



Republic of Iraq - Ministry of Higher Education and Scientific Research
 University of Baghdad
 Bachelor's degree in physical Science (First cycle)
 Four years (Eight semesters) - 240 ECTS credits - 1 ECTS = 25 hr
 Curriculum Program (2023 - 2024)

جمهورية العراق - وزارة التعليم العالي والبحث العلمي
 جامعة بغداد

بكالوريوس في علوم الفيزياء (الدورة الأولى) / فرع الفيزياء العامة
 أربع سنوات (ثمانية فصول دراسية) - 240 وحدة اوردية - كل وحدة اوردية = 25 ساعة
 المنهاج الدراسي للعام 2023-2024



| 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 | PHY 1101 | Mechanics I | ميكانيك I | English | 2 | | 2 | | 2 | | 4 | 94 | 106 | 200 | 8.00 | C | | |
| | | 2 | PHY 1102 | Electricity | كهربائية | English | 2 | | 2 | | 2 | | 4 | 94 | 106 | 200 | 8.00 | C | | |
| | | 3 | COS-1103 | Mathematics I | الرياضيات I | English | 2 | | | | 2 | | 3 | 63 | 62 | 125 | 5.00 | B | | |
| | | 4 | UOB-104 | Human Rights and democracy | حقوق الانسان والديمقراطية | Arabic | 2 | | | | | | 3 | 33 | 17 | 50 | 2.00 | S | | |
| | | 5 | COS-1105 | General Chemistry | كيمياء عامة | English | 2 | | 2 | | | | 4 | 64 | 61 | 125 | 5.00 | B | | |
| | | 6 | UOB-102 | English Language I | اللغة الانكليزية I | English | 2 | | | | | | 3 | 33 | 17 | 50 | 2.00 | S | | |
| | | | | | | | | Total | 12 | 0 | 6 | 0 | 6 | 0 | 21 | 381 | 369 | 750 | 30.00 | |
| | UGI | Two | 1 | PHY 1207 | Mechanics II | ميكانيك II | English | 2 | | 2 | | 2 | | 4 | 94 | 81 | 175 | 7.00 | C | PHY 1101 |
| | | | 2 | PHY 1208 | Magnetism | مغناطيسية | English | 2 | | 2 | | 2 | | 4 | 94 | 81 | 175 | 7.00 | C | PHY 1102 |
| | | | 3 | COS-1210 | Mathematics II | الرياضيات II | English | 2 | | | | 2 | | 3 | 63 | 62 | 125 | 5.00 | C | COS 1103 |
| | | | 4 | UOB103 | Computer 1 | حاسوب 1 | English | 1 | | 2 | | | | 3 | 48 | 27 | 75 | 3.00 | B | |
| | | | 5 | PHY 1211 | Geometric Optics | بصريات هندسية | English | 2 | | 2 | | 2 | | 4 | 94 | 56 | 150 | 6.00 | B | |
| | | | 6 | UOB101 | Arabic Language | اللغة العربية | Arabic | 2 | | | | | | 3 | 33 | 17 | 50 | 2.00 | S | |
| | | | | | | | | Total | 11 | 0 | 8 | 0 | 8 | 0 | 21 | 426 | 324 | 750 | 30.00 | |
| UGII | Three | 1 | PHY 2313 | Modern Physics I | الفيزياء الحديثه I | English | 2 | | 2 | | 2 | | 4 | 94 | 56 | 150 | 6.00 | C | | |
| | | 2 | PHY 2314 | Heat and Thermodynamic | حرارة و ثرموداينمك | English | 2 | | 2 | | 2 | | 4 | 94 | 56 | 150 | 6.00 | C | | |
| | | 3 | PHY 2315 | Analytical Mechanic II | ميكانيك تحليلي I | English | 2 | | | | 2 | | 3 | 63 | 87 | 150 | 6.00 | C | | |
| | | 4 | PHY 2316 | Analog Electronics | الالكترونيات تماثلية | English | 2 | | 2 | | 2 | | 4 | 94 | 56 | 150 | 6.00 | C | | |
| | | 5 | PHY-2317 | Mathematics III (Differential) | رياضيات III (تفاضلية) | English | 2 | | | | 2 | | 3 | 63 | 12 | 75 | 3.00 | B | | |
