وزارة التعليم العالي والبحث العلمي

جامعة الانبار

كلية علوم الحاسوب وتكنولوجيا المعلومات

# قسم تكنولوجيا المعلومات

# دليل مسار بولونيا

# ٢٠٢٤-٢٠٢٥

Republic of Iraq - Ministry of Higher Education and Scientific Research

University of Anbar

Bachelor's degree in Information Technology (First cycle)

Four years (Eight semesters) - 240 ECTS credits - 1 ECTS = 25 hr

Program Curriculum (2024 - 2025

جمهورية العراق - وزارة التعليم العالي والبحث العلمي

جامعة الانبار

بكالوريوس في تكنولوجيا المعلومات (الدورة الأولى)

أربع سنوات (ثمانية فصول دراسية) - ٢٤٠ وحدة اوربية - كل وحدة اوربية = ٢٥ ساعة

المنهاج الدراسي للعام ٢٠٢٤-٢٠٢٥

UNIVERSITY OF ANBAR

| 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 | ISSP101 | Structured programming | البرمجة المهيكلة I | English | 3 | | 3 | | 1 | | 3 | 108 | 92 | 200 | 8.00 | C | | Depatment |
| | One | 2 | ISFI 102 | Fundamental of Information Techn | اساسيات تكنولوجيا المعلومات | English | 2 | | 3 | | | | 3 | 78 | 72 | 150 | 6.00 | C | | Depatment |
| | One | 3 | ISLD103 | Logic Design I | تصميم منطقي I | English | 3 | | 2 | | 1 | | 3 | 93 | 57 | 150 | 6.00 | C | | Depatment |
| | One | 4 | CCIT060 | Mathematic | الرياضيات I | English | 3 | | | | 2 | | 3 | 78 | 72 | 150 | 6.00 | B | | COLLEGE |
| | One | 5 | UOA005 | Democracy and Human Rights | الديمقراطية وحقوق الانسان | Arabic | 2 | | | | | | 3 | 33 | 17 | 50 | 2.00 | S | | |
| | One | 6 | UOA003 | English 1 | اللغة الانكليزية ١ | English | 2 | | | | | | 3 | 33 | 17 | 50 | 2.00 | S | | UNIVERSITY |
| | | | | | | Total | 15 | 0 | 8 | 0 | 4 | 0 | 18 | 423 | 327 | 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) | | | | | | | | |
| | Two | 1 | ISSP201 | Structured programming II | البرمجة المهيكلة II | English | 3 | | 3 | | 1 | | 3 | 108 | 92 | 200 | 8.00 | C | ISSP101 | Department |
| | Two | 2 | **CCIT061** | Discrete Mathmatics | رياضيات متقطعة | English | 3 | | | | 2 | | 3 | 78 | 72 | 150 | 6.00 | B | | COLLEGE |
| | Two | 3 | ISLD202 | Logic Design II | تصميم منطقي II | English | 2 | | 3 | | 1 | | 3 | 93 | 57 | 150 | 6.00 | C | ISLD103 | Department |
| | Two | 4 | ISCS203 | Communication skills | مهارات التواصل | English | 2 | | | | | | 3 | 33 | 17 | 50 | 2.00 | C | | Department |
| | Two | 5 | ISOA204 | Office applications | تطبيقات مكتبية | English | 2 | | 3 | | | | 3 | 78 | 72 | 150 | 6.00 | C | | |
| | Two | 6 | UOA001 | Arabic Language 1 | اللغة العربيه ١ | Arabic | 2 | | | | | | 3 | 33 | 17 | 50 | 2.00 | S | | UNIVERSITY |
| | | | | | | Total | 14 | 0 | 9 | 0 | 4 | 0 | 18 | 423 | 327 | 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) | | | | | | | | |
| UGII | Three | 1 | ISOO301 | Object Oriented Programming I | البرمجة الكيانية I | English | 3 | | 2 | | 1 | | 5 | 95 | 105 | 200 | 8.00 | C | | |
| | Three | 2 | ISDS302 | Data Structures | هياكل البيانات | English | 3 | | 2 | | | | 5 | 70 | 80 | 150 | 6.00 | C | ISSP201 | |
| | Three | 3 | ISCT303 | Computational Theory | النظرية الاحتسابية | English | 2 | | | | 1 | | 5 | 34 | 66 | 100 | 4.00 | C | | |
| | Three | 4 | ISEI304 | tion to Electronic information Tec | مقدمة في نظم المعلومات الالكترونية | English | 2 | | | | | | 4 | 30 | 45 | 75 | 3.00 | E | | |
| | | | ISDA305 | gn and Analysis of Information Sys | تحليل وتصميم نظم المعلومات | | | | | | | | | | | | | E | | |
| | Three | 5 | ISDB306 | Design and Analysis of Databases | تحليل وتصميم قواعد البيانات | English | 2 | | 2 | | | | 5 | 60 | 65 | 125 | 5.00 | C | | |
| | Three | 6 | ISAM307 | Advanced Mathematics | الرياضيات المتقدمة | English | 2 | | | | 2 | | 5 | 63 | 37 | 100 | 4.00 | C | CCIT060 | |
| | | | | | | Total | 14 | 0 | 6 | 0 | 4 | 0 | 29 | 352 | 398 | 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) | | | | | | | | |
| | Four | 1 | ISOO401 | Object Oriented Programming II | البرمجة الكيانية II | English | 3 | | 3 | | 1 | | 3 | 108 | 92 | 200 | 8.00 | C | ISOO301 | |
| | Four | 2 | ISDD402 | Algorithms | خوارزميات | English | 3 | | 2 | | 1 | | 3 | 93 | 82 | 175 | 7.00 | C | ISDS302 | |
| | Four | 3 | ISWT403 | Web Technologies | تقنيات مواقع الانترنت | English | 2 | | 3 | | | | 3 | 78 | 47 | 125 | 5.00 | E | | |
| | | | ISDI404 | Design Internet Pages | تصميم صفحات الانترنت | English | | | | | | | | 0 | | | | E | | |
| | Four | 4 | CCIT062 | Numerical Analysis | تحليل عددي | English | 2 | | 2 | | | | 3 | 63 | 37 | 100 | 4.00 | B | | |
| | Four | 5 | UOA004 | English 2 | اللغة الانكليزية II | English | 2 | | | | | | 3 | 33 | 17 | 50 | 2.00 | S | UOA003 | |
| | Four | 6 | UOA006 | The Crimes of Baath Regime in Ira | جرائم نظام البعث | Arabic | 2 | | | | | | 3 | 33 | 17 | 50 | 2.00 | S | | |
| | Four | 7 | UOA002 | Arabic Language 2 | اللغة العربية ٢ | Arabic | 2 | | | | | | 3 | 33 | 17 | 50 | 2.00 | | | |
| | | | | | | Total | 12 | 0 | 10 | 0 | 2 | 0 | 21 | 375 | 309 | 750 | 30.00 | | | |

Republic of Iraq - Ministry of Higher Education and Scientific Research

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Program Curriculum (2024 - 2025

جمهورية العراق - وزارة التعليم العالي والبحث العلمي

جامعة الانبار

بكالوريوس في تكنولوجيا المعلومات (الدورة الأولى)

أربع سنوات (ثمانية فصول دراسية) - ٢٤٠ وحدة اوربية - كل وحدة اوربية = ٢٥ ساعة

المنهاج الدراسي للعام ٢٠٢٤-٢٠٢٥

| 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) | | | | | | | |
| | Five | 1 | ISDC308 | Visual Programming I | البرمجة المرئية I | English | 3 | | 2 | | | | 5 | 80 | 95 | 175 | 7.00 | C | |
| | Five | 2 | CCIT063 | Principles Of Computer Network | مبادئ شبكات الحاسوب | English | 3 | | 2 | 1 | | | 3 | 93 | 57 | 150 | 6.00 | B | |
| | Five | 3 | ISDE389 | Natural Lagnauge Processing | معالجة اللغات الطبيعية | English | 2 | | 2 | | | | 5 | 65 | 60 | 125 | 5.00 | C | ISCT303 |
| | | | ISDE324 | Compiler | المترجمات | English | | | | | | | | | | | | C | |
| | Five | 4 | ISDC307 | Project Management Systems | نظم ادارة مشاريع | English | 2 | | | | | | 5 | 35 | 65 | 100 | 4.00 | C | |
| | Five | 5 | ISDE325 | Artificial Intelligent I | الذكاء الاصطناعي I | English | 2 | | 2 | | | | 5 | 65 | 85 | 150 | 6.00 | C | |
| | Five | 6 | UOA002 | Distributed database system | نظم ادارة قواعد البيانات الموزعة | Arabic | 2 | | | | | | 2 | 32 | 18 | 50 | 2.00 | S | |
| | | | | | | Total | 12 | 0 | 8 | 1 | 0 | 0 | 23 | 338 | 362 | 700 | 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) | | | | | | | |
| UGIII | Six | 1 | ISDE323 | Visual Programming II | البرمجة المرئية II | English | 3 | | 2 | | | | 5 | 80 | 95 | 175 | 7.00 | C | ISDC308 |
| | Six | 2 | ISDE325 | Artificial Intelligent II | الذكاء الاصطناعي II | English | 2 | | 2 | | | | 5 | 65 | 85 | 150 | 6.00 | C | ISDC305 |
| | Six | 3 | ISDC323 | Data Storage Engineering | هندسة خزن البيانات | English | 2 | | | | | | 5 | 35 | 65 | 100 | 4.00 | E | |
| | | | ISDC309 | Software Engineering | هندسة برامجيات | English | | | | | | | | | | | | E | |
| | Six | 4 | ISDC327 | Data Management Systems | نظم ادارة المعلومات | English | 2 | | | | | | 5 | 35 | 65 | 100 | 4.00 | C | |
| | Six | 5 | ISRM3 | IT Risk Management | ادارة المخاطر تكنولوجيا المعلومات | English | 2 | | | | | | 5 | 35 | 40 | 75 | 3.00 | C | |
| | six | 2 | ISDW104 | Data Warehouse | مستودع بيانات | English | 2 | | 2 | | | | 5 | 65 | 85 | 150 | 6.00 | C | |
| | | | | | | Total | 13 | 0 | 6 | 0 | 0 | 0 | 30 | 315 | 435 | 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) | | | | | | | |
| | Seven | 1 | ISDE323 | Information Security | امنية البيانات | English | 2 | | | | | | 5 | 35 | 90 | 125 | 5.00 | C | |
| | Seven | 2 | ISDE322 | Internet of Things | انترنيت الاشياء | English | 2 | | 2 | | | | 5 | 65 | 85 | 150 | 6.00 | E | |
| | | | ISDE324 | Cloud Computing | الحوسبة السحابية | English | | | | | | | | | | | | E | |
| | Seven | 3 | ISDE325 | Machine learning | تعلم الالة | English | 2 | | 2 | | | | 5 | 65 | 85 | 150 | 6.00 | C | |
| | Seven | 4 | ISDC375 | Operating Systems I | انظمة تشغيل I | English | 2 | | 2 | | | | 5 | 65 | 60 | 125 | 5.00 | C | |
| | Seven | 5 | ISDC327 | Web Application Programming | برمجة تطبيقات الويب | English | 2 | | 2 | | | | 5 | 65 | 85 | 150 | 6.00 | C | ISDE219 |
| | Seven | 6 | UOA019 | Research Methodology | منهج بحث | English | 2 | | | | | | 5 | 35 | 15 | 50 | 2.00 | S | |
| | | | | | | Total | 12 | 0 | 8 | 0 | 0 | 0 | 30 | 330 | 420 | 750 | 30.0 | | |

| 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 | Eight | 1 | ISDC406 | Cyber-Security Principles | أساسيات الأمن السيبراني | English | 2 | | | | | | 5 | 35 | 90 | 125 | 5.00 | C | ISDE323 |
| | Eight | 2 | ISDC405 | Deep Learning | التعلم العميق | English | 2 | | 2 | | | | 5 | 65 | 60 | 125 | 5.00 | C | ISDE325 |
| | Eight | 3 | ISDE333 | nformation Technology Governanc | حوكمة تكنولوجيا المعلومات | English | 2 | | | | | | 3 | 33 | 42 | 75 | 3.00 | E | |
| | | | ISDE414 | E- Commerce | التجارة الالكترونية | English | | | | | | | | | | | | E | |
| | Eight | 4 | ISDC309 | Data Minining | تنقيب البيانات | English | 2 | | | | | | 3 | 33 | 42 | 75 | 3.00 | C | |
| | Eight | 5 | ISDC422 | Operating Systems II | انظمة تشغيل II | English | 2 | | 2 | | | | 5 | 65 | 85 | 150 | 6.00 | C | |
| | Eight | 6 | OA020+D4 | Project | مشروع التخرج | English | | | 4 | 2 | | | 3 | 93 | 107 | 200 | 8.00 | S | |
| | | | | | | Total | 10 | 0 | 8 | 2 | 0 | 0 | 24 | 324 | 426 | 750 | 30.0 | | |

Republic of Iraq - Ministry of Higher Education and Scientific Research

University of Anbar

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جامعة الانبار

بكالوريوس في تكنولوجيا المعلومات ا(الدورة الأولى)

أربع سنوات (ثمانية فصول دراسية) - ٢٤٠ وحدة اوربية - كل وحدة اوربية = ٢٥ ساعة

المنهاج الدراسي للعام ٢٠٢٤-٢٠٢٥

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بكالوريوس في تكنولوجيا المعلومات ا(الدورة الأولى)

أربع سنوات (ثمانية فصول دراسية) - ٢٤٠ وحدة اوربية - كل وحدة اوربية = ٢٥ ساعة

المنهاج الدراسي للعام ٢٠٢٤-٢٠٢٥

UNIVERSITY OF ANBAR

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Total | 92 | 0 | 55 | 3 | 14 | 0 | 168 | 2880 | 3004 | 5950 | 240.0 | | Must be 240 ECTS |
| er Internships to fullfil the requirements of the Bachelor's degree | | | | | | | | | | | | | | | | | | |
| Structu red | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 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 | | | | | | | | | | | | | | | |

# جامعة الانبار

UNIVERSITY OF ANBAR

*First Cycle – Bachelor's degree of (B.Sc.) – Information Technology*

بكالوريوس تكنولوجيا المعلومات

# Table of Contents | جدول المحتويات


1. Mission & Vision Statement | بيان المهمة والرؤية
2. Program Specification | مواصفات البرنامج
3. Program (Objectives) Goals | أهداف البرنامج
4. Program Student learning outcomes | مخرجات تعلم الطالب
5. Academic Staff | الهيئة التدريسية
6. Credits, Grading and GPA | الاعتمادات والدرجات والمعدل التراكمي
7. Modules | المواد الدراسية
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## 1. Mission & Vision Statement

***Vision Statement***

The Information Systems Department was established in 1999 to prepare qualified cadres in the field of building systems and information bases to supply state departments with expert cadres in order to develop the software industry in the country and to keep abreast of the tremendous developments in this field and to deal with modern technologies and information network. The main interest of the department is focused on the software industry in the country and keeping pace with The tremendous developments in this field and dealing with modern technologies and the information network, and the main concern of the department is to study all technical issues, issues of senior management, planning policies and decision-making associated with the employment of computers in the establishment of information systems for major institutions, and the department deals with the theoretical and practical aspects related to the description, analysis, design, implementation and management of systems Information while maximizing the utilization of the information and communication technology infrastructure.

***Mission Statement***

The Information System Department academic staff pursues a multifaceted charge at University of Anbar. The Program seeks to provide all Information System Department students with fundamental knowledge of Information System, as well as a deeper understanding of a selected focus area within the Computer sciences. The curriculum and advising have been designed to prepare graduates for their professional future, whether they choose to work as Information System specializing in botany or wildlife, or to pursue advanced degrees in the Information Technology. The Information System program also provides the necessary fundamental knowledge of the Computer sciences to support the

Computer Science degree, the Network Technology degree, and the Artificial intelligence degree in Forest Technology. In addition, Information System courses provide a key laboratory science experience for those students seeking to complete the general education requirements

## 2. Program Specification

| | | | |
|---|---|---|---|
| **Programme code:** | BSc-BIO | **ECTS** | 240 |
| **Duration:** | 4 levels, 8 Semesters | **Method of Attendance:** | Full Time |

Information System is a wonderfully wide-ranging subject and is well equipped to deliver. The emphasis of the program is the whole organism to which everything is related, be it the molecules that form proteins or communities of organisms in an ecosystem. The degree is popular - –or some it's' the breadth of the subject that appeals, for others it's a path to specialization. All students have the opportunity to transfer onto our specialist degrees in Information System at the end of the first year.

Level 1 exposes students to the fundamentals of Information System, suitable for progression to all programs within the Information System program group. Program-specific core topics are covered at Level 2 preparing for research-led subject specialist modules at Levels 3 and 4. The University Information System graduate is therefore trained to appreciate how research informs teaching, according to the University and School Mission statements.

At Levels 2, 3 and 4 students are able to study a range of modules which are selected, that reflect the complexity of life forms from Data Structure , information security, Networks , to free to choose more than half of their module credits with the proviso Artificial Intelligence to ensure the breadth of knowledge expected of a graduate with  Information System degree. This allows students to develop their own wide-ranging interests in Information System and Data Science. Decisions on what to study are made with input from personal tutors.

The research ethos is developed and fostered from the start via practical's, which are either embedded in lecture modules or taught in dedicated practical modules, research seminars and tutorials. There is a compulsory field course in Level 1, which students must pass in order to progress into Level 2, and optional field courses in Levels 2, 3 and 4. At Level 4 all students carry out an independent research project, which may be a 8 credit library or data analysis project, or a 8 credit field or laboratory based project.

Academic tutorials are held at Levels 1 and 2 with the same tutor, who is also the personal tutor, providing continuity and progressive guidance. Level 1 and 2 tutorials include a number of workshops to teach skills, e.g. library use and presentation skills, followed by assessed exercises, e.g. essays and talks, as opportunities to practice these skills in a subject-specific context.

International years and Industrial placements are also offered and individual needs are discussed with the appropriate tutor and accommodated wherever possible.

## 3. Program Objectives

1. The department aims to prepare qualified cadres in the field of building systems and databases to provide state departments and institutions with expert cadres, in a way that develops the software industry in Iraq, keeping abreast of the tremendous developments in this field, and dealing with modern technologies and the information network. To be able to study the problems and challenges in the field of information systems science and technology.
2. Prepare the student systematically
3. Enable the systems analyst to lead a software team to prepare a computer system that solves the problems of users and beneficiaries.
4. Developing the students' mental abilities through analysis and logical deduction, and enabling them to solve programming problems
5. The necessary development of school curricula to ensure the integration of recent changes in computer science technology and e-learning applications.
6. Encouraging innovative ideas and projects and developing leadership and creative skills in the field of information technology by urging students to participate in computer events and forums.

## 4. Student Learning Outcomes

Information System is the study of the organization and operation of life at business and organizations levels. Graduates obtain information on how to collect, retrieve, process, store and disseminate information for the purpose of facilitating planning , control , analysis ,coordination and decision making in business and other organizations. The Department offers a Bachelor of Science in Information system. Additionally, the Department offers courses to a large number of students from other departments and supports pre-professional programs. The Information System curriculum and experiences are designed to prepare students, in part, for entry into professional Technology programs, graduate studies, technical careers and education

**Outcome 1**

*Identification of Complex Relationships*

Graduates will be able to illustrate the structure and function of information systems components and explain how they interact in a living cell.

