ar/courses/elective-iii-2) | 3 | 3 | 0 | 0 | 3 | 0 | 0 |  |  | None |
| **Total** | 20 | 19 | 1 | 0 | 19 | 2 | 0 |  |  |  |
| **Total No. of courses having applied (partial/full) component (practical/lab/clinic/field etc.):** | 1 |

*\*Mention “IP” in credit units if course completing in next semester.*

* **Fourth Year**

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| **10th Semester** |
| # | **Course Code** | **Course Title** | **اسم المقرر** | **Credit Units\*** | **Credit Units** | **Contact Hours** | **Add (✓) if applicable to course** | **Prerequisites** |
| Theory | Lab/Practical | Clinic, Field … | Theory | Lab/Practical | Clinic, Field … | Minor | Double Major | **Course Code** |
| 1 | CONEN 442 | Transportation Engineering | [هندسة النقل](https://www.iau.edu.sa/ar/courses/transportation-engineering) | 3 | 3 | 0 | 0 | 3 | 0 | 0 |  |  | None |
| 2 | HUMN 502 | Global Business Culture | ثقافة اعمال دولية | 2 | 2 | 0 | 0 | 2 | 0 | 0 |  |  | NONE |
| 3 | CONEN 522 | Senior Design Project II | [مشروع تصميم نهائي 2](https://www.iau.edu.sa/ar/courses/senior-design-project-i-1) | 4 | 0 | 4 | 0 | 0 | 8 | 0 |  |  | CONEN 521 |
| 4 | CONEN xxx | Elective III | [مقرر إختيارى 3 \*](https://www.iau.edu.sa/ar/courses/elective-iii-2) | 3 | 3 | 0 | 0 | 3 | 0 | 0 |  |  | None  |
| **Total** | 12 | 8 | 4 | 0 | 8 | 8 | 0 |  |  |  |
| **Total No. of courses having applied (partial/full) component (practical/lab/clinic/field etc.):** | 1 |

*\*Mention “IP” in credit units if course completing in next semester.*

* **Elective Courses**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| # | **Course Code** | **Course Title** | **اسم المقرر** | **Credit Units** | **Semester** | **Credit Units** | **Contact Hours** | **Prerequisites** |
| Theory | Lab/Practical | Clinic, Field … | Theory | Lab/Practical | Clinic, Field … | **Course Code** |
| 1 | CONEN 503 | Construction Productivity & Quality Management |  | 3 |  | 3 | 0 | 0 | 3 | 0 | 0 | NONE |
| 2 | CONEN 523 | Topics in Construction Management |  | 3 |  | 3 | 0 | 0 | 3 | 0 | 0 | NONE |
| 3 | CONEN 553 | Pavement Management System |  | 3 |  | 3 | 0 | 0 | 3 | 0 | 0 | NONE |
| 4 | CONEN 563 | Structure & Pavement Material Engineering |  | 3 |  | 3 | 0 | 0 | 3 | 0 | 0 | NONE |
| 5 | CONEN 534 | Recent Topics in Construction Engineering |  | 3 |  | 3 | 0 | 0 | 3 | 0 | 0 | NONE |
| 6 | CONEN 573 | Topics in Structural Analysis |  | 3 |  | 3 | 0 | 0 | 3 | 0 | 0 | NONE |
| 7 | CONEN 583 | Topics in Concrete Structures |  | 3 |  | 3 | 0 | 0 | 3 | 0 | 0 | NONE |
| 8 | CONEN 593 | Topics in Foundation Engineering |  | 3 |  | 3 | 0 | 0 | 3 | 0 | 0 | NONE |
| 9 | CONEN 504 | Topics in Steel Structures |  | 3 |  | 3 | 0 | 0 | 3 | 0 | 0 | NONE |
| 10 | CONEN 513 | Methods & Equipments for Construction |  | 3 |  | 3 | 0 | 0 | 3 | 0 | 0 | NONE |
| 11 | CONEN 533 | Financial Management |  | 3 |  | 3 | 0 | 0 | 3 | 0 | 0 | NONE |
| 12 | CONEN 543 | Highway Construction and Heavy Equipment |  | 3 |  | 3 | 0 | 0 | 3 | 0 | 0 | NONE |
| 13 | CONEN 514 | Design of Fixed offshore Structures |  | 3 |  | 3 | 0 | 0 | 3 | 0 | 0 | NONE |
| 14 | CONEN 524 | Industrial Structures |  | 3 |  | 3 | 0 | 0 | 3 | 0 | 0 | NONE |

*\*Include elective courses in a separate table as a group (e.g. elective I, elective II…).*