| | | 6 | UOB207 | Computer 2 | حاسوب 2 | English | 1 | | 2 | | | | 3 | 48 | 27 | 75 | 3.00 | B | UOB 103 | |
| | | | | | | | | Total | 11 | 0 | 8 | 0 | 10 | 0 | 21 | 456 | 294 | 750 | 30.00 | |
| | UGII | Four | 1 | PHY 2419 | Modern Physics II | الفيزياء الحديثه II | English | 2 | | 2 | | 2 | | 4 | 94 | 56 | 150 | 6.00 | C | PHY-2313 |
| | | | 2 | PHY 2420 | Thermodynamic and Statistical | الديناميكيه الحرارية و الاحصائية | English | 2 | | 2 | | 2 | | 4 | 94 | 56 | 150 | 6.00 | C | PHY-2314 |
| | | | 3 | PHY 2421 | Analytical Mechanic II | ميكانيك تحليلي II | English | 2 | | | | 2 | | 3 | 63 | 62 | 125 | 5.00 | C | PHY-2315 |
| | | | 4 | PHY 2422 | Digital Electronics | الالكترونيات الرقمية | English | 2 | | 2 | | 2 | | 4 | 94 | 31 | 125 | 5.00 | C | PHY-2316 |
| | | | 5 | COS 2423 | Mathematics IIIII (Complex analysis) | الرياضيات IIIII (تحليل عقدي) | English | 2 | | | | 2 | | 3 | 63 | 37 | 100 | 4.00 | B | |
| | | | 6 | UOB 206 | English Language II | لغة انكليزية II | English | 2 | | | | | | 3 | 33 | 17 | 50 | 2.00 | S | |
| 7 | | UOB-205 | Baath Regime Crimes in iraq | جرائم حزب البعث | Arabic | 2 | | | | | | | 33 | 17 | 50 | 2.00 | S | | | |
| | | | | | | | Total | 14 | 0 | 6 | 0 | 10 | 0 | 21 | 474 | 276 | 750 | 30.00 | | |
| | Five | 1 | PHY-3526 | physical optics | بصريات فيزيائية | English | 2 | | 2 | | 2 | | 4 | 94 | 56 | 150 | 6.00 | C | PHY 1211 | |
| | | 2 | PHY-3527 | Laser physics | فيزياء الليزر I | English | 2 | | 2 | | 2 | | 4 | 94 | 56 | 150 | 6.00 | C | | |
| | | 3 | PHY-3528 | Quantum Mechanics I | ميكانيك الكم I | English | 2 | | | | 2 | | 3 | 63 | 62 | 125 | 5.00 | C | | |
| | | 4 | PHY-3529 | Material Physics I | فيزياء المواد I | English | 2 | | 2 | | 2 | | 4 | 94 | 56 | 150 | 6.00 | C | | |
| | | 5 | UOB-309 | Research Methodology | منهجية بحث | English | 1 | | | | | | 3 | 18 | 7 | 25 | 1.00 | C | | |
| | | 6 | PHY-3531 | Optional I | أختياري I | English | 2 | | | | 2 | | 3 | 63 | 87 | 150 | 6.00 | E | | |
| | | | | | | | | Total | 11 | 0 | 6 | 0 | 10 | 0 | 21 | 426 | 324 | 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) | | | | | | | | |
| Six | 1 | PHY-3632 | Mathematical Physics | فيزياء رياضية | English | 2 | | | | 2 | | 3 | 63 | 62 | 125 | 5.00 | C | | |
| | 2 | PHY-3633 | Laser Physics II | فيزياء الليزر II | English | 2 | | 2 | | 2 | | 4 | 94 | 56 | 150 | 6.00 | C | PHY-3527 | |
| | 3 | PHY-3634 | Quantum Mechanics II | ميكانيك الكم II | English | 2 | | | | 2 | | 3 | 63 | 62 | 125 | 5.00 | C | PHY-3528 | |
| | 4 | PHY-3635 | Material Physics II | فيزياء المواد II | English | 2 | | 2 | | 2 | | 4 | 94 | 56 | 150 | 6.00 | S | PHY-3529 | |
| | 5 | PHY-3636 | Molecular Physics | فيزياء جزيئية | English | 2 | | | | 1 | | 3 | 48 | 2 | 50 | 2.00 | C | | |