**Outcome 2**

*Oral and Written Communication*

Graduates will be able to formally communicate the results of technology investigations using both oral and written communication skills.

**Outcome 3**

*Laboratory and Field Studies*

Graduates will be able to perform laboratory experiments and field studies, by using scientific equipment and computer technology while observing appropriate safety protocols.

**Outcome 4**

*Scientific Knowledge*

Graduates will be able to demonstrate a balanced concept of how scientific knowledge develops, including the historical development of foundational theories and laws and the nature of science.

**Outcome 5**

*Data Analyses*

Graduates will be able to demonstrate scientific quantitative skills, such as the ability to conduct simple data analyses.

**Outcome 6**

*Critical Thinking*

Graduates will be able to use critical-thinking and problem-solving skills to develop a research project and/or paper.

# 5. Academic Staff

Murtadha Mohammed Hamed Ramathan | Ph.D. in Exploration and Data Warehouse | Professor
Email: co.mortadha61@uoanbar.edu.iq
Mobile no.:

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Khalid Shaker Jasim Mohammad | Ph.D. in Artificial Intelligence| Assistant Professor
Email: khalidalhity@uoanbar.edu.iq
Mobile no.:

---

Omar Abdulrahman Dawood Salman | Ph.D. in Information System | Assistant Professor
Email: omar-abdulrahman@uoanbar.edu.iq
Mobile no.:

---

Baraa Tareq Hammad Al-showka | Ph.D. in Information System | Assistant Professor
Email: baraa.tareq@uoanbar.edu.iq
Mobile no.:

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Akeel Abdulraheem Thulnoon Zoead | Ph.D. in Distributed Systems | Lecturer

Email: akeelalhadithy@uoanbar.edu.iq
Mobile no.:

---

Waleed Khalid Hassan Deeb | Ph.D. in Cloud Security and Privacy | Lecturer
Email: waleed.hassan@uoanbar.edu.iq
Mobile no.:

---

Muntaser Abdulwahed Salman Abdulaziz | Ph.D. in Networks | Lecturer
Email: co.montasser.salman@uoanbar.edu.iq
Mobile no.:

---

Mohammed Rabeea Hashim Mohammed | Ph.D. in Robotics and Control | Lecturer
Email: mohammed.rabeea@uoanbar.edu.iq
Mobile no.:

---

Waleed Abdulmaged Hammood Ali | Ph.D. in Information System | Lecturer
Email: waleed.abdulmaged@uoanbar.edu.iq
Mobile no.:

---

Sadir Abdulwahed Fadhil Abd | Ph.D. in Intelligent Systems | Lecturer
Email: fadhil-academia@uoanbar.edu.iq
Mobile no.:

---

Mohanad Abdulsalam younis gedan | Ph.D. in Computer Science | Lecturer
Email: mohanad.abdul@uoanbar.edu.iq
Mobile no.:

---

Farah Maath Jasem Alani | MSc in Computer Science | Assistant Lecturer
Email: farahmaath86@uoanbar.edu.iq
Mobile no.:

---

Mahmoud Hilal Farhan Mes'her | MSc in Computer Science| Assistant Lecturer
Email: mah2005hilal@uoanbar.edu.iq
Mobile no.:

---

Hadeel amjed saeed ali| MSc in Computer Science| Assistant Lecturer
Email: Hadeel.saeed@uoanbar.edu.iq
Mobile no.:

---

Shokhan Mahmoud Hama Hama | MSc in Computer Science | Lecturer
Email: shokhan.albarzinji@uoanbar.edu.iq
Mobile no.:

---

Doaa Yaseen Khudhur abdullrahuman | MSc in Computer Science | Lecturer
Email: co.doaa.yassin@uoanbar.edu.iq
Mobile no.:

Yaqeen Saad Ali Dieb | MSc in Computer Science | Assistant Lecturer
Email: yaqeen.saad@uoanbar.edu.iq
Mobile no.:

Baraa saad abdulhakeem
Master of electrical and computer engineering
Baraasaad@uoanbar.edu.iq

Omar Hammad Jasim Al-ajeely
MSc in information system
omarhj@uoanbar.edu.iq

Ali Muwaffaq Shaaban
MSc in Electrical and Computer Engineering
ali.m.shaban@uoanbar.edu.iq

# 6. Credits, Grading and GPA

***Credits***

University of Anbar is following the Bologna Process with the European Credit Transfer System (ECTS) credit system. The total degree program number of ECTS is 240, 30 ECTS per semester. 1 ECTS is equivalent to 25 hrs student workload, including structured and unstructured workload.

***Grading***

Before the evaluation, the results are divided into two subgroups: pass and fail. Therefore, the results are independent of the students who failed a course. The grading system is defined as follows:

| GRADING SCHEME<br>مخطط الدرجات | | | | |
|---|---|---|---|---|
| **Group** | **Grade** | التقدير | **Marks (%)** | **Definition** |
| **Success Group (50 - 100)** | A - Excellent | امتياز | 90 - 100 | Outstanding Performance |
| | B - Very Good | جيد جدا | 80 - 89 | Above average with some errors |
| | C - Good | جيد | 70 - 79 | Sound work with notable errors |
| | D - Satisfactory | متوسط | 60 - 69 | Fair but with major shortcomings |
| | E - Sufficient | مقبول | 50 - 59 | Work meets minimum criteria |
| **Fail Group (0 – 49)** | FX – Fail | راسب - قيد المعالجة | (45-49) | More work required but credit awarded |
| | F – Fail | راسب | (0-44) | Considerable amount of work required |

| | | | | |
|---|---|---|---|---|
| Note: | | | | |
| Number Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above. | | | | |

***Calculation of the Cumulative Grade Point Average (CGPA)***

1. The CGPA is calculated by the summation of each module score multiplied by its ECTS, all are divided by the program total ECTS.

   CGPA of a 4-year B.Sc. degree:

   CGPA = [ (1st $^{m}$odule score x ECTS) + (2nd $^{m}$odule score x ECTS) + ……] / 240

# 7. Curriculum/Modules

**Semester 1 | 30 ECTS | 1 ECTS = 25 hrs**

| Code | Module | SSWL | USSWL | ECTS | Type | Pre-request |
|---|---|---|---|---|---|---|
| ISSP101 | Structured programming | 108 | 92 | 8.00 | C | |
| ISFI 102 | Fundamental of Information Technology | 78 | 72 | 6.00 | C | |
| ISLD103 | Logic Design I | 93 | 57 | 6.00 | C | |
| CCIT060 | Mathematic I | 78 | 72 | 6.00 | B | |
| UOA005 | Democracy and Human Rights | 33 | 17 | 2.00 | S | |
| UOA003 | English (1) | 33 | 17 | 2.00 | S | |
| | | 423 | 327 | 30.00 | | |

**Semester 2 | 30 ECTS | 1 ECTS = 25 hrs**

| Code | Module | SSWL | USSWL | ECTS | Type | Pre-request |
|---|---|---|---|---|---|---|
| ISSP201 | Structured programming II | 108 | 92 | 8.00 | C | ISSP101 |
| CCIT061 | Discrete Structures | 78 | 72 | 6.00 | B | |
| ISLD202 | Logic Design II | 93 | 57 | 6.00 | C | ISLD103 |
| ISMT203 | Communication skills | 33 | 17 | 2.00 | C | CCIT060 |
| ISOA204 | Office applications | 78 | 72 | 6.00 | C | ` |
| UOA001 | Arabic Language I | 33 | 17 | 2.00 | S | |
| | | 423 | 327 | 30.00 | | |

**Semester 3 | 30 ECTS | 1 ECTS = 25 hrs**

| Code | Module | SSWL | USSWL | ECTS | Type | Pre-request |
|---|---|---|---|---|---|---|
| ISDC207 | Object Oriented Programming I | 95 | 105 | 8.00 | C | |
| CSIT201 | Data Structures | 70 | 80 | 6.00 | C | |
| ISDE215 | Computational Theory | 34 | 66 | 4.00 | C | |
| ISDC198 | Introduction to Electronic information system | 30 | 45 | 5.00 | E | |
| ISDC202 | Design and Analysis of Databases | 60 | 65 | | E | |
| ISDC203 | Advanced Mathematics | 63 | 73 | 5.00 | C | |
| | | 352 | 398 | 30.00 | | |

**Semester 4 | 30 ECTS | 1 ECTS = 25 hrs**

| Code | Module | SSWL | USSWL | ECTS | Type | Pre-request |
|---|---|---|---|---|---|---|
| ISDE211 | Object Oriented Programming II | 80 | 120 | 8.00 | C | ISDC207 |
| ISDC205 | Design and Analysis of Databases | 65 | 85 | 7.00 | C | |
| ISDE190 | Web Technologies | 65 | 85 | 7.00 | E | |
| ISDE219 | Design Internet Pages | | | | E | |
| CCIT062 | Numerical Analysis | 80 | 85 | 6.00 | B | |
| UOA004 | English II | 32 | 65 | 2.00 | S | |
| UOA006 | The Crimes of Baath Regime in Iraq | 17 | 15 | 2.00 | S | |
| | | 322 | 428 | 30.00 | | |

**Semester 5 | 30 ECTS | 1 ECTS = 25 hrs**

| Code | Module | SSWL | USSWL | ECTS | Type | Pre-request |
|---|---|---|---|---|---|---|
| ISDC308 | Visual Programming I | 80 | 95 | 7.00 | C | |
| CCIT063 | Principles Of Computer Network | 93 | 57 | 6.00 | B | |
| ISDE389 | Natural Language Processing | 65 | 60 | 5.00 | C | |
| ISDE324 | Compiler | | | | | I ISDE215 |
| ISDC307 | Project Management Systems | 35 | 65 | 4.00 | C | |
| ISDE325 | Artificial Intelligent I | 65 | 85 | 6.00 | C | |
| UOA002 | Arabic Language II | 32 | 18 | 2.00 | S | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 338 | 362 | 30.00 | | |

**Semester 6 | 30 ECTS | 1 ECTS = 25 hrs**

| Code | Module | SSWL | USSWL | ECTS | Type | Pre-request |
|---|---|---|---|---|---|---|
| ISDE323 | Visual Programming II | 80 | 95 | 7.00 | C | ISDC308 |
| ISDE325 | Artificial Intelligent II | 65 | 85 | 6.00 | C | ISDC305 |
| ISDC323 | Data Storage Engineering | 35 | 65 | 4.00 | E | |
| ISDC309 | Software Engineering | | | | | |
| ISDC327 | Data Management Systems | 35 | 65 | 4.00 | C | |
| ISRM3 | IT Risk Management | 35 | 40 | 3.00 | C | |
| ISDC306 | Distributed Database Management systems | 80 | 70 | 6.00 | C | ISDC205 |
| | | 330 | 420 | 30.00 | | |

**Semester 7 | 30 ECTS | 1 ECTS = 25 hrs**

| Code | Module | SSWL | USSWL | ECTS | Type | Pre-request |
|---|---|---|---|---|---|---|
| ISDE323 | Information Security | 35 | 90 | 5.00 | C | |
| ISDE322 | Internet of Things | 65 | 85 | 6.00 | E | |
| ISDE324 | Cloud Computing | | | | E | |
| ISDE325 | Machine learning | 65 | 85 | 6.00 | C | |
| ISDC375 | Operating Systems I | 65 | 60 | 5.00 | C | |
| ISDC327 | Web Application Programming | 65 | 85 | 6.00 | C | ISDE219 |
| UOA019 | Research Methodology | 35 | 15 | 2.00 | S | |
| | | 330 | 420 | 30 | | |

**Semester 8 | 30 ECTS | 1 ECTS = 25 hrs**

| Code | Module | SSWL | USSWL | ECTS | Type | Pre-request |
|---|---|---|---|---|---|---|
| ISDC406 | Cyber-Security Principles | 35 | 90 | 5.00 | C | ISDE323 |
| ISDC405 | Deep Learning | 65 | 60 | 5.00 | C | ISDE325 |

| | | | | | | |
|---|---|---|---|---|---|---|
| ISDE333 | Information Technology Governance | 33 | 42 | 3.00 | E | |
| ISDE414 | E- Commerce | | | | E | |
| ISDC309 | Data Warehouse and Data Minining | 33 | 42 | 3.00 | C | |
| ISDC422 | Operating Systems II | 65 | 85 | 6.00 | C | |
| UOA020+D49 | Project | 93 | 107 | 8.00 | S | |
| | | 324 | 426 | 30.00 | | |

# 8. Contact


Program Manager:

Khalid Shaker | Ph.D. in Computer Science | Assistant Prof.

Email: khalidalhity@uoanbar.edu.iq

Mobile no.: +964-7811061019

Program Coordinator:

Baraa saad abdulhakeem

Master of electrical and computer engineering

Baraasaad@uoanbar.edu.iq

# University of Anbar

# جامعة الانبار

*First Cycle – Bachelor's Degree (B.Sc.) - Information Technology*

بكالوريوس - تكنولوجيا المعلومات

# Table of Contents


1. Overview
2. Undergraduate Modules 2023-2024
3. Contact


## Overview .١

**This catalogue is about the courses (modules) given by the**

**نظرة عامة**

**يتناول هذا الدليل المواد الدراسية التي يقدمها برنامج نظم**

## 2. Undergraduate Courses 2023-2024

| # | Code | Course/Module Title | ECTS | Semester | Class (hr/w) | Lect/Lab./Prac./Tutor | SSWL (hr/sem) | USWL (hr/w) |
|---|---|---|---|---|---|---|---|---|
| Module 1 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | The "Structured Programming" course focuses on teaching students how to design and implement computer programs in a structured and systematic manner. This course aims to provide students with the fundamental concepts of computer programming and develop their skills in writing purposeful and maintainable code. Throughout the course, you will learn the basic principles of computer programming, such as sequencing, iteration, and conditional statements. You will become familiar with program design methodologies and its | | | | | | | |
| Module 2 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification. | | | | | | | |
| Module 3 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification. | | | | | | | |
| Module 4 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | Study of derivatives, their methods and applications, and their relationship to real problems. Teaching training students to deal with the rules and laws of derivatives and apply them in the future in a logical and correct manner | | | | | | | |
| Module 5 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Description | | | | | | | |
| | This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification. | | | | | | | |
| Module 6 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification. | | | | | | | |
| Module 7 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | Discrete Structures is a fundamental course within the Computer Science curriculum that introduces students to mathematical concepts and structures essential for solving complex computational problems. The course provides a bridge between discrete mathematics and its applications in computer science, laying the groundwork for algorithm design, logic, and various computational paradigms. | | | | | | | |
| Module 8 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification. | | | | | | | |
| Module 9 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | Mathematics II for Computer Science is a continuation of the mathematical foundation established in Mathematics I, tailored specifically to meet the needs of computer science students. This course explores advanced mathematical concepts and techniques that are fundamental for understanding and solving complex problems in computer science and software engineering. | | | | | | | |
| Module 10 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | The Introductory Arabic Language course in the first stage is designed to introduce students to the Arabic language and culture. It serves as a foundation for developing basic communication skills in Arabic, fostering cultural awareness, and preparing students for more advanced language courses or interactions within Arabic-speaking communities. This course is suitable for students who have little to no prior knowledge of the Arabic language. | | | | | | | |
| Module 11 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | The study of structured programming, entity programming and what is known as object-oriented programming, knowledge of injunctions and functions to prepare the student to know how to write a set of commands, knowing what are injunctions, how to build classes and objects, what the class has of properties and functions, how to build several classes and several objects, and how properties are inherited between them. | | | | | | | |

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|---|---|---|---|---|---|---|---|---|
| Module 12 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | The Data Structures and Algorithms course is a cornerstone of the Computer Science curriculum, offering an in-depth exploration of fundamental concepts and techniques essential for solving complex computational problems efficiently. This course equips students with the knowledge and skills required to design, analyze, and implement data structures and algorithms, which are fundamental to computer science and software engineering. | | | | | | | |
| Module 13 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | The Computational Theory course is a fundamental component of the Computer Science curriculum that explores the theoretical underpinnings of computation. This course delves into abstract models of computation, formal languages, and the limits of algorithmic solvability. It provides students with the theoretical foundations necessary to analyze and understand the capabilities and limitations of computers and algorithms. | | | | | | | |
| Module 14 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | The Introduction to Electronic Information Systems course is designed to provide students with a foundational understanding of electronic information systems and their role in modern computing and information management. This course explores the principles, technologies, and applications of electronic information systems, equipping students with essential knowledge and skills for managing and processing digital information. | | | | | | | |
| Module 15 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | The Design and Analysis of Information Systems course is a pivotal component of the Computer Science curriculum that focuses on the principles, methodologies, and best practices for designing, developing, and analyzing complex information systems. This course empowers students with the knowledge and skills necessary to create robust, efficient, and scalable information systems that meet real-world business and technology requirements. | | | | | | | |
| Module 16 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | The Democracy and Human Rights course in the first stage is designed to provide students with a fundamental understanding of the concepts, theories, and historical development of democracy and human rights. This introductory course aims to foster critical thinking and awareness of the importance of these principles in contemporary global society. | | | | | | | |
| Module 17 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification. | | | | | | | |
| Module 18 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | The study of structured programming, entity programming and what is known as object-oriented programming, knowledge of injunctions and functions to prepare the student to know how to write a set of commands, knowing what are injunctions, how to build classes and objects, what the class has of properties and functions, how to build several classes and several objects, and how properties are inherited between | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | them. | | | | | | | |
| Module 19 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification. | | | | | | | |
| Module 20 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | The Web Technologies course is designed to provide students with a comprehensive understanding of the technologies and principles that underlie the World Wide Web. In an era where the web plays a crucial role in communication, commerce, and information dissemination, this course equips students with the knowledge and skills necessary to design, develop, and manage modern web applications. | | | | | | | |
| Module 21 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | The Design Internet Pages course is designed to provide students with the knowledge and skills needed to create attractive, functional, and user-friendly web pages. In today's digital age, effective web design is crucial for businesses, organizations, and individuals. This course equips students with the tools and techniques required to design visually appealing and responsive web pages that meet modern web standards. | | | | | | | |
| Module 22 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | Studying the numerical analysis, methods, applications and its relationship with the real problems. Teach train the students to deal with the numerical process in the future in logic and right style. | | | | | | | |
| Module 23 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification. | | | | | | | |
| Module 24 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | NOT YET | | | | | | | |
| Module 24 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the | | | | | | | |

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|---|---|---|---|---|---|---|---|---|
| | programme specification. | | | | | | | |
| Module 25 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | Principles of Computer Communications and Networks Detailed Syllabus for B.Tech third year First semester is covered here. This gives the details about credits, number of hours and other details along with reference books for the course. Course objectives: To understand the concept of computer communication, To learn about the networking concept, layered protocols, To understand various communications concepts, and To get the knowledge of various networking equipment. | | | | | | | |
| Module 26 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | The Distributed Database Management Systems course is a specialized offering in the field of computer science, focusing on the principles, technologies, and strategies for managing databases across distributed and interconnected environments. In today's interconnected world, where data is generated and consumed across various locations and platforms, this course equips students with the knowledge and skills required to design, deploy, and manage distributed database systems effectively. | | | | | | | |
| Module 27 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | The Natural Language Processing (NLP) course is designed to introduce students to the interdisciplinary field that combines computer science, artificial intelligence, and linguistics. NLP focuses on the interaction between computers and human language, enabling machines to understand, interpret, and generate human language text. This course provides students with a strong foundation in NLP techniques and applications. | | | | | | | |
| Module 28 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification. | | | | | | | |
| Module 29 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification. | | | | | | | |
| Module 30 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | Artificial Intelligence I is an introductory course that explores the fundamental principles and techniques underlying the field of artificial intelligence (AI). This course provides students with a comprehensive introduction to AI concepts, algorithms, and applications, equipping them with the knowledge and skills needed to understand, design, and implement AI systems. | | | | | | | |
| Module 31 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification. | | | | | | | |
| Module 32 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | Artificial Intelligence II is an advanced course that builds upon the foundational concepts introduced in Artificial Intelligence I. This course delves deeper into the theory and applications of artificial intelligence, focusing on advanced topics, cutting-edge research, and practical AI development. It provides students with the opportunity to explore and apply more complex AI algorithms and techniques. | | | | | | | |
| Module 33 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | The Data Storage Engineering course is designed to provide students with an in-depth understanding of the principles, technologies, and best practices related to data storage and management in modern computing systems. In today's data-driven world, the effective storage and retrieval of data are critical for businesses and organizations. This course equips students with the knowledge and skills needed to design, implement, and optimize data storage solutions. | | | | | | | |
| Module 34 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification. | | | | | | | |
| Module 35 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification. | | | | | | | |
| Module 36 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | A decision support system is an interactive computer application that has complete access to information about your organization. Each student will get "hands-on" experience with the development of a decision support system/expert system. When used, it offers comparative figures between one period and the next. It projects revenue figures based on assumptions related to product sales. A DSS is smart enough to help you understand the expenses involved in and consequences resulting from different decision alternatives | | | | | | | |
| Module 37 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification. | | | | | | | |
| Module 38 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | This course is to cover the concepts, structure, and functions of Multimedia Computing To give students a broad grounding in issue surrounding multimedia, including the role of and design of multimedia Systems | | | | | | | |

which incorporate digital audio, graphics and video, underlying concepts and representations of sound, pictures and video, data compression and transmission, integration of media, multimedia authoring, and delivery of multimedia.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Module 39 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |

Description

The Cloud Computing course is designed to provide students with a comprehensive understanding of cloud technologies, their architecture, and their applications in modern computing environments. Cloud computing has revolutionized the way businesses and organizations manage and deliver IT services. This course equips students with the knowledge and skills necessary to design, deploy, and manage cloud-based solutions effectively.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Module 40 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |

Description

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Module 41 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |

Description

Operating Systems I is a foundational course in computer science that provides students with a comprehensive introduction to the principles, design, and functioning of operating systems. Operating systems are the core software that manages computer hardware and facilitates application execution. This course equips students with the knowledge and skills needed to understand, design, and implement basic operating system components.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Module 42 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |

Description

Programming of Web Applications Detailed Syllabus for B.Tech fourth year First semester is covered here. This gives the details about credits, number of hours and other details along with reference books for the course. The course covers construction and design of dynamic web pages. The emphasis lies on standardised HTML and CSS to create structure and appearance. The course also covers basic JavaScript to create a dynamic behaviour on web sites.

Other parts that are covered are availability, responsive design and validation of web pages.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Module 43 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |

Description

The Research Methodology in Computer Science course is designed to provide students with the knowledge and skills necessary to conduct effective and rigorous research in the field of computer science. This course emphasizes the research process, methodologies, techniques, and ethical considerations, enabling students to plan, execute, and report on their research effectively.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Module 44 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |

Description

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Module 45 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |

Description

This Course Specification provides a concise summary of the main features of the course and the learning

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification. | | | | | | | |
| Module 46 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | The Information Technology Governance course is designed to provide students with a comprehensive understanding of the principles, frameworks, and practices related to the governance of information technology within organizations. In today's digital age, effective IT governance is crucial for ensuring that IT resources are aligned with business goals, risks are managed, and compliance requirements are met. This course equips students with the knowledge and skills needed to establish and maintain effective IT governance practices. | | | | | | | |
| Module 47 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification. | | | | | | | |
| Module 48 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | The Data Warehouse and Data Mining course is designed to provide students with a deep understanding of the concepts, technologies, and techniques related to data warehousing and data mining. In today's data-driven world, organizations rely on these disciplines to extract valuable insights from vast amounts of data. This course equips students with the knowledge and skills required to design, implement, and leverage data warehouses and data mining tools effectively. | | | | | | | |
| Module 49 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | Operating Systems II is an advanced course that continues to explore the principles, design, and functioning of operating systems, building upon the knowledge acquired in Operating Systems I. This course delves deeper into operating system concepts, advanced topics, and hands-on implementation, providing students with a comprehensive understanding of modern operating systems and their components. | | | | | | | |
| Module 50 | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| | Description | | | | | | | |
| | The Project in Computer Science course is a capstone experience designed to integrate and apply the knowledge and skills acquired throughout the computer science program. It offers students the opportunity to work on a substantial project that addresses real-world challenges or explores advanced topics in computer science. This course serves as a culmination of their academic journey, allowing them to demonstrate their expertise in planning, designing, developing, and presenting a significant computing project. | | | | | | | |
| | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |

**Program Manager:**
**Khalid Shaker | Ph.D. in Computer Science | Assistant Prof.**
**Email: khalidalhity@uoanbar.edu.iq**
**Mobile no.: +964-7811061019**

**Program Coordinator:**
**Baraa saad abdulhakeem**

Baraasaad@uoanbar.edu.iq

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# MODULE DESCRIPTOR FORM

| Module Information | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Structured programming I** | | **Module Type** | TYPE C | |
| **Module Code** | ISSP101 | | **ECTS Credits** | 8 | |
| **Module Level** | UGI | | **Semester of Delivery** | One | |
| **Administering Department** | IS | | **Faculty** | CSIT | |
| **Module Leader** | Mahmoud Hilal | | **e-mail** | mah2005hilal@uoanbar.edu.iq | |
| **Module Leader's Acad. Title** | Lecturer | | **Module Leader's Qualification** | PhD | |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | / | | **e-mail** | / | |
| **Review Committee Approval** | DD/MM/YY | | **Version Number** | 1.0 | |

| Relation With Other Modules | |
|---|---|
| **Pre-requisites** | / |
| **Co-requisites** | / |
| **Module Aims, Learning Outcomes and Indicative Contents** | |
| **Module Aims** | Learn how to use the Advanced Tools<br>helps programmers write fast, portable programs<br>The main principles of programming and the development of programming languages<br>Learn the principles of Structure programming |
| **Module Learning Outcomes** | A1- Knowledge and understanding<br>A2. Learn algorithms<br>A3. Learn flowcharts |

| | |
|---|---|
| | A4. Learn structured programming<br>A5. Learn Python programming |
| **Indicative Contents** | |

## Learning and Teaching Strategies

| | |
|---|---|
| **Strategies** | The main strategy that will be adopted in delivering this module are:<br>1. Power point presentation (Data show).<br>2. Explanation on the white board using different color markers.<br>3. Discussions with the student during teaching.<br>4. Interaction with students through daily problems practice through lecture.<br>5. Solve different problems with more exercises.<br>6. Submit assignment that develop student learning. |

## Module Delivery

| | |
|---|---|
| **Structured workload (h/w)** | 5.4 |
| **Unstructured workload (h/w)** | 8 |
| **Total workload (h/w)** | 13.4 |

## Module Evaluation

| | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|
| **Quizzes** | 3 | 6% (6) | 3,7 and 11 | |
| **Assignments** | 2 | 6% (6) | 2 and 12 | |
| **Projects / Lab.** | 1 | 15% (15) | Continuous | |
| **Report** | 1 | 5% (5) | 13 | |
| **Midterm Exam** | 2 hr | 18% (18) | 7 | |
| **Final Exam** | 3 hr | 50% (50) | 16 | |
| **Total** | | 100% (100 Marks) | | |

## Learning and Teaching Resources

| | Text | Available in the Library? |
|---|---|---|

| | | |
|---|---|---|
| **Required Texts** | "Starting Out with Python plus My Programming Lab with Pearson Text --Access Card Package (3rd Edition) Tony Gaddis ISBN-13: 978-0133862256" | Yes/No |
| **Recommended Texts** | | Yes/No |
| **Websites** | | |

Course Structure

| Week | Hours | ILOs | Unit/Module or Topic Title | Teaching Method | Assessment Method |
|---|---|---|---|---|---|
| First | 3 h. | Programming principles | Overview to Programming Language | Explain Menu, Getting Started with python | |
| Second | 3 h. | Algorithms | Algorithms and Flow Charts | Algorithms and Flow Charts | |
| Third | 3 h. | Introduction to Programming | Storing and Manipulating Values Calling Functions Comments Formatting Values Working with Strings Exercises | Storing and Manipulating Values Calling Functions Comments Formatting Values Working with Strings Exercises | Quiz |
| Fourth | 3 h. | Unary Operators | Unary Minus Increment and /decrement Operators. | Program of Unary Minus Increment and /decrement Operators. | |
| Fifth | 3 h. | Operational Operators | Operational Assignment Operators Relational Operators Logical Operators. Bitwise Operator Logical Operators. Bitwise Operator | Program Operational Assignment Operators Relational Operators Program Logical Operators. Bitwise Operator | |
| Sixth | 3 h. | Selection Statements | Boolean Logic If Statements If-Else Statements | Programs in Lectures | Quiz |
| Seventh | 3 h. | Selection Statements | If-Elif Statements If-Elif-Else Statements Nested If Statements | Programs in Lectures | |

| | | | | | |
|---|---|---|---|---|---|
| Ninth | 3 h. | To evaluate the students | Monthly exam | | By exam |
| Ninth | 3 h. | Repetition | While Loops | | By exam |
| Tenth | 3 h. | Repetition | For Loops | Programs in Lectures | |
| Eleventh | 3 h. | Repetition | Nested Loops Exercises | Programs in Lectures | |
| Twelfth | 3 h. | Functions | Functions with Parameters Variables in Functions | Programs in Lectures | |
| Thirteenth | 3 h. | Functions | Return Values | Programs in Lectures | |
| Fourteenth | 3 h. | Functions | Importing Functions into Other Programs Exercises | Programs in Lectures | |
| Fifteenth | 3 h. | To evaluate the students | Monthly exam | | By exam |

**APPENDIX:**

| **UNIVERSITYof Anbar** | | | | |
|---|---|---|---|---|
| **GRADING SCHEME** | | | | |
| **Group** | **ECTS Grade** | **% of Students/Marks** | **Definition** | **GPA** |
| **Success Group (50 - 100)** | **A** - Excellent | Best 10% | Outstanding Performance | **5** |
| | **B** - Very Good | Next 25% | Above average with some errors | **4** |
| | **C** - Good | Next 30% | Sound work with notable errors | **3** |
| | **D** - Satisfactory | Next 25% | Fair but with major shortcomings | **2** |
| | **E** - Sufficient | Next 10% | Work meets minimum criteria | **1** |
| **Fail Group (0 – 49)** | **FX** – Fail | (45-49) | More work required but credit awarded | |
| | **F** – Fail | (0-44) | Considerable amount of work required | |
| | | | | |

Note:

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

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# MODULE DESCRIPTOR FORM

| Module Information | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Fundamental of Information Technology** | | **Module Type** | TYPE C | |
| **Module Code** | ISFI102 | | **ECTS Credits** | 6 | |
| **Module Level** | UGI | | **Semester of Delivery** | One | |
| **Administering Department** | IS | | **Faculty** | CSIT | |
| **Module Leader** | Mohanad Abdulsalam Younis gedan | | **e-mail** | mohanad.abdul@uoanbar.edu.iq | |
| **Module Leader's Acad. Title** | Lecturer | | **Module Leader's Qualification** | Ph. D | |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | / | | **e-mail** | / | |
| **Review Committee Approval** | DD/MM/YY | | **Version Number** | 2.0 | |

| Relation With Other Modules | |
|---|---|
| **Pre-requisites** | / |
| **Co-requisites** | / |
| **Module Aims, Learning Outcomes and Indicative Contents** | |
| **Module Aims** | - Provide a basic knowledge of computer hardware and software<br>- Introduce the business areas to which computers may be applied.<br>- Provide an introduction to business organization and information systems.<br>- Develop the skills in network & communication, which play an important part in business computing and information processing. |
| **Module Learning** | A-Knowledge and Understanding |

| | |
|---|---|
| **Outcomes** | A1. The student should understand the architecture of any IT systems.<br>A2. The student should understand the parts of hardware.<br>A3. The student should understand the system software.<br>A4. The student should understand the architecture of networks, protocols and communications devices. |
| **Indicative Contents** | |
| **Learning and Teaching Strategies** | |
| **Strategies** | The main strategy that will be adopted in delivering this module are:<br>1. Power point presentation (Data show).<br>2. Explanation on the white board using different color markers.<br>3. Discussions with the student during teaching.<br>4. Interaction with students through daily problems practice through lecture.<br>5. Solve different problems with more exercises.<br>6. Submit assignment that develop student learning. |

| **Module Delivery** | |
|---|---|
| **Structured workload (h/w)** | 3.4 |
| **Unstructured workload (h/w)** | 5.6 |
| **Total workload (h/w)** | 10 |

## Module Evaluation

| | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|
| **Quizzes** | 3 | 6% (6) | 3,7 and 11 | |
| **Assignments** | 2 | 6% (6) | 2 and 12 | |
| **Projects / Lab.** | 1 | 15% (15) | Continuous | |
| **Report** | 1 | 5% (5) | 13 | |
| **Midterm Exam** | 2 hr | 18% (18) | 7 | |
| **Final Exam** | 3 hr | 50% (50) | 16 | |
| **Total** | | 100% (100 Marks) | | |

| Learning and Teaching Resources | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | | Yes/No |
| **Recommended Texts** | | Yes/No |
| **Websites** | | |

| Delivery Plan (Weekly Syllabus) | |
|---|---|
| | **Material Covered** |
| **Week 1** | Introduction of Computers and Programming |
| **Week 2** | Brief history of computer |
| **Week 3** | Generation of Computers & Computer hierarchy |
| **Week 4** | Basic Computer Components |
| **Week 5** | Computer function (fetch cycle, interrupt cycle, I/O function |
| **Week 6** | Semiconductor main memory (RAM, ROM, CACHE) |
| **Week 7** | **Mid-Term Exam** |
| **Week 8** | Computer Software (application software) |
| **Week 9** | External & Internal memory |
| **Week 10** | Telecommunications system & Network |
| **Week 11** | Topology of a network |
| **Week 12** | Layering model |
| **Week 13** | Protocols |
| **Week 14** | addressing communications |

| | |
|---|---|
| **Week 15** | **Preparatory Week** |
| **Week 16** | **Final Exam** |

**APPENDIX:**

| UNIVERSITYof Anbar | | | | |
|---|---|---|---|---|
| **GRADING SCHEME** | | | | |
| **Group** | **ECTS Grade** | **% of Students/Marks** | **Definition** | **GPA** |
| **Success Group (50 - 100)** | **A** - Excellent | Best 10% | Outstanding Performance | **5** |
| | **B** - Very Good | Next 25% | Above average with some errors | **4** |
| | **C** - Good | Next 30% | Sound work with notable errors | **3** |
| | **D** - Satisfactory | Next 25% | Fair but with major shortcomings | **2** |
| | **E** - Sufficient | Next 10% | Work meets minimum criteria | **1** |
| **Fail Group (0 – 49)** | **FX** – Fail | (45-49) | More work required but credit awarded | |
| | **F** – Fail | (0-44) | Considerable amount of work required | |
| | | | | |

Note:

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

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# MODULE DESCRIPTOR FORM

| Module Information | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Logic Design I** | | | **Module Type** | TYPE C |
| **Module Code** | ISLD103 | | **ECTS Credits** | | 6 |
| **Module Level** | UGI | | **Semester of Delivery** | | One |
| **Administering Department** | IS | | **Faculty** | CSIT | |
| **Module Leader** | Muntaser Abdulwahed Salman Abdulaziz | | **e-mail** | Co.montasser.salman@uoanbar.edu.iq | |
| **Module Leader's Acad. Title** | Lecturer | | **Module Leader's Qualification** | | PhD. |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | / | | **e-mail** | / | |
| **Review Committee Approval** | DD/MM/YY | | **Version Number** | 2.0 | |

| Relation With Other Modules | |
|---|---|
| **Pre-requisites** | / |
| **Co-requisites** | / |
| **Module Aims, Learning Outcomes and Indicative Contents** | |
| **Module Aims** | -The student should understand number systems and codes and the conversion between them.<br>-The student should understand the Boolean expression and how to apply it.<br>-The student should recognize among different logic gates and how to use them.<br>-The student should understand how to design a logic circuit.<br>-The student should understand using K-map for simplification. |

| | |
|---|---|
| **Module Learning Outcomes** | A-Knowledge and Understanding<br>A1. The student should understand number systems and codes and the conversion between them.<br>A2. The student should understand the Boolean expression and how to apply it.<br>A3. The student should recognize among different logic gates and how to use them.<br>A4. The student should understand how to design a logic circuit.<br>A5. The student should understand using K-map for simplification |
| **Indicative Contents** | |
| **Learning and Teaching Strategies** | |
| **Strategies** | The main strategy that will be adopted in delivering this module are:<br>1. Power point presentation (Data show).<br>2. Explanation on the white board using different color markers.<br>3. Discussions with the student during teaching.<br>4. Interaction with students through daily problems practice through lecture.<br>5. Solve different problems with more exercises.<br>6. Submit assignment that develop student learning. |

| **Module Delivery** | |
|---|---|
| **Structured workload (h/w)** | 6.4 |
| **Unstructured workload (h/w)** | 3.6 |
| **Total workload (h/w)** | 10 |

## Module Evaluation

| | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|
| **Quizzes** | 3 | 6% (6) | 3,7 and 11 | |
| **Assignments** | 2 | 6% (6) | 2 and 12 | |
| **Projects / Lab.** | 1 | 15% (15) | Continuous | |
| **Report** | 1 | 5% (5) | 13 | |
| **Midterm Exam** | 2 hr | 18% (18) | 7 | |
| **Final Exam** | 3 hr | 50% (50) | 16 | |
| **Total** | | 100% (100 Marks) | | |

| Learning and Teaching Resources | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | | Yes/No |
| **Recommended Texts** | | Yes/No |
| **Websites** | | |

| Delivery Plan (Weekly Syllabus) | |
|---|---|
| | **Material Covered** |
| **Week 1** | Introduction to number system |
| **Week 2** | Conversion between systems |
| **Week 3** | Codes and conversion between them |
| **Week 4** | Boolean expression |
| **Week 5** | Logic gates |
| **Week 6** | Logic gates design |
| **Week 7** | **Mid-Term Exam** |
| **Week 8** | NAND gates |
| **Week 9** | NOR gates |
| **Week 10** | Sum of product form |
| **Week 11** | Product Of sum form |
| **Week 12** | Product Of sum form |
| **Week 13** | K-map |

| | |
|---|---|
| **Week 14** | K-map |
| **Week 15** | **Preparatory Week** |
| **Week 16** | **Final Exam** |