| | 6 | PHY-3637 | Optional II | اختياري II | English | 2 | | | | 2 | | 3 | 63 | 87 | 150 | 6.00 | E | | |
| Total | | | | | | 12 | 0 | 4 | 0 | 11 | 0 | 20 | 425 | 325 | 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 |
| UGIV | Seven | 1 | PHY-4738 | Nuclear Physics I | الفيزياء النووية I | English | 2 | | 2 | | 2 | | 4 | 94 | 56 | 150 | 6.00 | C | |
| | | 2 | PHY-4739 | Solid State Physics I | فيزياء الحالة الصلبة I | English | 2 | | 2 | | 2 | | 4 | 94 | 56 | 150 | 6.00 | C | |
| | | 3 | PHY-4740 | Electromagnetic Theory I | النظرية الكهرومغناطيسية I | English | 2 | | | | 2 | | 3 | 63 | 37 | 100 | 4.00 | C | |
| | | 4 | PHY-4741 | Nano Science | علم النانو | English | 2 | | | | 2 | | 3 | 63 | 62 | 125 | 5.00 | B | |
| | | 5 | PHY-4742 | Option III | اختياري III | English | 2 | | | | 2 | | 3 | 63 | 62 | 125 | 5.00 | E | |
| | | 6 | PHY-4743 | Research Project I | مشروع بحث I | English | 2 | | 2 | | | | 3 | 63 | 37 | 100 | 4.00 | C | |
| | Total | | | | | | 12 | 0 | 6 | 0 | 10 | 0 | 20 | 440 | 310 | 750 | 30.0 | | |
| | Eight | 1 | PHY-4844 | Nuclear Physics II | الفيزياء النووية II | English | 2 | | 2 | | 2 | | 4 | 94 | 56 | 150 | 6.00 | C | PHY-4738 |
| | | 2 | PHY-4845 | Solid State Physics II | فيزياء الحالة الصلبة II | English | 2 | | 2 | | 2 | | 4 | 94 | 56 | 150 | 6.00 | C | PHY-4739 |
| | | 3 | PHY-4846 | Electromagnetic Theory II | النظرية الكهرومغناطيسية II | English | 2 | | | | 2 | | 3 | 63 | 37 | 100 | 4.00 | C | PHY-4740 |
| | | 4 | PHY-4847 | Plasma Physics | فيزياء البلازما | English | 2 | | | | 2 | | 3 | 63 | 62 | 125 | 5.00 | C | |
| | | 5 | PHY-4848 | Option IIII | اختياري IIII | English | 2 | | | | 2 | | 3 | 63 | 62 | 125 | 5.00 | C | |
| 6 | | PHY-4849 | Research Project II | مشروع بحث II | English | 2 | | 2 | | | | 3 | 63 | 37 | 100 | 4.00 | E | PHY-4743 | |
| Total | | | | | | 12 | 0 | 6 | 0 | 10 | 0 | 20 | 440 | 310 | 750 | 30.0 | | | |
| Total | | | | | | 95 | 0 | 50 | 0 | 75 | 0 | 165 | 3468 | 2532 | 6000 | 240.0 | | Must be 240 ECTS | |

or Internships to fulfill the requirements of the Bachelor's degree

| Structure | Module type | Module type | | SWL: Student Workload |
|-----------|--------------------|-------------|--------------------------------------|-------------------------|
| | | CL | Lab | |
| CL | Class Lecture | B | Basic learning activities | SWL: Structured SWL |
| Lab | Laboratory | C | Core learning activity | |
| Pr | Practical Training | S | Support or related learning activity | USSWL: Unstructured SWL |
| Tut | Tutorial | E | Elective learning activity | |
| Lect | Online lecture | | | |
| Sem | Seminar | | | |

Note: Columns O, Q and R are programmed, protected and should not be edited