**APPENDIX:**

| **UNIVERSITYof Anbar** | | | | |
|---|---|---|---|---|
| **GRADING SCHEME** | | | | |
| **Group** | **ECTS Grade** | **% of Students/Marks** | **Definition** | **GPA** |
| **Success Group (50 - 100)** | **A** - Excellent | Best 10% | Outstanding Performance | **5** |
| | **B** - Very Good | Next 25% | Above average with some errors | **4** |
| | **C** - Good | Next 30% | Sound work with notable errors | **3** |
| | **D** - Satisfactory | Next 25% | Fair but with major shortcomings | **2** |
| | **E** - Sufficient | Next 10% | Work meets minimum criteria | **1** |
| **Fail Group (0 – 49)** | **FX** – Fail | (45-49) | More work required but credit awarded | |
| | **F** – Fail | (0-44) | Considerable amount of work required | |
| | | | | |
| Note: | | | | |

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

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# MODULE DESCRIPTOR FORM

| Module Information | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Mathematic I** | | | **Module Type** | TYPE B |
| **Module Code** | **CCIT060** | | **ECTS Credits** | | 6 |
| **Module Level** | **UGI** | | **Semester of Delivery** | | One |
| **Administering Department** | **IS** | | **Faculty** | CSIT | |
| **Module Leader** | **Muhammad Rabie** | | **e-mail** | **mohammed.rabeea@uoanbar.edu.iq** | |
| **Module Leader's Acad. Title** | **Lecturer** | | **Module Leader's Qualification** | | PhD. |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | / | | **e-mail** | / | |
| **Review Committee Approval** | DD/MM/YY | | **Version Number** | 2.0 | |

| Relation With Other Modules | |
|---|---|
| **Pre-requisites** | / |
| **Co-requisites** | / |
| **Module Aims, Learning Outcomes and Indicative Contents** | |
| **Module Aims** | A - Understand the concept of mathematics, its methods and applications.<br>B - Explain the concept of derivatives and integration and their applications.<br>C - Understand the relationship between extracts and integration and the real problems and how to deal with them |
| **Module Learning Outcomes** | A-Knowledge and Understanding<br>A 1. Acquiring the ability and skill to distinguish the bases of derivatives methods and dealing with them<br>A 2. Acquire the capabilities and skills of applications of derivatives |

| | |
|---|---|
| | A3. Dealing with different methods of finite and indefinite derivatives<br>B. Subject-specific skills<br>B1. Summer Training<br>B2. Fourth year projects<br>B3. Scientific projects |
| **Indicative Contents** | |
| **Learning and Teaching Strategies** | |
| **Strategies** | The main strategy that will be adopted in delivering this module are:<br>1. Power point presentation (Data show).<br>2. Explanation on the white board using different color markers.<br>3. Discussions with the student during teaching.<br>4. Interaction with students through daily problems practice through lecture.<br>5. Solve different problems with more exercises.<br>6. Submit assignment that develop student learning. |

| Module Delivery | |
|---|---|
| **Structured workload (h/w)** | 3.3 |
| **Unstructured workload (h/w)** | 6.7 |
| **Total workload (h/w)** | 10 |

## Module Evaluation

| | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|
| **Quizzes** | 2 | 6% (6) | 5 and 10 | |
| **Assignments** | 2 | 6% (6) | 2 and 12 | |
| **Projects / Lab.** | 1 | 5% (5) | Continuous | |
| **Report** | 1 | 5% (5) | 13 | |
| **Midterm Exam** | 2 hr | 18% (18) | 7 | |
| **Final Exam** | 3 hr | 60% (60) | 16 | |
| **Total** | | 100% (100 Marks) | | |

| Learning and Teaching Resources | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | | Yes/No |
| **Recommended Texts** | | Yes/No |
| **Websites** | | |

| Delivery Plan (Weekly Syllabus) | |
|---|---|
| | **Material Covered** |
| **Week 1** | The Definition of the Derivative<br>Interpretation of the Derivative |
| **Week 2** | Properties of Derivative , Some laws of derivatives |
| **Week 3** | Properties of Derivative , Some laws of derivatives |
| **Week 4** | **Derivatives of the six trig functions** |
| **Week 5** | **Exponential Functions, Logarithm Functions** |
| **Week 6** | **Inverse Sine, Inverse cosine, Inverse tangent, Alternate Notation** |
| **Week 7** | **Mid-Term Exam** |
| **Week 8** | **Inverse Sine, Inverse cosine, Inverse tangent, Alternate Notation** |
| **Week 9** | These are the six hyperbolic trig<br>Functions .and They are defined as |
| **Week 10** | There are two forms of the chain rule |
| **Week 11** | Defined , formula, and used the chain rule |
| **Week 12** | first derivative, second derivative, third derivative. |
| **Week 13** | the properties of<br>logarithms |

| | |
|---|---|
| **Week 14** | Introduction, Critical Points and Minimum and Maximum Values |
| **Week 15** | **Preparatory Week** |
| **Week 16** | **Final Exam** |

**APPENDIX:**

| **UNIVERSITYof Anbar** | | | | |
|---|---|---|---|---|
| **GRADING SCHEME** | | | | |
| **Group** | **ECTS Grade** | **% of Students/Marks** | **Definition** | **GPA** |
| **Success Group (50 - 100)** | **A** - Excellent | Best 10% | Outstanding Performance | **5** |
| | **B** - Very Good | Next 25% | Above average with some errors | **4** |
| | **C** - Good | Next 30% | Sound work with notable errors | **3** |
| | **D** - Satisfactory | Next 25% | Fair but with major shortcomings | **2** |
| | **E** - Sufficient | Next 10% | Work meets minimum criteria | **1** |
| **Fail Group (0 – 49)** | **FX** – Fail | (45-49) | More work required but credit awarded | |
| | **F** – Fail | (0-44) | Considerable amount of work required | |
| | | | | |

Note:

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

| | | |
|---|---|---|
| | Ministry of Higher Education and Scientific Research.<br>University of Anbar.<br>Department of Information System. | |

# MODULE DESCRIPTOR FORM

| Module Information | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **English (1)** | | **Module Type** | TYPE S | |
| **Module Code** | **UOA003** | **ECTS Credits** | | 2 | |
| **Module Level** | **UGI** | **Semester of Delivery** | | One | |
| **Administering Department** | **IS** | **Faculty** | CSIT | | |
| **Module Leader** | **Akeel Abdulraheem Thulnoon Zoead** | **e-mail** | **akeelalhadithy@uoanbar.edu.iq** | | |
| **Module Leader's Acad. Title** | **Assistant Professor** | **Module Leader's Qualification** | | PhD. | |
| **Module Tutor** | | **e-mail** | | | |
| **Peer Reviewer Name** | / | **e-mail** | / | | |
| **Review Committee Approval** | DD/MM/YY | **Version Number** | 2.0 | | |

| Relation With Other Modules | |
|---|---|
| **Pre-requisites** | / |
| **Co-requisites** | / |
| **Module Aims, Learning Outcomes and Indicative Contents** | |
| **Module Aims** | Enhancing English speaking, reading and writing<br>Memorize a big number of vocabularies<br>Helping students to deal with the English language in easier ways |
| **Module Learning Outcomes** | A1. Reading<br>A2. writing<br>A3. Speaking.<br>A4. Listening<br>B. Subject-specific skills |

| | |
|---|---|
| | B1. Learn scanning and skimming skills in reading<br>B2. Right pronunciation<br>B3. Vocabularies |
| **Indicative Contents** | |
| **Learning and Teaching Strategies** | |
| **Strategies** | The main strategy that will be adopted in delivering this module are:<br>1. Power point presentation (Data show).<br>2. Explanation on the white board using different color markers.<br>3. Discussions with the student during teaching.<br>4. Interaction with students through daily problems practice through lecture.<br>5. Solve different problems with more exercises.<br>6. Submit assignment that develop student learning. |

| Module Delivery | |
|---|---|
| **Structured workload (h/w)** | 2.34 |
| **Unstructured workload (h/w)** | 4.34 |
| **Total workload (h/w)** | 6.68 |

## Module Evaluation

| | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|
| **Quizzes** | 2 | 6% (6) | 5 and 10 | |
| **Assignments** | 2 | 6% (6) | 2 and 12 | |
| **Projects / Lab.** | 1 | 5% (5) | Continuous | |
| **Report** | 1 | 5% (5) | 13 | |
| **Midterm Exam** | 2 hr | 18% (18) | 7 | |
| **Final Exam** | 3 hr | 60% (60) | 16 | |
| **Total** | | 100% (100 Marks) | | |

## Learning and Teaching Resources

| | Text | Available in the |
|---|---|---|

| | | Library? |
|---|---|---|
| **Required Texts** | | Yes/No |
| **Recommended Texts** | | Yes/No |
| **Websites** | | |

| Delivery Plan (Weekly Syllabus) | |
|---|---|
| | **Material Covered** |
| **Week 1** | Unit 1: Hello |
| **Week 2** | Unit 2:Your world |
| **Week 3** | Unit 3:All about you |
| **Week 4** | Unit 4: Family and friends |
| **Week 5** | Unit 5: The way I live |
| **Week 6** | Unit 6: Every Day |
| **Week 7** | **Mid-Term Exam** |
| **Week 8** | Unit 7: My favourites |
| **Week 9** | Unit 8: Where I live |
| **Week 10** | Unit 9:Times past |
| **Week 11** | Unit 10:we had a great time! |
| **Week 12** | English for Computer Science |
| **Week 13** | Listening |
| **Week 14** | Revision of most important topics in the subject |
| **Week 15** | **Preparatory Week** |

| Week 16 | Final Exam |
|---|---|

**APPENDIX:**

| UNIVERSITYof Anbar | | | | |
|---|---|---|---|---|
| GRADING SCHEME | | | | |
| **Group** | **ECTS Grade** | **% of Students/Marks** | **Definition** | **GPA** |
| **Success Group (50 - 100)** | **A** - Excellent | Best 10% | Outstanding Performance | **5** |
| | **B** - Very Good | Next 25% | Above average with some errors | **4** |
| | **C** - Good | Next 30% | Sound work with notable errors | **3** |
| | **D** - Satisfactory | Next 25% | Fair but with major shortcomings | **2** |
| | **E** - Sufficient | Next 10% | Work meets minimum criteria | **1** |
| **Fail Group (0 – 49)** | **FX** – Fail | (45-49) | More work required but credit awarded | |
| | **F** – Fail | (0-44) | Considerable amount of work required | |
| | | | | |
| Note: | | | | |

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **الحريات وحقوق الانسان** | | | **Module Delivery** | |
| **Module Type** | S | | | ☒ **Theory**<br>☐ **Lecture**<br>☐ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | **UOA005** | | | | |
| **ECTS Credits** | **2** | | | | |
| **SWL (hr/sem)** | **50** | | | | |
| **Module Level** | 1 | | **Semester of Delivery** | 1 | |
| **Administering Department** | IS | | **College** | Type College Code | |
| **Module Leader** | Name | | **e-mail** | E-mail | |
| **Module Leader's Acad. Title** | | | **Module Leader's Qualification** | Ph.D. | |
| **Module Tutor** | Name (if available) | | **e-mail** | E-mail | |
| **Peer Reviewer Name** | Name | | **e-mail** | E-mail | |
| **Scientific Committee Approval Date** | 01/06/2023 | | **Version Number** | 1.0 | |

| Relation with other Modules<br>العلاقة مع المواد الدراسية الأخرى | | | |
|---|---|---|---|
| **Prerequisite module** | None | **Semester** | |
| **Co-requisites module** | None | **Semester** | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | أ . تعليم الطلبة على أساسيات حقوق الإنسان وقوانينها.<br>ب. التعرف على الحقوق وأهم الإشكاليات والتحديات التي تواجهها<br>ج- تحديد وفهم المفاهيم المتعلقة بالحريات، بما في ذلك الحقوق الفردية والحريات الشخصية.<br>د. تنمية القدرة على التفكير النقدي حول القضايا المتعلقة بالحريات والحقوق الفردية. |
| **Module Learning Outcomes**<br>مخرجات التعلم للمادة الدراسية | 1- أن يعرف الطالب مفهوم الحقوق وقوانينها وتطبيقاتها .<br>2- أن يعرف الطالب كيفية المشاركة في نشر الحقوق وتطبيقها بالعمل الواقعي الحقيقي.<br>3- القدرة على استخدام الحقوق وسيلة من أجل التعايش السلمي بين مكونات المجتمع وجميع المخلوقات .<br>4- القدرة على مشاركة الآخرين في نشر هذه الحقوق .<br>5- القدرة على تحليل وتعريف مفهوم الحرية والتمييز بين أنواع مختلفة من الحريات.<br>6- التفاعل مع قضايا الحريات على الصعيدين الوطني والدولي والتأثير في تشكيل الرأي العام. |
| **Indicative Contents**<br>المحتويات الإرشادية | الحقوق والحريات الأساسية وغير الأساسية<br>الحقوق والحريات المدنية<br>الحقوق السياسية<br>حقوق الانسان والقانون الدولي الإنساني |

| Learning and Teaching Strategies<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | 1- المشاركة بالتحضير في قاعة الدرس<br>2- طريقة الأسئلة والأجوبة في قاعة الدرس<br>3- الواجبات<br>4- التقارير |

| Student Workload (SWL)<br>الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا | | | |
|---|---|---|---|
| **Structured SWL (h/sem)**<br>الحمل الدراسي المنتظم للطالب خلال الفصل | 33 | **Structured SWL (h/w)**<br>الحمل الدراسي المنتظم للطالب أسبوعيا | 2 |
| **Unstructured SWL (h/sem)**<br>الحمل الدراسي غير المنتظم للطالب خلال الفصل | 17 | **Unstructured SWL (h/w)**<br>الحمل الدراسي غير المنتظم للطالب أسبوعيا | 1 |
| **Total SWL (h/sem)**<br>الحمل الدراسي الكلي للطالب خلال الفصل | **50** | | |

| Module Evaluation<br>تقييم المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| | | **Time/Number** | **Weight (Marks)** | **Week Due** | **Relevant Learning Outcome** |
| **Formative assessment** | **Quizzes** | 2 | 10% (10) | 5 and 10 | LO #1, #2 and #10, #11 |
| | **Assignments** | 2 | 10% (10) | 2 and 12 | LO #3, #4 and #6, #7 |
| | **Projects / Lab.** | 1 | | Continuous | All |
| | **Report** | 1 | 10% (10) | 13 | LO #5, #8 and #10 |
| **Summative assessment** | **Midterm Exam** | 2hr | 10% (10) | 7 | LO #1 - #7 |
| | **Final Exam** | 3hr | 60% (60) | 16 | All |
| **Total assessment** | | | 100% (100 Marks) | | |

| Delivery Plan (Weekly Syllabus)<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | تعريف الحقوق |
| **Week 2** | أنواع حقوق الانسان |
| **Week 3** | الحقوق الأساسية وغير الأساسية |
| **Week 4** | - الحقوق المدنية , الحقوق السياسية |
| **Week 5** | الحقوق الاقتصادية والاجتماعية والثقافية<br>الحقوق الفردية والحقوق الجماعية |
| **Week 6** | طائفة الحقوق الجديدة<br>حقوق الانسان والقانون الدولي الإنساني<br>العلاقة بين حقوق الانسان والقانون الدولي الانساني |
| **Week 7** | امتحان |
| **Week 8** | ماهو مفهوم الحريات :مصطلح الحرية والحريات العامة |
| **Week 9** | التطور في مفهوم الحريات العامة |
| **Week 10** | أشكال الحريات العامة وأنواعه |
| **Week 11** | النظام القانوني للحريات العامة |
| **Week 12** | تنظيم الحريات العامة من قبل السلطات العامة |

| | |
|---|---|
| **Week 13** | ضمانات الحريات العامة |
| **Week 14** | الحريات في الفكر السياسي الحديث |
| **Week 15** | الامتحان النهائي |

| **Learning and Teaching Resources**<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | Diamond L. & M. F. Plattner, eds., (2009), Democracy. A Reader, Baltimore, Johns Hopkins University Press. | yes |
| **Recommended Texts** | مفهوم الحريات العامة وحقوق الانسان ، إطارها التاريخي والفكري والفلسفي، وضماناتها الأساسية- 2010 | |
| **Websites** | **http://ghrorg-learning.blogspot.com** | |

| **Grading Scheme**<br>مخطط الدرجات | | | | |
|---|---|---|---|---|
| **Group** | **Grade** | التقدير | **Marks %** | **Definition** |
| **Success Group (50 - 100)** | **A -** Excellent | امتياز | 90 - 100 | Outstanding Performance |
| | **B -** Very Good | جيد جدا | 80 - 89 | Above average with some errors |
| | **C -** Good | جيد | 70 - 79 | Sound work with notable errors |
| | **D -** Satisfactory | متوسط | 60 - 69 | Fair but with major shortcomings |
| | **E -** Sufficient | مقبول | 50 - 59 | Work meets minimum criteria |
| **Fail Group (0 – 49)** | **FX –** Fail | راسب (قيد المعالجة) | (45-49) | More work required but credit awarded |
| | **F –** Fail | راسب | (0-44) | Considerable amount of work required |
| | | | | |

**Note:** Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

| | | |
|---|---|---|
| | Ministry of Higher Education and Scientific Research.<br>University of Anbar.<br>Department of Information System. | |

# MODULE DESCRIPTOR FORM

| Module Information | | | | | |
|---|---|---|---|---|---|
| **Module Title** | Structured programming II | | | **Module Type** | TYPE B |
| **Module Code** | CSIT108 | | **ECTS Credits** | | 8 |
| **Module Level** | UGI | | **Semester of Delivery** | | Two |
| **Administering Department** | IS | | **Faculty** | CSIT | |
| **Module Leader** | Akeel Abdulraheem Thulnoon Zoead | | **e-mail** | akeelalhadithy@uoanbar.edu.iq | |
| **Module Leader's Acad. Title** | Lecturer | | **Module Leader's Qualification** | | PhD |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | / | | **e-mail** | / | |
| **Review Committee Approval** | DD/MM/YY | | **Version Number** | 2.0 | |

| Relation With Other Modules | |
|---|---|
| **Pre-requisites** | CSIT107 |
| **Co-requisites** | |

| Module Aims, Learning Outcomes and Indicative Contents | |
|---|---|
| **Module Aims** | Learn how to use the Advanced Tools<br>helps programmers write fast, portable programs<br>The main principles of programming and the development of programming languages<br>Learn the principles of Structure programming |

| | |
|---|---|
| **Module Learning Outcomes** | A- Knowledge and Understanding A1. Learn the algorithms<br>A2.Learn the Flowchart<br>A3.Learn C++ Programming |
| **Indicative Contents** | |

## Learning and Teaching Strategies

| | |
|---|---|
| **Strategies** | The main strategy that will be adopted in delivering this module are:<br>1. Power point presentation (Data show).<br>2. Explanation on the white board using different color markers.<br>3. Discussions with the student during teaching.<br>4. Interaction with students through daily problems practice through lecture.<br>5. Solve different problems with more exercises.<br>6. Submit assignment that develop student learning. |

## Module Delivery

| | |
|---|---|
| **Structured workload (h/w)** | 5.34 |
| **Unstructured workload (h/w)** | 8 |
| **Total workload (h/w)** | 13.34 |

## Module Evaluation

| | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|
| **Quizzes** | 3 | 6% (6) | 3,7 and 11 | |
| **Assignments** | 2 | 6% (6) | 2 and 12 | |
| **Projects / Lab.** | 1 | 15% (15) | Continuous | |
| **Report** | 1 | 5% (5) | 13 | |
| **Midterm Exam** | 2 hr | 18% (18) | 7 | |
| **Final Exam** | 3 hr | 50% (50) | 16 | |
| **Total** | | 100% (100 Marks) | | |

## Learning and Teaching Resources

| | Text | Available in the Library? |
|---|---|---|
| **Required Texts** | | Yes/No |
| **Recommended Texts** | | Yes/No |
| **Websites** | | |

| Delivery Plan (Weekly Syllabus) | |
|---|---|
| | **Material Covered** |
| **Week 1** | Passing Parameters. Passing by Value. Passing by Reference. |
| **Week 2** | Pointers |
| **Week 3** | Arrays. Array of One Dimension: Declaration of Arrays. |
| **Week 4** | Elements |
| **Week 5** | Initializing Array |
| **Week 6** | Accessing Array Elements. |
| **Week 7** | **Mid-Term Exam** |
| **Week 8** | Read / Write / Process Array Elements. |
| **Week 9** | Array of Two Dimension: Declaration of 2D-Arrays. |
| **Week 10** | Read / Write / Process<br>Array Elements. |
| **Week 11** | Member Function of String stdlib Library. |
| **Week 12** | Structures. The Three Ways for Declare the Structure. |
| **Week 13** | Array of Structures. |
| **Week 14** | The Files |

| | |
|---|---|
| **Week 15** | **Preparatory Week** |
| **Week 16** | **Final Exam** |

**APPENDIX:**

| **UNIVERSITYof Anbar** | | | | |
|---|---|---|---|---|
| **GRADING SCHEME** | | | | |
| **Group** | **ECTS Grade** | **% of Students/Marks** | **Definition** | **GPA** |
| **Success Group (50 - 100)** | **A** - Excellent | Best 10% | Outstanding Performance | **5** |
| | **B** - Very Good | Next 25% | Above average with some errors | **4** |
| | **C** - Good | Next 30% | Sound work with notable errors | **3** |
| | **D** - Satisfactory | Next 25% | Fair but with major shortcomings | **2** |
| | **E** - Sufficient | Next 10% | Work meets minimum criteria | **1** |
| **Fail Group (0 – 49)** | **FX** – Fail | (45-49) | More work required but credit awarded | |
| | **F** – Fail | (0-44) | Considerable amount of work required | |
| | | | | |

Note:

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

| | | |
|---|---|---|
| | Ministry of Higher Education and Scientific Research.<br>University of Anbar.<br>Department of Information System. | |

# MODULE DESCRIPTOR FORM

| Module Information | | | | | |
|---|---|---|---|---|---|
| **Module Title** | DISCRETE STRUCTURE | | **Module Type** | TYPE B | |
| **Module Code** | CSIT112 | | **ECTS Credits** | 6 | |
| **Module Level** | UGI | | **Semester of Delivery** | First | |
| **Administering Department** | IS | | **Faculty** | CSIT | |
| **Module Leader** | Mohanad Abdulsalam younis gedan | | **e-mail** | mohanad.abdul@uoanbar.edu.iq | |
| **Module Leader's Acad. Title** | Lecturer | | **Module Leader's Qualification** | Ph. D | |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | / | | **e-mail** | / | |
| **Review Committee Approval** | DD/MM/YY | | **Version Number** | 2.0 | |

| Relation With Other Modules | |
|---|---|
| **Pre-requisites** | / |
| **Co-requisites** | / |
| **Module Aims, Learning Outcomes and Indicative Contents** | |
| **Module Aims** | 1-To convey the basic concepts of data structures<br>2-To understand basic concepts about stacking, queues, lists, trees, and graphs<br>3-It helps the student to know how to deal with data and how to choose the appropriate graphic structure for it<br>4-Data structure helps the student to understand the nature of the problem at a deeper level and thus better understanding the world for solving programming problems |

| | |
|---|---|
| **Module Learning Outcomes** | A- Knowledge and Understanding<br>A1- Know the concept of data structures and how to apply them<br>A2- Understand how to use data structures to know the data to be organized in program memory<br>A3- Understand and know the use of data structures in different real applications<br>A4- Understand and know the methods of different data structures<br>B. Subject-specific skills<br>1. Providing the student with the skill of applying various data<br>2- Providing the student with the skill of structuring programs<br>3- Providing the student with the skill of planning any problem and solving it programmatically<br>4- Providing the student with the skill of dealing with any type of data |
| **Indicative Contents** | |

## Learning and Teaching Strategies

| | |
|---|---|
| **Strategies** | The main strategy that will be adopted in delivering this module are:<br>1. Power point presentation (Data show).<br>2. Explanation on the white board using different color markers.<br>3. Discussions with the student during teaching.<br>4. Interaction with students through daily problems practice through lecture.<br>5. Solve different problems with more exercises.<br>6. Submit assignment that develop student learning. |

## Module Delivery

| | |
|---|---|
| **Structured workload (h/w)** | 3.4 |
| **Unstructured workload (h/w)** | 6.6 |
| **Total workload (h/w)** | 10 |

## Module Evaluation

| | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|
| **Quizzes** | 2 | 6% (6) | 5 and 10 | |
| **Assignments** | 2 | 6% (6) | 2 and 12 | |
| **Projects / Lab.** | 1 | 5% (5) | Continuous | |
| **Report** | 1 | 5% (5) | 13 | |
| **Midterm Exam** | 2 hr | 18% (18) | 7 | |
| **Final Exam** | 3 hr | 60% (60) | 16 | |
| **Total** | | 100% (100 Marks) | | |

## Learning and Teaching Resources

| | Text | Available in the Library? |
|---|---|---|
| **Required Texts** | | Yes/No |
| **Recommended Texts** | | Yes/No |
| **Websites** | | |

| Delivery Plan (Weekly Syllabus) | |
|---|---|
| | **Material Covered** |
| **Week 1** | Introduction |
| **Week 2** | General concept |
| **Week 3** | Array Data structure |
| **Week 4** | Stack data structure |
| **Week 5** | Expression Parsing |
| **Week 6** | Solving homework |
| **Week 7** | **Mid-Term Exam** |
| **Week 8** | Queue data structure |
| **Week 9** | circular Queue data structure |
| **Week 10** | Pointer &Structure |
| **Week 11** | linked list data structure |
| **Week 12** | linked list operations |
| **Week 13** | Doubly linked list data structure |
| **Week 14** | Doubly linked list operations |

| | |
|---|---|
| **Week 15** | **Preparatory Week** |
| **Week 16** | **Final Exam** |

**APPENDIX:**

| UNIVERSITYof Anbar | | | | |
|---|---|---|---|---|
| GRADING SCHEME | | | | |
| **Group** | **ECTS Grade** | **% of Students/Marks** | **Definition** | **GPA** |
| **Success Group (50 - 100)** | **A** - Excellent | Best 10% | Outstanding Performance | **5** |
| | **B** - Very Good | Next 25% | Above average with some errors | **4** |
| | **C** - Good | Next 30% | Sound work with notable errors | **3** |
| | **D** - Satisfactory | Next 25% | Fair but with major shortcomings | **2** |
| | **E** - Sufficient | Next 10% | Work meets minimum criteria | **1** |
| **Fail Group (0 – 49)** | **FX** – Fail | (45-49) | More work required but credit awarded | |
| | **F** – Fail | (0-44) | Considerable amount of work required | |
| | | | | |

Note:

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

| | | |
|---|---|---|
| | Ministry of Higher Education and Scientific Research.<br>University of Anbar.<br>Department of Information System. | |

# MODULE DESCRIPTOR FORM

| Module Information | | | | | |
|---|---|---|---|---|---|
| **Module Title** | Logic Design II | | **Module Type** | TYPE B | |
| **Module Code** | CSIT111 | | **ECTS Credits** | 6 | |
| **Module Level** | UGI | | **Semester of Delivery** | Two | |
| **Administering Department** | IS | | **Faculty** | CSIT | |
| **Module Leader** | Muntaser AbdulWahed Salman Abdulaziz | | **e-mail** | co.montasser.salman@uoanbar.edu.iq | |
| **Module Leader's Acad. Title** | Lecturer | | **Module Leader's Qualification** | PhD. | |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | / | | **e-mail** | / | |
| **Review Committee Approval** | DD/MM/YY | | **Version Number** | 2.0 | |

| Relation With Other Modules | |
|---|---|
| **Pre-requisites** | CSIT109 |
| **Co-requisites** | |
| **Module Aims, Learning Outcomes and Indicative Contents** | |
| **Module Aims** | ● The student should understand encoder, decoder and multiplexers<br>● The student should understand synchronous logic circuit<br>● The student should understand flip-flops and how to use them<br>● The student should understand registers and their types<br>● The student should understand counters and their types<br>● The student should understand ROM and PLA implementation |
| **Module Learning Outcomes** | A1. The student should understand encoder, decoder and multiplexers<br>A2. The student should understand flip-flops and how to use them. |

| | |
|---|---|
| | A3. The student should understand registers and their types.<br>A4. The student should understand counters and their types.<br>A5. The student should understand ROM and PLA implementation. |
| **Indicative Contents** | |

## Learning and Teaching Strategies

| | |
|---|---|
| **Strategies** | The main strategy that will be adopted in delivering this module are:<br>1. Power point presentation (Data show).<br>2. Explanation on the white board using different color markers.<br>3. Discussions with the student during teaching.<br>4. Interaction with students through daily problems practice through lecture.<br>5. Solve different problems with more exercises.<br>6. Submit assignment that develop student learning. |

## Module Delivery

| | |
|---|---|
| **Structured workload (h/w)** | 4.4 |
| **Unstructured workload (h/w)** | 5.6 |
| **Total workload (h/w)** | 10 |

## Module Evaluation

| | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|
| **Quizzes** | 3 | 6% (6) | 3,7 and 11 | |
| **Assignments** | 2 | 6% (6) | 2 and 12 | |
| **Projects / Lab.** | 1 | 15% (15) | Continuous | |
| **Report** | 1 | 5% (5) | 13 | |
| **Midterm Exam** | 2 hr | 18% (18) | 7 | |
| **Final Exam** | 3 hr | 50% (50) | 16 | |
| **Total** | | 100% (100 Marks) | | |

## Learning and Teaching Resources

| | Text | Available in the Library? |
|---|---|---|
| **Required Texts** | | Yes/No |
| **Recommended Texts** | | Yes/No |
| **Websites** | | |

| Delivery Plan (Weekly Syllabus) | |
|---|---|
| | **Material Covered** |
| **Week 1** | Synchronous logic gates |
| **Week 2** | Adder and subtractor circuits |
| **Week 3** | Comparator circuits |
| **Week 4** | Encoders and multiplexers |
| **Week 5** | Multiplexers |
| **Week 6** | First month exam |
| **Week 7** | **Mid-Term Exam** |
| **Week 8** | Flip-flops |
| **Week 9** | SR flip flop and j k flip flop |
| **Week 10** | T flip flop and D flip flop |
| **Week 11** | Second month exam |
| **Week 12** | Registers design |
| **Week 13** | Counters design |
| **Week 14** | ROM PLA State plan |

| | |
|---|---|
| **Week 15** | **Preparatory Week** |
| **Week 16** | **Final Exam** |

**APPENDIX:**

| UNIVERSITYof Anbar | | | | |
|---|---|---|---|---|
| GRADING SCHEME | | | | |
| **Group** | **ECTS Grade** | **% of Students/Marks** | **Definition** | **GPA** |
| **Success Group (50 - 100)** | **A** - Excellent | Best 10% | Outstanding Performance | **5** |
| | **B** - Very Good | Next 25% | Above average with some errors | **4** |
| | **C** - Good | Next 30% | Sound work with notable errors | **3** |
| | **D** - Satisfactory | Next 25% | Fair but with major shortcomings | **2** |
| | **E** - Sufficient | Next 10% | Work meets minimum criteria | **1** |
| **Fail Group (0 – 49)** | **FX** – Fail | (45-49) | More work required but credit awarded | |
| | **F** – Fail | (0-44) | Considerable amount of work required | |
| | | | | |

Note:

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

| | | |
|---|---|---|
| | Ministry of Higher Education and Scientific Research.<br>University of Anbar.<br>Department of Information System. | |

# MODULE DESCRIPTOR FORM

| Module Information | | | | | |
|---|---|---|---|---|---|
| **Module Title** | Mathematic II | | **Module Type** | TYPE C | |
| **Module Code** | ISDC116 | | **ECTS Credits** | 6 | |
| **Module Level** | UGI | | **Semester of Delivery** | One | |
| **Administering Department** | IS | | **Faculty** | CSIT | |
| **Module Leader** | Mohammed Rabeea Al-Dahhan | | **e-mail** | mohammed.rabeea@uoanbar.edu.iq | |
| **Module Leader's Acad. Title** | Lecturer | | **Module Leader's Qualification** | PhD. | |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | / | | **e-mail** | / | |
| **Review Committee Approval** | DD/MM/YY | | **Version Number** | 2.0 | |

| Relation With Other Modules | |
|---|---|
| **Pre-requisites** | ISDC115 |
| **Co-requisites** | / |
| **Module Aims, Learning Outcomes and Indicative Contents** | |
| **Module Aims** | In a computer science department, the specific aims of a Mathematics II module can vary depending on the curriculum and the intended learning outcomes. However, here are some common aims of a Mathematics II module in a computer science department:<br>Advanced Algebra and Calculus: The module aims to provide a deeper understanding of advanced algebraic concepts such as matrices, vectors, and complex numbers. It also covers calculus topics including limits, derivatives, and integrals. |

| | |
|---|---|
| | Discrete Mathematics: Discrete mathematics is essential in computer science as it provides the foundation for many algorithms, data structures, and problem-solving techniques. The module aims to introduce topics like logic, set theory, combinatorics, graph theory, and formal languages.<br>Probability and Statistics: Probability theory and statistics play a crucial role in various aspects of computer science, such as machine learning, data analysis, and algorithm design. The module aims to cover probability concepts, random variables, statistical distributions, hypothesis testing, and basic statistical analysis. |
| **Module Learning Outcomes** | Understanding Advanced Algebra and Calculus: Students should demonstrate a solid understanding of advanced algebraic concepts, such as matrices, vectors, and complex numbers. They should be able to apply calculus techniques, such as limits, derivatives, and integrals, in the context of computer science problems.<br>Applying Discrete Mathematics: Students should be able to apply discrete mathematics concepts and techniques to solve problems in computer science. This includes understanding and using logic, set theory, combinatorics, graph theory, and formal languages in algorithm design and analysis.<br>Analyzing Probability and Statistics: Students should be able to analyze and interpret probabilistic and statistical data relevant to computer science problems. They should understand concepts such as probability distributions, random variables, hypothesis testing, and basic statistical analysis.<br>Using Numerical Methods: Students should be proficient in using numerical methods to solve computational problems encountered in computer science. This includes employing numerical approximation techniques, solving equations numerically, and performing numerical integration. |
| **Indicative Contents** | |
| **Learning and Teaching Strategies** | |
| **Strategies** | The main strategy that will be adopted in delivering this module are:<br>1. Power point presentation (Data show).<br>2. Explanation on the white board using different color markers.<br>3. Discussions with the student during teaching.<br>4. Interaction with students through daily problems practice through lecture.<br>5. Solve different problems with more exercises.<br>6. Submit assignment that develop student learning. |

| Module Delivery | |
|---|---|
| **Structured workload (h/w)** | 3.3 |
| **Unstructured workload (h/w)** | 6.7 |
| **Total workload (h/w)** | 10 |

## Module Evaluation

| | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|
| **Quizzes** | 2 | 6% (6) | 5 and 10 | |
| **Assignments** | 2 | 6% (6) | 2 and 12 | |
| **Projects / Lab.** | 1 | 5% (5) | Continuous | |
| **Report** | 1 | 5% (5) | 13 | |
| **Midterm Exam** | 2 hr | 18% (18) | 7 | |
| **Final Exam** | 3 hr | 60% (60) | 16 | |
| **Total** | | 100% (100 Marks) | | |

## Learning and Teaching Resources

| | Text | Available in the Library? |
|---|---|---|
| **Required Texts** | | Yes/No |
| **Recommended Texts** | | Yes/No |
| **Websites** | | |

## Delivery Plan (Weekly Syllabus)

| | Material Covered |
|---|---|
| **Week 1** | Topic: Integral Calculus - Techniques of Integration<br>Integration by substitution<br>Integration by parts<br>Trigonometric substitutions |

| | |
|---|---|
| **Week 2** | Topic: Integral Calculus - Techniques of Integration<br>Integration by substitution<br>Integration by parts<br>Trigonometric substitutions |
| **Week 3** | Topic: Integral Calculus - Techniques of Integration<br>Integration by substitution<br>Integration by parts<br>Trigonometric substitutions |
| **Week 4** | Topic: Integral Calculus - Advanced Integration Techniques<br>Partial fraction decomposition<br>Integration using trigonometric identities<br>Integration of rational functions |
| **Week 5** | Topic: Integral Calculus - Advanced Integration Techniques<br>Partial fraction decomposition<br>Integration using trigonometric identities<br>Integration of rational functions |
| **Week 6** | Topic: Integral Calculus - Advanced Integration Techniques<br>Partial fraction decomposition<br>Integration using trigonometric identities<br>Integration of rational functions |
| **Week 7** | Mid-Term Exam |
| **Week 8** | Topic: Integral Calculus - Advanced Integration Techniques<br>Partial fraction decomposition<br>Integration using trigonometric identities<br>Integration of rational functions |
| **Week 9** | Topic: Integral Calculus - Advanced Integration Techniques<br>Partial fraction decomposition<br>Integration using trigonometric identities<br>Integration of rational functions |
| **Week 10** | Topic: Integral Calculus - Advanced Integration Techniques<br>Partial fraction decomposition<br>Integration using trigonometric identities<br>Integration of rational functions |

| | |
|---|---|
| **Week 11** | Topic: Integral Calculus - Advanced Integration Techniques<br>Partial fraction decomposition<br>Integration using trigonometric identities<br>Integration of rational functions |
| **Week 12** | Topic: Integral Calculus - Advanced Integration Techniques<br>Partial fraction decomposition<br>Integration using trigonometric identities<br>Integration of rational functions |
| **Week 13** | Topic: Integral Calculus - Advanced Integration Techniques<br>Partial fraction decomposition<br>Integration using trigonometric identities<br>Integration of rational functions |
| **Week 14** | Topic: Review and Practice<br>Comprehensive review of topics covered<br>Problem-solving exercises and practice problems<br>Preparation for the final assessment |
| **Week 15** | **Preparatory Week** |
| **Week 16** | **Final Exam** |

**APPENDIX:**

| **UNIVERSITYof Anbar** | | | | |
|---|---|---|---|---|
| **GRADING SCHEME** | | | | |
| **Group** | **ECTS Grade** | **% of Students/Marks** | **Definition** | **GPA** |
| **Success Group (50 - 100)** | **A** - Excellent | Best 10% | Outstanding Performance | **5** |
| | **B** - Very Good | Next 25% | Above average with some errors | **4** |
| | **C** - Good | Next 30% | Sound work with notable errors | **3** |
| | **D** - Satisfactory | Next 25% | Fair but with major shortcomings | **2** |
| | **E** - Sufficient | Next 10% | Work meets minimum criteria | **1** |
| **Fail Group (0 – 49)** | **FX** – Fail | (45-49) | More work required but credit awarded | |
| | **F** – Fail | (0-44) | Considerable amount of work required | |
| | | | | |
| Note: | | | | |

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

| | | |
|---|---|---|
| | Ministry of Higher Education and Scientific Research.<br>University of Anbar.<br>Department of Information System. | |

# MODULE DESCRIPTOR FORM

| Module Information | | | | | |
|---|---|---|---|---|---|
| **Module Title** | Arabic Language | | **Module Type** | TYPE B | |
| **Module Code** | UOA137 | | **ECTS Credits** | 4 | |
| **Module Level** | UGI | | **Semester of Delivery** | Two | |
| **Administering Department** | IS | | **Faculty** | CSIT | |
| **Module Leader** | Saad Ibrahim Ahmed Hussein | | **e-mail** | Saad.ibrahim@uonbar.edu.iq | |
| **Module Leader's Acad. Title** | Assistant Professor | | **Module Leader's Qualification** | Ph. D | |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | / | | **e-mail** | / | |
| **Review Committee Approval** | DD/MM/YY | | **Version Number** | 2.0 | |

| Relation With Other Modules | |
|---|---|
| **Pre-requisites** | / |
| **Co-requisites** | |
| **Module Aims, Learning Outcomes and Indicative Contents** | |
| **Module Aims** | تعليم الطلبة على أساسيات اللغة العربية وقواعدها<br>تعليم الطلبة على كيفية الأعراب |
| **Module Learning Outcomes** | **أن يتعرف الطالب على قواعد اللغة العربية**<br>أن يعرف الطالب كيفية بناء الجمل واستخراجها للعنوان المطلوب |
| **Indicative Contents** | |

| | |
|---|---|
| **Learning and Teaching Strategies** | |
| **Strategies** | The main strategy that will be adopted in delivering this module are:<br>1. Power point presentation (Data show).<br>2. Explanation on the white board using different color markers.<br>3. Discussions with the student during teaching.<br>4. Interaction with students through daily problems practice through lecture.<br>5. Solve different problems with more exercises.<br>6. Submit assignment that develop student learning. |

| **Module Delivery** | |
|---|---|
| **Structured workload (h/w)** | 2.3 |
| **Unstructured workload (h/w)** | 4.3 |
| **Total workload (h/w)** | 6.6 |

**Module Evaluation**

| | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|
| **Quizzes** | 2 | 6% (6) | 5 and 10 | |
| **Assignments** | 2 | 6% (6) | 2 and 12 | |
| **Projects / Lab.** | 1 | 5% (5) | Continuous | |
| **Report** | 1 | 5% (5) | 13 | |
| **Midterm Exam** | 2 hr | 18% (18) | 7 | |
| **Final Exam** | 3 hr | 60% (60) | 16 | |
| **Total** | | 100% (100 Marks) | | |

| **Learning and Teaching Resources** | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | | Yes/No |
| **Recommended Texts** | | Yes/No |
| **Websites** | | |

| | |
|---|---|

| Delivery Plan (Weekly Syllabus) | |
|---|---|
| | **Material Covered** |
| **Week 1** | العدد تذكيره وتأنيثه |
| **Week 2** | الأعداد المفردة والمركبة |
| **Week 3** | ألفاظ العقود و الأعداد (مئة ، ألف ، مليون) |
| **Week 4** | تعريف العدد وتنكيره |
| **Week 5** | ما يصاغ من العدد على وزن فاعل |
| **Week 6** | كتابة الهمزة المتوسطة والمتطرفة |
| **Week 7** | Mid-Term Exam |
| **Week 8** | كتابة الألف اللينة |
| **Week 9** | كتابة التاء المربوطة والمبسوطة |
| **Week 10** | كتابة الضاد والظاء |
| **Week 11** | اللامات وأنواعها |
| **Week 12** | الهاءات وأنواعها |
| **Week 13** | النونات وأنواعها |
| **Week 14** | استعمالات (ما ، من) والفرق بين (أما ، إما) |
| **Week 15** | **Preparatory Week** |
| **Week 16** | **Final Exam** |

**APPENDIX:**

| UNIVERSITYof Anbar |
|---|
| GRADING SCHEME |

| Group | ECTS Grade | % of Students/Marks | Definition | GPA |
|---|---|---|---|---|
| **Success Group (50 - 100)** | **A -** Excellent | Best 10% | Outstanding Performance | **5** |
| | **B -** Very Good | Next 25% | Above average with some errors | **4** |
| | **C -** Good | Next 30% | Sound work with notable errors | **3** |
| | **D -** Satisfactory | Next 25% | Fair but with major shortcomings | **2** |
| | **E -** Sufficient | Next 10% | Work meets minimum criteria | **1** |
| **Fail Group (0 – 49)** | **FX –** Fail | (45-49) | More work required but credit awarded | |
| | **F –** Fail | (0-44) | Considerable amount of work required | |
| | | | | |

Note:

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

# University of Anbar
# Diploma Supplement

Anbar, Ramadi, Iraq
Phone No.:
e-mail: Contact@uoanbar.edu.iq
URL: https://www.uoanbar.edu.iq/

This Diploma Supplement follows the model developed by the European Commission, Council of Europe and UNESCO/CEPES. The purpose of the supplement is to provide sufficient independent data to improve the international 'transparency' and fair academic and professional recognition of qualifications (diplomas, degrees, certificates etc.). It is designed to provide a description of the nature, level, context, content and status of the studies that were pursued and successfully completed by the individual named on the original qualification to which this supplement is appended. It should be free from any value judgements, equivalence statements or suggestions about recognition. Information in all sections should be provided. Where information is not provided, an explanation should give the reason why.

## 1. INFORMATION IDENTIFYING THE HOLDER OF THE QUALIFICATION

1.1 First Name:
1.2 Second Name:
1.3 Third Name:
1.4 Date of Birth:
1.5 Place of Birth:
1.6 Student Identification Number:
1.7 National ID number:

## 2. INFORMATION IDENTIFYING THE QUALIFICATION

2.1 Name of the Qualification:
2.2 Main Field of the Study of the Qualification:
2.3 Name and Status of the Awarding Institution:
2.4 Language of Instruction/ Examination:

## 3. INFORMATION ON THE LEVEL OF QUALIFICATION

3.1 Level of Qualification

**First Cycle (Bachelor's Degree)**

3.2 Official Length of the Programme

**4 years – 8 Semesters**

3.3 Access Requirements

**High School Diploma – Placement through the National Central Admission Requirements**

## 4. INFORMATION ON THE CONTENTS AND RESULTS GAINED

4.1 Study System:

**Bologna process**

4.2 Mode of Study

**First Cycle (Bachelor's Degree)**

4.3 Program Requirements

**A Student is required to have a minimum CGPA of 50% and no falling grades**

4.4 Minimum Credits for Semester, Year and Graduation (ECTS)

**30 ECTS/Semester | 60 ECTS/Year | 240 ECTS/Programme | 1 ECTS = 25 hrs**

4.5 Student Learning Outcomes

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies

4.6 Programme Details and the Individual Grade/Marks Obtained

| Module Code | Module Name | Type | Mark Grade | ECTS |
|---|---|---|---|---|
| **Semester 1** | | | | |
| CSDC110 | Computer Technology | Core | | 6 |
| CSDC111 | Programming in C++ I | Core | | 8 |
| CSDC112 | Logic Design I | Core | | 6 |
| CCIT060 | Mathematics | Basic | | 6 |
| UOA003 | English Language I | Support | | 2 |
| UOA005 | Democracy and Human Rights | Support | | 2 |
| Grade Point Average (GPA) = ( – ) | | | Total ECTS | 30 |
| **Semester 2** | | | | |
| CSDC120 | Microprocessors | Core | | 6 |
| CCIT061 | Discrete Structures | Basic | | 6 |
| CSDC121 | Programming in C++ II | Core | | 8 |
| CSDC122 | Logic Design II | Core | | 6 |
| UOA001 | Arabic Language I | Support | | 2 |
| CSDC123 | Communication Skills | Core | | 2 |
| Grade point Average (GPA) = ( – ) | | | Total ECTS | 30 |
| **Semester 3** | | | | |
| CSDC210 | Database | Core | | 7 |
| CSDC211 | Object Oriented Programming | Core | | 8 |
| CSDC212 | Data Structures | Core | | 7 |
| CSDC213 | Advanced Mathematics | Core | | 4 |
| UOA006 | The crimes of the defunct Ba'ath party | Support | | 2 |
| UOA002 | Arabic Language II | Support | | 2 |
| Grade Point Average (GPA) = ( – ) | | | Total ECTS | 30 |
| **Semester 4** | | | | |
| CSDC220 | Computational Theory | Core | | 5 |
| CSDC221 | python | Core | | 7 |
| CSDC222 | Algorithms | Core | | 6 |
| CCIT062 | Numerical Analysis | Basic | | 4 |
| CCIT063 | Computer Networks | Support | | 6 |
| UOA004 | English Language 2 | Support | | 2 |
| GPA = ( – ) | | | Total ECTS | 30 |
| **Semester 5** | | | | |
| CSDC310 | Visual Programming | Core | | 6 |
| CSDC311 | Computer Graphics | Core | | 6 |
| CSDC312 | Computer Architecture | Core | | 6 |
| CSDC321 | Wireless Networks | Core | | 6 |
| CSDC323 | Mobile Applications Programming | Core | | 6 |
| Grade Point average (GPA) = ( – ) | | | Total ECTS | 30 |

| Semester 6 | | | | | |
|---|---|---|---|---|---|
| CSDC320 | Multimedia | Core | | | 7 |
| CSDE223 | Internet of Things | Elective | | | 6 |
| CSDC322 | Compilers | Core | | | 7 |
| CSDC313 | Software Engineering | Core | | | 6 |
| UOA019 | Research methodology | Basic | | | 4 |
| Grade Point Average (GPA) = ( – ) | | | | Total ECTS | 30 |
| **Semester 7** | | | | | |
| CSDC410 | Operating Systems I | Core | | | 6 |
| CSDC411 | Computer Security 1 | Core | | | 6 |
| CSDC412 | Artificial Intelligence | Core | | | 6 |
| CSDC413 | Digital Image Processing | Core | | | 6 |
| CSDE414 | Game Programming | Elective | | | 6 |
| Grade Point Average (GPA) = ( – ) | | | | Total ECTS | 30 |
| **Semester 8** | | | | | |
| CSDC420 | Operating Systems II | Core | 95 | A | 5 |
| CSDC421 | Computer Security II | Core | 87 | B | 5 |
| CSDC422 | Machine Learning | Core | 76 | C | 6 |
| CSDC423 | Web Development | Core | 65 | D | 6 |
| UOA020 | Project | Basic | 65 | D | 8 |
| Grade Point Average (GPA) = ( – ) | | | | Total ECTS | 30 |
| **Cumulative Grade Point Average (CGPA) =** | | | | **Programme total ECTS** | **240** |

## 4.7 Grading Scheme and Grade Distribution Guidance

| Group | Grade | Marks | Definitions |
|---|---|---|---|
| Success Group (50 - 100) | A - Excellent | 90 - 100 | Outstanding Performance |
| | B - Very Good | 80 - 89 | Above average with some errors |
| | C - Good | 70 - 79 | Sound work with notable errors |
| | D - Satisfactory | 60 - 69 | Fair but with major shortcomings |
| | E - Sufficient | 50 - 59 | Work meets minimum criteria |
| Fail Group (0 – 49) | F - Fail | 00 - 49 | Considerable amount of work required |

Marks with Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

4.8 Overall Classification of the Qualification

**Cumulative Grade Point Average (CGPA) =**

**Final Grade of Degree relative RANK: 4 of 23**

## 5. INFORMATION ON THE FUNCTION OF THE QUALIFICATION

5.1 Access to Further Study

**May apply to second cycle programs**

5.2 Professional Status Conferred

**The degree enables the graduate to exercise the profession**

## 6. ADDITIONAL INFORMATION

6.1 Additional Information

**University of Anbar, College of Computer Science and Information Technology, Department of Computer Science**

6.2 Further Information Sources

**University Website** https://uoanbar.edu.iq/

**Registration Office e-mail** xxxxx@ uoanbar.edu.iq

## 7. CERTIFICATION OF THE SUPPLEMENT

7.1 Date **01.10. 2027**

7.2 Name **Full Name**

7.3 Capacity **University General Registrar**

7.4 Signature

7.5 Official Stamp and Seal

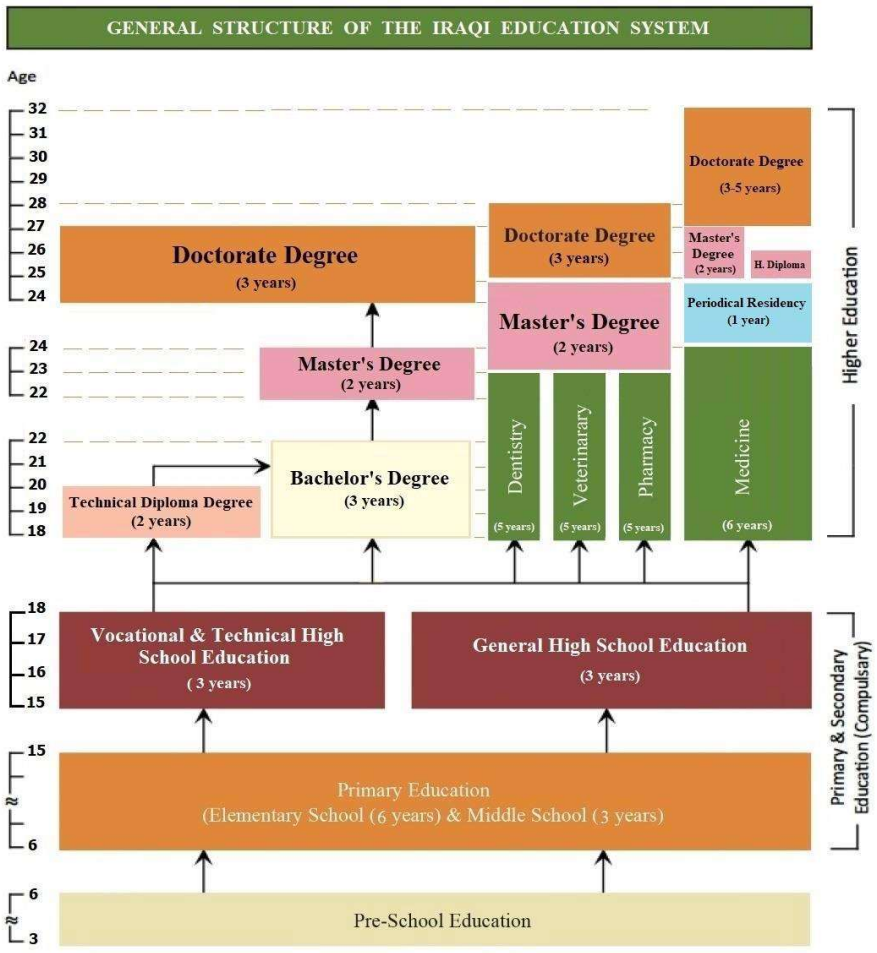
## Structure and Degree System

The basic structure of the Iraqi National Education System consists of stages of noncompulsory pre-school education; Compulsory primary (elementary and middle school) and secondary (high school) education; and higher education. Primary education begins at the age of 6 years (72 months), lasts nine years and comprises six years of elementary and three years of middle school education. Secondary education is three years and divided into two categories as "General High School Education" and "Vocational and Technical High School Education". The entry into these categories is through composite scores obtained from centralized exam of secondary schools.

Higher Education System is managed by the Ministry of Higher Education and Scientific Research which is responsible for the planning, coordination, governance and supervision of higher education within the provisions set forth in the Constitution of the Republic of Iraq and Higher Education Law. Both state and private universities are founded by law and subjected to the higher education law and to the regulations enacted in accordance with it.

Higher Education in Iraq comprises all post-secondary higher education programs, consisting of short, first, second and third cycle degrees in terms of the terminology of the Bologna Process. Except for the Architectural Engineering, Pharmacy, Dentistry and Veterinary programs, which are five years (300 ECTS), and Medicine Programme which is six years (360 ECTS), the duration of the fist cycle (Bachelor degree) is a full-time four years (240 ECTS) study. The duration of the short cycle (Technical Diploma) is a full-time two years (120 ECTS) study.

Graduate level of Study consists of second cycle (master) and third cycle (doctorate) degree programs. The second cycle is a master with thesis with duration of two years (120 ECTS). Third cycle (doctorate) degree programs are completed having earned a minimum of 180 ECTS credits., which consists of completion of courses, passing a proficiency examination and doctoral thesis.



| | | |
|---|---|---|
| | Ministry of Higher Education and Scientific Research.<br>University of Anbar.<br>Department of Information System. | |

# MODULE DESCRIPTOR FORM

| Module Information | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Structured programming I** | | **Module Type** | TYPE C | |
| **Module Code** | ISSP101 | | **ECTS Credits** | 8 | |
| **Module Level** | UGI | | **Semester of Delivery** | One | |
| **Administering Department** | IS | | **Faculty** | CSIT | |
| **Module Leader** | Mahmoud Hilal | | **e-mail** | mah2005hilal@uoanbar.edu.iq | |
| **Module Leader's Acad. Title** | Lecturer | | **Module Leader's Qualification** | PhD | |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | / | | **e-mail** | / | |
| **Review Committee Approval** | DD/MM/YY | | **Version Number** | 1.0 | |

| Relation With Other Modules | |
|---|---|
| **Pre-requisites** | / |
| **Co-requisites** | / |
| **Module Aims, Learning Outcomes and Indicative Contents** | |
| **Module Aims** | Learn how to use the Advanced Tools<br>helps programmers write fast, portable programs<br>The main principles of programming and the development of programming languages<br>Learn the principles of Structure programming |
| **Module Learning Outcomes** | A1- Knowledge and understanding<br>A2. Learn algorithms<br>A3. Learn flowcharts |

| | |
|---|---|
| | A4. Learn structured programming<br>A5. Learn Python programming |
| **Indicative Contents** | |

## Learning and Teaching Strategies

| | |
|---|---|
| **Strategies** | The main strategy that will be adopted in delivering this module are:<br>1. Power point presentation (Data show).<br>2. Explanation on the white board using different color markers.<br>3. Discussions with the student during teaching.<br>4. Interaction with students through daily problems practice through lecture.<br>5. Solve different problems with more exercises.<br>6. Submit assignment that develop student learning. |

## Module Delivery

| | |
|---|---|
| **Structured workload (h/w)** | 5.4 |
| **Unstructured workload (h/w)** | 8 |
| **Total workload (h/w)** | 13.4 |

## Module Evaluation

| | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|
| **Quizzes** | 3 | 6% (6) | 3,7 and 11 | |
| **Assignments** | 2 | 6% (6) | 2 and 12 | |
| **Projects / Lab.** | 1 | 15% (15) | Continuous | |
| **Report** | 1 | 5% (5) | 13 | |
| **Midterm Exam** | 2 hr | 18% (18) | 7 | |
| **Final Exam** | 3 hr | 50% (50) | 16 | |
| **Total** | | 100% (100 Marks) | | |

## Learning and Teaching Resources

| | Text | Available in the Library? |
|---|---|---|

| | | |
|---|---|---|
| **Required Texts** | "Starting Out with Python plus My Programming Lab with Pearson Text --Access Card Package (3rd Edition) Tony Gaddis ISBN-13: 978-0133862256" | Yes/No |
| **Recommended Texts** | | Yes/No |
| **Websites** | | |

Course Structure

| Week | Hours | ILOs | Unit/Module or Topic Title | Teaching Method | Assessment Method |
|---|---|---|---|---|---|
| First | 3 h. | Programming principles | Overview to Programming Language | Explain Menu, Getting Started with python | |
| Second | 3 h. | Algorithms | Algorithms and Flow Charts | Algorithms and Flow Charts | |
| Third | 3 h. | Introduction to Programming | Storing and Manipulating Values Calling Functions Comments Formatting Values Working with Strings Exercises | Storing and Manipulating Values Calling Functions Comments Formatting Values Working with Strings Exercises | Quiz |
| Fourth | 3 h. | Unary Operators | Unary Minus Increment and /decrement Operators. | Program of Unary Minus Increment and /decrement Operators. | |
| Fifth | 3 h. | Operational Operators | Operational Assignment Operators Relational Operators Logical Operators. Bitwise Operator Logical Operators. Bitwise Operator | Program Operational Assignment Operators Relational Operators Program Logical Operators. Bitwise Operator | |
| Sixth | 3 h. | Selection Statements | Boolean Logic If Statements If-Else Statements | Programs in Lectures | Quiz |
| Seventh | 3 h. | Selection Statements | If-Elif Statements If-Elif-Else Statements Nested If Statements | Programs in Lectures | |

| | | | | | |
|---|---|---|---|---|---|
| Ninth | 3 h. | To evaluate the students | Monthly exam | | By exam |
| Ninth | 3 h. | Repetition | While Loops | | By exam |
| Tenth | 3 h. | Repetition | For Loops | Programs in Lectures | |
| Eleventh | 3 h. | Repetition | Nested Loops Exercises | Programs in Lectures | |
| Twelfth | 3 h. | Functions | Functions with Parameters Variables in Functions | Programs in Lectures | |
| Thirteenth | 3 h. | Functions | Return Values | Programs in Lectures | |
| Fourteenth | 3 h. | Functions | Importing Functions into Other Programs Exercises | Programs in Lectures | |
| Fifteenth | 3 h. | To evaluate the students | Monthly exam | | By exam |

**APPENDIX:**

| **UNIVERSITYof Anbar** | | | | |
|---|---|---|---|---|
| **GRADING SCHEME** | | | | |
| **Group** | **ECTS Grade** | **% of Students/Marks** | **Definition** | **GPA** |
| **Success Group (50 - 100)** | **A** - Excellent | Best 10% | Outstanding Performance | **5** |
| | **B** - Very Good | Next 25% | Above average with some errors | **4** |
| | **C** - Good | Next 30% | Sound work with notable errors | **3** |
| | **D** - Satisfactory | Next 25% | Fair but with major shortcomings | **2** |
| | **E** - Sufficient | Next 10% | Work meets minimum criteria | **1** |
| **Fail Group (0 – 49)** | **FX** – Fail | (45-49) | More work required but credit awarded | |
| | **F** – Fail | (0-44) | Considerable amount of work required | |
| | | | | |

Note:

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

| | | |
|---|---|---|
| | Ministry of Higher Education and Scientific Research.<br>University of Anbar.<br>Department of Information System. | |

# MODULE DESCRIPTOR FORM

| Module Information | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Fundamental of Information Technology** | | **Module Type** | TYPE C | |
| **Module Code** | ISFI102 | | **ECTS Credits** | 6 | |
| **Module Level** | UGI | | **Semester of Delivery** | One | |
| **Administering Department** | IS | | **Faculty** | CSIT | |
| **Module Leader** | Mohanad Abdulsalam Younis gedan | | **e-mail** | mohanad.abdul@uoanbar.edu.iq | |
| **Module Leader's Acad. Title** | Lecturer | | **Module Leader's Qualification** | Ph. D | |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | / | | **e-mail** | / | |
| **Review Committee Approval** | DD/MM/YY | | **Version Number** | 2.0 | |

| Relation With Other Modules | |
|---|---|
| **Pre-requisites** | / |
| **Co-requisites** | / |
| **Module Aims, Learning Outcomes and Indicative Contents** | |
| **Module Aims** | - Provide a basic knowledge of computer hardware and software<br>- Introduce the business areas to which computers may be applied.<br>- Provide an introduction to business organization and information systems.<br>- Develop the skills in network & communication, which play an important part in business computing and information processing. |
| **Module Learning** | A-Knowledge and Understanding |

| | |
|---|---|
| **Outcomes** | A1. The student should understand the architecture of any IT systems.<br>A2. The student should understand the parts of hardware.<br>A3. The student should understand the system software.<br>A4. The student should understand the architecture of networks, protocols and communications devices. |
| **Indicative Contents** | |
| **Learning and Teaching Strategies** | |
| **Strategies** | The main strategy that will be adopted in delivering this module are:<br>1. Power point presentation (Data show).<br>2. Explanation on the white board using different color markers.<br>3. Discussions with the student during teaching.<br>4. Interaction with students through daily problems practice through lecture.<br>5. Solve different problems with more exercises.<br>6. Submit assignment that develop student learning. |

| **Module Delivery** | |
|---|---|
| **Structured workload (h/w)** | 3.4 |
| **Unstructured workload (h/w)** | 5.6 |
| **Total workload (h/w)** | 10 |

## Module Evaluation

| | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|
| **Quizzes** | 3 | 6% (6) | 3,7 and 11 | |
| **Assignments** | 2 | 6% (6) | 2 and 12 | |
| **Projects / Lab.** | 1 | 15% (15) | Continuous | |
| **Report** | 1 | 5% (5) | 13 | |
| **Midterm Exam** | 2 hr | 18% (18) | 7 | |
| **Final Exam** | 3 hr | 50% (50) | 16 | |
| **Total** | | 100% (100 Marks) | | |

| Learning and Teaching Resources | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | | Yes/No |
| **Recommended Texts** | | Yes/No |
| **Websites** | | |

| Delivery Plan (Weekly Syllabus) | |
|---|---|
| | **Material Covered** |
| **Week 1** | Introduction of Computers and Programming |
| **Week 2** | Brief history of computer |
| **Week 3** | Generation of Computers & Computer hierarchy |
| **Week 4** | Basic Computer Components |
| **Week 5** | Computer function (fetch cycle, interrupt cycle, I/O function |
| **Week 6** | Semiconductor main memory (RAM, ROM, CACHE) |
| **Week 7** | **Mid-Term Exam** |
| **Week 8** | Computer Software (application software) |
| **Week 9** | External & Internal memory |
| **Week 10** | Telecommunications system & Network |
| **Week 11** | Topology of a network |
| **Week 12** | Layering model |
| **Week 13** | Protocols |
| **Week 14** | addressing communications |

| | |
|---|---|
| **Week 15** | **Preparatory Week** |
| **Week 16** | **Final Exam** |

**APPENDIX:**

| UNIVERSITYof Anbar | | | | |
|---|---|---|---|---|
| GRADING SCHEME | | | | |
| **Group** | **ECTS Grade** | **% of Students/Marks** | **Definition** | **GPA** |
| **Success Group (50 - 100)** | **A** - Excellent | Best 10% | Outstanding Performance | **5** |
| | **B** - Very Good | Next 25% | Above average with some errors | **4** |
| | **C** - Good | Next 30% | Sound work with notable errors | **3** |
| | **D** - Satisfactory | Next 25% | Fair but with major shortcomings | **2** |
| | **E** - Sufficient | Next 10% | Work meets minimum criteria | **1** |
| **Fail Group (0 – 49)** | **FX** – Fail | (45-49) | More work required but credit awarded | |
| | **F** – Fail | (0-44) | Considerable amount of work required | |
| | | | | |

Note:

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

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|---|---|---|
| | Ministry of Higher Education and Scientific Research.<br>University of Anbar.<br>Department of Information System. | |

# MODULE DESCRIPTOR FORM

| Module Information | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Logic Design I** | | | **Module Type** | TYPE C |
| **Module Code** | ISLD103 | | **ECTS Credits** | | 6 |
| **Module Level** | UGI | | **Semester of Delivery** | | One |
| **Administering Department** | IS | | **Faculty** | CSIT | |
| **Module Leader** | Muntaser Abdulwahed Salman Abdulaziz | | **e-mail** | Co.montasser.salman@uoanbar.edu.iq | |
| **Module Leader's Acad. Title** | Lecturer | | **Module Leader's Qualification** | | PhD. |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | / | | **e-mail** | / | |
| **Review Committee Approval** | DD/MM/YY | | **Version Number** | 2.0 | |

| Relation With Other Modules | |
|---|---|
| **Pre-requisites** | / |
| **Co-requisites** | / |
| **Module Aims, Learning Outcomes and Indicative Contents** | |
| **Module Aims** | -The student should understand number systems and codes and the conversion between them.<br>-The student should understand the Boolean expression and how to apply it.<br>-The student should recognize among different logic gates and how to use them.<br>-The student should understand how to design a logic circuit.<br>-The student should understand using K-map for simplification. |
| **Module Learning** | A-Knowledge and Understanding |

| | |
|---|---|
| **Outcomes** | A1. The student should understand number systems and codes and the conversion between them.<br>A2. The student should understand the Boolean expression and how to apply it.<br>A3. The student should recognize among different logic gates and how to use them.<br>A4. The student should understand how to design a logic circuit.<br>A5. The student should understand using K-map for simplification |
| **Indicative Contents** | |
| **Learning and Teaching Strategies** | |
| **Strategies** | The main strategy that will be adopted in delivering this module are:<br>1. Power point presentation (Data show).<br>2. Explanation on the white board using different color markers.<br>3. Discussions with the student during teaching.<br>4. Interaction with students through daily problems practice through lecture.<br>5. Solve different problems with more exercises.<br>6. Submit assignment that develop student learning. |

| **Module Delivery** | |
|---|---|
| **Structured workload (h/w)** | 6.4 |
| **Unstructured workload (h/w)** | 3.6 |
| **Total workload (h/w)** | 10 |

## Module Evaluation

| | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|
| **Quizzes** | ٣ | 6% (6) | 3,7 and 11 | |
| **Assignments** | 2 | 6% (6) | 2 and 12 | |
| **Projects / Lab.** | 1 | ١٠% (١٠) | Continuous | |
| **Report** | 1 | 5% (5) | 13 | |
| **Midterm Exam** | 2 hr | 18% (18) | 7 | |
| **Final Exam** | 3 hr | 50% (50) | 16 | |
| **Total** | | 100% (100 Marks) | | |

| Learning and Teaching Resources | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | | Yes/No |
| **Recommended Texts** | | Yes/No |
| **Websites** | | |

| Delivery Plan (Weekly Syllabus) | |
|---|---|
| | **Material Covered** |
| **Week 1** | Introduction to number system |
| **Week 2** | Conversion between systems |
| **Week 3** | Codes and conversion between them |
| **Week 4** | Boolean expression |
| **Week 5** | Logic gates |
| **Week 6** | Logic gates design |
| **Week 7** | **Mid-Term Exam** |
| **Week 8** | NAND gates |
| **Week 9** | NOR gates |
| **Week 10** | Sum of product form |
| **Week 11** | Product Of sum form |
| **Week 12** | Product Of sum form |
| **Week 13** | K-map |
| **Week 14** | K-map |

| | |
|---|---|
| **Week 15** | **Preparatory Week** |
| **Week 16** | **Final Exam** |

**APPENDIX:**

| UNIVERSITYof Anbar | | | | |
|---|---|---|---|---|
| GRADING SCHEME | | | | |
| **Group** | **ECTS Grade** | **% of Students/Marks** | **Definition** | **GPA** |
| **Success Group (50 - 100)** | **A** - Excellent | Best 10% | Outstanding Performance | **5** |
| | **B** - Very Good | Next 25% | Above average with some errors | **4** |
| | **C** - Good | Next 30% | Sound work with notable errors | **3** |
| | **D** - Satisfactory | Next 25% | Fair but with major shortcomings | **2** |
| | **E** - Sufficient | Next 10% | Work meets minimum criteria | **1** |
| **Fail Group (0 – 49)** | **FX** – Fail | (45-49) | More work required but credit awarded | |
| | **F** – Fail | (0-44) | Considerable amount of work required | |
| | | | | |

Note:

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

| | | |
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# MODULE DESCRIPTOR FORM

| Module Information | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Mathematic I** | | | **Module Type** | TYPE B |
| **Module Code** | **CCIT060** | | **ECTS Credits** | | 6 |
| **Module Level** | **UGI** | | **Semester of Delivery** | | One |
| **Administering Department** | **IS** | | **Faculty** | CSIT | |
| **Module Leader** | **Muhammad Rabie** | | **e-mail** | **mohammed.rabeea@uoanbar.edu.iq** | |
| **Module Leader's Acad. Title** | **Lecturer** | | **Module Leader's Qualification** | | PhD. |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | / | | **e-mail** | / | |
| **Review Committee Approval** | DD/MM/YY | | **Version Number** | 2.0 | |

| Relation With Other Modules | |
|---|---|
| **Pre-requisites** | / |
| **Co-requisites** | / |
| **Module Aims, Learning Outcomes and Indicative Contents** | |
| **Module Aims** | A - Understand the concept of mathematics, its methods and applications.<br>B - Explain the concept of derivatives and integration and their applications.<br>C - Understand the relationship between extracts and integration and the real problems and how to deal with them |
| **Module Learning Outcomes** | A-Knowledge and Understanding<br>A 1. Acquiring the ability and skill to distinguish the bases of derivatives methods and dealing with them<br>A 2. Acquire the capabilities and skills of applications of derivatives |

| | |
|---|---|
| | A3. Dealing with different methods of finite and indefinite derivatives<br>B. Subject-specific skills<br>B1. Summer Training<br>B2. Fourth year projects<br>B3. Scientific projects |
| **Indicative Contents** | |
| **Learning and Teaching Strategies** | |
| **Strategies** | The main strategy that will be adopted in delivering this module are:<br>1. Power point presentation (Data show).<br>2. Explanation on the white board using different color markers.<br>3. Discussions with the student during teaching.<br>4. Interaction with students through daily problems practice through lecture.<br>5. Solve different problems with more exercises.<br>6. Submit assignment that develop student learning. |

| **Module Delivery** | |
|---|---|
| **Structured workload (h/w)** | 3.3 |
| **Unstructured workload (h/w)** | 6.7 |
| **Total workload (h/w)** | 10 |

**Module Evaluation**

| | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|
| **Quizzes** | 2 | 6% (6) | 5 and 10 | |
| **Assignments** | 2 | 6% (6) | 2 and 12 | |
| **Projects / Lab.** | 1 | 5% (5) | Continuous | |
| **Report** | 1 | 5% (5) | 13 | |
| **Midterm Exam** | 2 hr | 18% (18) | 7 | |
| **Final Exam** | 3 hr | 60% (60) | 16 | |
| **Total** | | 100% (100 Marks) | | |

| Learning and Teaching Resources | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | | Yes/No |
| **Recommended Texts** | | Yes/No |
| **Websites** | | |

| Delivery Plan (Weekly Syllabus) | |
|---|---|
| | **Material Covered** |
| **Week 1** | The Definition of the Derivative<br>Interpretation of the Derivative |
| **Week 2** | Properties of Derivative , Some laws of derivatives |
| **Week 3** | Properties of Derivative , Some laws of derivatives |
| **Week 4** | **Derivatives of the six trig functions** |
| **Week 5** | **Exponential Functions, Logarithm Functions** |
| **Week 6** | **Inverse Sine, Inverse cosine, Inverse tangent, Alternate Notation** |
| **Week 7** | **Mid-Term Exam** |
| **Week 8** | **Inverse Sine, Inverse cosine, Inverse tangent, Alternate Notation** |
| **Week 9** | These are the six hyperbolic trig<br>Functions .and They are defined as |
| **Week 10** | There are two forms of the chain rule |
| **Week 11** | Defined , formula, and used the chain rule |
| **Week 12** | first derivative, second derivative, third derivative. |
| **Week 13** | the properties of<br>logarithms |

| | |
|---|---|
| **Week 14** | Introduction, Critical Points and Minimum and Maximum Values |
| **Week 15** | **Preparatory Week** |
| **Week 16** | **Final Exam** |

**APPENDIX:**

| **UNIVERSITYof Anbar** | | | | |
|---|---|---|---|---|
| **GRADING SCHEME** | | | | |
| **Group** | **ECTS Grade** | **% of Students/Marks** | **Definition** | **GPA** |
| **Success Group (50 - 100)** | **A** - Excellent | Best 10% | Outstanding Performance | **5** |
| | **B** - Very Good | Next 25% | Above average with some errors | **4** |
| | **C** - Good | Next 30% | Sound work with notable errors | **3** |
| | **D** - Satisfactory | Next 25% | Fair but with major shortcomings | **2** |
| | **E** - Sufficient | Next 10% | Work meets minimum criteria | **1** |
| **Fail Group (0 – 49)** | **FX** – Fail | (45-49) | More work required but credit awarded | |
| | **F** – Fail | (0-44) | Considerable amount of work required | |
| | | | | |
| Note: | | | | |

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

| | | |
|---|---|---|
| | Ministry of Higher Education and Scientific Research.<br>University of Anbar.<br>Department of Information System. | |

# MODULE DESCRIPTOR FORM

| Module Information | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **English (1)** | | **Module Type** | TYPE S | |
| **Module Code** | **UOA003** | **ECTS Credits** | | 2 | |
| **Module Level** | **UGI** | **Semester of Delivery** | | One | |
| **Administering Department** | **IS** | **Faculty** | CSIT | | |
| **Module Leader** | **Akeel Abdulraheem Thulnoon Zoead** | **e-mail** | **akeelalhadithy@uoanbar.edu.iq** | | |
| **Module Leader's Acad. Title** | **Assistant Professor** | **Module Leader's Qualification** | | PhD. | |
| **Module Tutor** | | **e-mail** | | | |
| **Peer Reviewer Name** | / | **e-mail** | / | | |
| **Review Committee Approval** | DD/MM/YY | **Version Number** | 2.0 | | |

| Relation With Other Modules | |
|---|---|
| **Pre-requisites** | / |
| **Co-requisites** | / |
| **Module Aims, Learning Outcomes and Indicative Contents** | |
| **Module Aims** | Enhancing English speaking, reading and writing<br>Memorize a big number of vocabularies<br>Helping students to deal with the English language in easier ways |
| **Module Learning Outcomes** | A1. Reading<br>A2. writing<br>A3. Speaking.<br>A4. Listening<br>B. Subject-specific skills |

| | |
|---|---|
| | B1. Learn scanning and skimming skills in reading<br>B2. Right pronunciation<br>B3. Vocabularies |
| **Indicative Contents** | |
| **Learning and Teaching Strategies** | |
| **Strategies** | The main strategy that will be adopted in delivering this module are:<br>1. Power point presentation (Data show).<br>2. Explanation on the white board using different color markers.<br>3. Discussions with the student during teaching.<br>4. Interaction with students through daily problems practice through lecture.<br>5. Solve different problems with more exercises.<br>6. Submit assignment that develop student learning. |

| **Module Delivery** | |
|---|---|
| **Structured workload (h/w)** | 2.34 |
| **Unstructured workload (h/w)** | 4.34 |
| **Total workload (h/w)** | 6.68 |

## Module Evaluation

| | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|
| **Quizzes** | 2 | 6% (6) | 5 and 10 | |
| **Assignments** | 2 | 6% (6) | 2 and 12 | |
| **Projects / Lab.** | 1 | 5% (5) | Continuous | |
| **Report** | 1 | 5% (5) | 13 | |
| **Midterm Exam** | 2 hr | 18% (18) | 7 | |
| **Final Exam** | 3 hr | 60% (60) | 16 | |
| **Total** | | 100% (100 Marks) | | |

## Learning and Teaching Resources

| | Text | Available in the |
|---|---|---|

| | | Library? |
|---|---|---|
| **Required Texts** | | Yes/No |
| **Recommended Texts** | | Yes/No |
| **Websites** | | |

| Delivery Plan (Weekly Syllabus) | |
|---|---|
| | **Material Covered** |
| **Week 1** | Unit 1: Hello |
| **Week 2** | Unit 2:Your world |
| **Week 3** | Unit 3:All about you |
| **Week 4** | Unit 4: Family and friends |
| **Week 5** | Unit 5: The way I live |
| **Week 6** | Unit 6: Every Day |
| **Week 7** | **Mid-Term Exam** |
| **Week 8** | Unit 7: My favourites |
| **Week 9** | Unit 8: Where I live |
| **Week 10** | Unit 9:Times past |
| **Week 11** | Unit 10:we had a great time! |
| **Week 12** | English for Computer Science |
| **Week 13** | Listening |
| **Week 14** | Revision of most important topics in the subject |
| **Week 15** | **Preparatory Week** |

| Week 16 | Final Exam |
|---|---|

**APPENDIX:**

| UNIVERSITYof Anbar | | | | |
|---|---|---|---|---|
| GRADING SCHEME | | | | |
| **Group** | **ECTS Grade** | **% of Students/Marks** | **Definition** | **GPA** |
| **Success Group (50 - 100)** | **A** - Excellent | Best 10% | Outstanding Performance | **5** |
| | **B** - Very Good | Next 25% | Above average with some errors | **4** |
| | **C** - Good | Next 30% | Sound work with notable errors | **3** |
| | **D** - Satisfactory | Next 25% | Fair but with major shortcomings | **2** |
| | **E** - Sufficient | Next 10% | Work meets minimum criteria | **1** |
| **Fail Group (0 – 49)** | **FX** – Fail | (45-49) | More work required but credit awarded | |
| | **F** – Fail | (0-44) | Considerable amount of work required | |
| | | | | |
| Note: | | | | |

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **الحريات وحقوق الانسان** | | | **Module Delivery** | |
| **Module Type** | S | | | ☒ **Theory**<br>☐ **Lecture**<br>☐ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | **UOA005** | | | | |
| **ECTS Credits** | **2** | | | | |
| **SWL (hr/sem)** | **50** | | | | |
| **Module Level** | | 1 | **Semester of Delivery** | | 1 |
| **Administering Department** | | IS | **College** | Type College Code | |
| **Module Leader** | Name | | **e-mail** | E-mail | |
| **Module Leader's Acad. Title** | | | **Module Leader's Qualification** | | Ph.D. |
| **Module Tutor** | Name (if available) | | **e-mail** | E-mail | |
| **Peer Reviewer Name** | | Name | **e-mail** | E-mail | |
| **Scientific Committee Approval Date** | | 01/06/2023 | **Version Number** | | 1.0 |

| Relation with other Modules<br>العلاقة مع المواد الدراسية الأخرى | | | |
|---|---|---|---|
| **Prerequisite module** | None | **Semester** | |
| **Co-requisites module** | None | **Semester** | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | أ . تعليم الطلبة على أساسيات حقوق الإنسان وقوانينها.<br>ب. التعرف على الحقوق وأهم الإشكاليات والتحديات التي تواجهها<br>ج- تحديد وفهم المفاهيم المتعلقة بالحريات، بما في ذلك الحقوق الفردية والحريات الشخصية.<br>د. تنمية القدرة على التفكير النقدي حول القضايا المتعلقة بالحريات والحقوق الفردية. |
| **Module Learning Outcomes**<br>مخرجات التعلم للمادة الدراسية | ١- أن يعرف الطالب مفهوم الحقوق وقوانينها وتطبيقاتها .<br>٢- أن يعرف الطالب كيفية المشاركة في نشر الحقوق وتطبيقها بالعمل الواقعي الحقيقي.<br>٣- القدرة على استخدام الحقوق وسيلة من أجل التعايش السلمي بين مكونات المجتمع وجميع المخلوقات .<br>٤- القدرة على مشاركة الآخرين في نشر هذه الحقوق .<br>٥- القدرة على تحليل وتعريف مفهوم الحرية والتمييز بين أنواع مختلفة من الحريات.<br>٦- التفاعل مع قضايا الحريات على الصعيدين الوطني والدولي والتأثير في تشكيل الرأي العام. |
| **Indicative Contents**<br>المحتويات الإرشادية | الحقوق والحريات الأساسية وغير الأساسية<br>الحقوق والحريات المدنية<br>الحقوق السياسية<br>حقوق الانسان والقانون الدولي الإنساني |

| Learning and Teaching Strategies<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | ١- المشاركة بالتحضير في قاعة الدرس<br>٢- طريقة الأسئلة والأجوبة في قاعة الدرس<br>٣- الواجبات<br>٤- التقارير |

| Student Workload (SWL)<br>الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا | | | |
|---|---|---|---|
| **Structured SWL (h/sem)**<br>الحمل الدراسي المنتظم للطالب خلال الفصل | 33 | **Structured SWL (h/w)**<br>الحمل الدراسي المنتظم للطالب أسبوعيا | 2 |
| **Unstructured SWL (h/sem)**<br>الحمل الدراسي غير المنتظم للطالب خلال الفصل | 17 | **Unstructured SWL (h/w)**<br>الحمل الدراسي غير المنتظم للطالب أسبوعيا | 1 |
| **Total SWL (h/sem)**<br>الحمل الدراسي الكلي للطالب خلال الفصل | **50** | | |

| Module Evaluation<br>تقييم المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| | | **Time/Number** | **Weight (Marks)** | **Week Due** | **Relevant Learning Outcome** |
| **Formative assessment** | **Quizzes** | 2 | 10% (10) | 5 and 10 | LO #1, #2 and #10, #11 |
| | **Assignments** | 2 | 10% (10) | 2 and 12 | LO #3, #4 and #6, #7 |
| | **Projects / Lab.** | 1 | | Continuous | All |
| | **Report** | 1 | 10% (10) | 13 | LO #5, #8 and #10 |
| **Summative assessment** | **Midterm Exam** | 2hr | 10% (10) | 7 | LO #1 - #7 |
| | **Final Exam** | 3hr | 60% (60) | 16 | All |
| **Total assessment** | | | 100% (100 Marks) | | |

| Delivery Plan (Weekly Syllabus)<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | تعريف الحقوق |
| **Week 2** | أنواع حقوق الانسان |
| **Week 3** | الحقوق الأساسية وغير الأساسية |
| **Week 4** | - الحقوق المدنية , الحقوق السياسية |
| **Week 5** | الحقوق الاقتصادية والاجتماعية والثقافية<br>الحقوق الفردية والحقوق الجماعية |
| **Week 6** | طائفة الحقوق الجديدة<br>حقوق الانسان والقانون الدولي الإنساني<br>العلاقة بين حقوق الانسان والقانون الدولي الانساني |
| **Week 7** | امتحان |
| **Week 8** | ماهو مفهوم الحريات :مصطلح الحرية والحريات العامة |
| **Week 9** | التطور في مفهوم الحريات العامة |
| **Week 10** | أشكال الحريات العامة وأنواعه |
| **Week 11** | النظام القانوني للحريات العامة |
| **Week 12** | تنظيم الحريات العامة من قبل السلطات العامة |

| | |
|---|---|
| **Week 13** | ضمانات الحريات العامة |
| **Week 14** | الحريات في الفكر السياسي الحديث |
| **Week 15** | الامتحان النهائي |

| **Learning and Teaching Resources**<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | Diamond L. & M. F. Plattner, eds., (2009), Democracy. A Reader, Baltimore, Johns Hopkins University Press. | yes |
| **Recommended Texts** | مفهوم الحريات العامة وحقوق الانسان ، إطارها التاريخي والفكري والفلسفي، وضماناتها الأساسية- ٢٠١٠ | |
| **Websites** | **http://ghrorg-learning.blogspot.com** | |

| **Grading Scheme**<br>مخطط الدرجات | | | | |
|---|---|---|---|---|
| **Group** | **Grade** | التقدير | **Marks %** | **Definition** |
| **Success Group (50 - 100)** | **A -** Excellent | امتياز | 90 - 100 | Outstanding Performance |
| | **B -** Very Good | جيد جدا | 80 - 89 | Above average with some errors |
| | **C -** Good | جيد | 70 - 79 | Sound work with notable errors |
| | **D -** Satisfactory | متوسط | 60 - 69 | Fair but with major shortcomings |
| | **E -** Sufficient | مقبول | 50 - 59 | Work meets minimum criteria |
| **Fail Group (0 – 49)** | **FX –** Fail | راسب (قيد المعالجة) | (45-49) | More work required but credit awarded |
| | **F –** Fail | راسب | (0-44) | Considerable amount of work required |
| | | | | |

**Note:** Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

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| | Ministry of Higher Education and Scientific Research.<br>University of Anbar.<br>Department of Information System. | |

# MODULE DESCRIPTOR FORM

| Module Information | | | | | |
|---|---|---|---|---|---|
| **Module Title** | Structured programming II | | **Module Type** | TYPE C | |
| **Module Code** | ISSP201 | | **ECTS Credits** | 8 | |
| **Module Level** | UGI | | **Semester of Delivery** | Two | |
| **Administering Department** | IS | | **Faculty** | CSIT | |
| **Module Leader** | Mahmoud Hilal Farhan | | **e-mail** | Mah2005hilal@uoanbar.edu.iq | |
| **Module Leader's Acad. Title** | Lecturer | | **Module Leader's Qualification** | PhD | |
| **Module Tutor** | Mahmoud Hilal Farhan | | **e-mail** | Mah2005hilal@uoanbar.edu.iq | |
| **Peer Reviewer Name** | / | | **e-mail** | / | |
| **Review Committee Approval** | DD/MM/YY | | **Version Number** | 2.0 | |

| Relation With Other Modules | |
|---|---|
| **Pre-requisites** | ISSP101 |
| **Co-requisites** | |
| **Module Aims, Learning Outcomes and Indicative Contents** | |
| **Module Aims** | Learn how to use the Advanced Tools<br>helps programmers write fast, portable programs<br>The main principles of collections programming and the development of programming languages<br>Learn the advanced principles of Structure programming |
| **Module Learning** | A- Knowledge and Understanding collection such as list and Dictionaries |

| | |
|---|---|
| **Outcomes** | A2.Learn about Files and Exceptions<br>A3.Learn about advanced topics in python |
| **Indicative Contents** | |

## Learning and Teaching Strategies

| | |
|---|---|
| **Strategies** | The main strategy that will be adopted in delivering this module are:<br>1. Power point presentation (Data show).<br>2. Explanation on the white board using different color markers.<br>3. Discussions with the student during teaching.<br>4. Interaction with students through daily problems practice through lecture.<br>5. Solve different problems with more exercises.<br>6. Submit assignment that develop student learning. |

## Module Delivery

| | |
|---|---|
| **Structured workload (h/w)** | 5.34 |
| **Unstructured workload (h/w)** | 8 |
| **Total workload (h/w)** | 13.34 |

## Module Evaluation

| | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|
| **Quizzes** | 3 | 6% (6) | 3,7 and 11 | |
| **Assignments** | 2 | 6% (6) | 2 and 12 | |
| **Projects / Lab.** | 1 | 15% (15) | Continuous | |
| **Report** | 1 | 5% (5) | 13 | |
| **Midterm Exam** | 2 hr | 18% (18) | 7 | |
| **Final Exam** | 3 hr | 50% (50) | 16 | |
| **Total** | | 100% (100 Marks) | | |

## Learning and Teaching Resources

| | Text | Available in the Library? |
|---|---|---|

| | | |
|---|---|---|
| **Required Texts** | Deitel, Paul, Harvey Deitel, and Paul J. Deitel. Python for Programmers. Addison-Wesley Professional, 2019. | |
| **Recommended Texts** | Tony Gaddis, Starting Out with Python, 5th editio, Haywood Community College, Pearson 2021 | |
| **Websites** | Python in w3schools.com | |

| **Delivery Plan (Weekly Syllabus)** | |
|---|---|
| | **Material Covered** |
| **Week 1** | **Functions:** Functions with Parameters and Variables in Functions |
| **Week 2** | **Functions:** Return Values |
| **Week 3** | **Functions:** Importing Functions into Other Programs |
| **Week 4** | **Lists:** Adding Elements to a List, Removing Elements from a List, and Rearranging the Elements in a List |
| **Week 5** | **List:** Searching a List and Lists as Return Values and Arguments |
| **Week 6** | **Dictionaries:** Accessing, Modifying and Adding Values, Removing a Key-Value Pair and Additional Dictionary Operations |
| **Week 7** | **Mid-Term Exam** |
| **Week 8** | **Dictionaries:** Loops and Dictionaries and Dictionaries as Arguments and Return Values |
| **Week 9** | **Dictionaries:** Dictionaries: Accessing, Modifying and Adding Values, Removing a Key-Value Pair and Additional Dictionary Operations |
| **Week 10** | **Dictionaries:** Loops and Dictionaries and Dictionaries as Arguments and Return Values |
| **Week 11** | **Files :** Opening a File, and Reading Input from a File |
| **Week 12** | **Files:** End of Line Characters and Writing Output to a File |

| | |
|---|---|
| **Week 13** | **Files :** Command Line Arguments<br>**Exceptions** |
| **Week 14** | **Recursion :** Summing Integers , Fibonacci Numbers and Counting Characters |
| **Week 15** | **Preparatory Week** |
| **Week 16** | **Final Exam** |

**APPENDIX:**

| **UNIVERSITYof Anbar** | | | | |
|---|---|---|---|---|
| **GRADING SCHEME** | | | | |
| **Group** | **ECTS Grade** | **% of Students/Marks** | **Definition** | **GPA** |
| **Success Group (50 - 100)** | **A** - Excellent | Best 10% | Outstanding Performance | **5** |
| | **B** - Very Good | Next 25% | Above average with some errors | **4** |
| | **C** - Good | Next 30% | Sound work with notable errors | **3** |
| | **D** - Satisfactory | Next 25% | Fair but with major shortcomings | **2** |
| | **E** - Sufficient | Next 10% | Work meets minimum criteria | **1** |
| **Fail Group (0 – 49)** | **FX** – Fail | (45-49) | More work required but credit awarded | |
| | **F** – Fail | (0-44) | Considerable amount of work required | |
| | | | | |

Note:

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

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| | Ministry of Higher Education and Scientific Research.<br>University of Anbar.<br>Department of Information System. | |

# MODULE DESCRIPTOR FORM

| Module Information | | | | | |
|---|---|---|---|---|---|
| **Module Title** | Logic Design II | | **Module Type** | TYPE B | |
| **Module Code** | CSIT111 | | **ECTS Credits** | 6 | |
| **Module Level** | UGI | | **Semester of Delivery** | Two | |
| **Administering Department** | IS | | **Faculty** | CSIT | |
| **Module Leader** | Muntaser AbdulWahed Salman Abdulaziz | | **e-mail** | co.montasser.salman@uoanbar.edu.iq | |
| **Module Leader's Acad. Title** | Lecturer | | **Module Leader's Qualification** | PhD. | |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | / | | **e-mail** | / | |
| **Review Committee Approval** | DD/MM/YY | | **Version Number** | 2.0 | |

| Relation With Other Modules | |
|---|---|
| **Pre-requisites** | CSIT109 |
| **Co-requisites** | |
| **Module Aims, Learning Outcomes and Indicative Contents** | |
| **Module Aims** | • The student should understand encoder, decoder and multiplexers<br>• The student should understand synchronous logic circuit<br>• The student should understand flip-flops and how to use them<br>• The student should understand registers and their types<br>• The student should understand counters and their types<br>• The student should understand ROM and PLA implementation |
| **Module Learning Outcomes** | A1. The student should understand encoder, decoder and multiplexers<br>A2. The student should understand flip-flops and how to use them. |

| | |
|---|---|
| | A3. The student should understand registers and their types.<br>A4. The student should understand counters and their types.<br>A5. The student should understand ROM and PLA implementation. |
| **Indicative Contents** | |

## Learning and Teaching Strategies

| | |
|---|---|
| **Strategies** | The main strategy that will be adopted in delivering this module are:<br>1. Power point presentation (Data show).<br>2. Explanation on the white board using different color markers.<br>3. Discussions with the student during teaching.<br>4. Interaction with students through daily problems practice through lecture.<br>5. Solve different problems with more exercises.<br>6. Submit assignment that develop student learning. |

## Module Delivery

| | |
|---|---|
| **Structured workload (h/w)** | 4.4 |
| **Unstructured workload (h/w)** | 5.6 |
| **Total workload (h/w)** | 10 |

## Module Evaluation

| | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|
| **Quizzes** | 3 | 6% (6) | 3,7 and 11 | |
| **Assignments** | 2 | 6% (6) | 2 and 12 | |
| **Projects / Lab.** | 1 | 15% (15) | Continuous | |
| **Report** | 1 | 5% (5) | 13 | |
| **Midterm Exam** | 2 hr | 18% (18) | 7 | |
| **Final Exam** | 3 hr | 50% (50) | 16 | |
| **Total** | | 100% (100 Marks) | | |

## Learning and Teaching Resources

| | Text | Available in the |
|---|---|---|

| | | Library? |
|---|---|---|
| **Required Texts** | | Yes/No |
| **Recommended Texts** | | Yes/No |
| **Websites** | | |

| Delivery Plan (Weekly Syllabus) | |
|---|---|
| | **Material Covered** |
| **Week 1** | Synchronous logic gates |
| **Week 2** | Adder and subtractor circuits |
| **Week 3** | Comparator circuits |
| **Week 4** | Encoders and multiplexers |
| **Week 5** | Multiplexers |
| **Week 6** | First month exam |
| **Week 7** | **Mid-Term Exam** |
| **Week 8** | Flip-flops |
| **Week 9** | SR flip flop and j k flip flop |
| **Week 10** | T flip flop and D flip flop |
| **Week 11** | Second month exam |
| **Week 12** | Registers design |
| **Week 13** | Counters design |
| **Week 14** | ROM PLA State plan |
| **Week 15** | **Preparatory Week** |

| Week 16 | Final Exam |
|---|---|

**APPENDIX:**

| UNIVERSITYof Anbar | | | | |
|---|---|---|---|---|
| GRADING SCHEME | | | | |
| **Group** | **ECTS Grade** | **% of Students/Marks** | **Definition** | **GPA** |
| **Success Group (50 - 100)** | **A** - Excellent | Best 10% | Outstanding Performance | **5** |
| | **B** - Very Good | Next 25% | Above average with some errors | **4** |
| | **C** - Good | Next 30% | Sound work with notable errors | **3** |
| | **D** - Satisfactory | Next 25% | Fair but with major shortcomings | **2** |
| | **E** - Sufficient | Next 10% | Work meets minimum criteria | **1** |
| **Fail Group (0 – 49)** | **FX** – Fail | (45-49) | More work required but credit awarded | |
| | **F** – Fail | (0-44) | Considerable amount of work required | |
| | | | | |
| Note: | | | | |

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

| | | |
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| | Ministry of Higher Education and Scientific Research.<br>University of Anbar.<br>Department of Information System. | |

# MODULE DESCRIPTOR FORM

| Module Information | | | | | |
|---|---|---|---|---|---|
| **Module Title** | Arabic Language | | | **Module Type** | TYPE B |
| **Module Code** | UOA137 | | **ECTS Credits** | | 2 |
| **Module Level** | UGI | | **Semester of Delivery** | | Two |
| **Administering Department** | IS | | **Faculty** | CSIT | |
| **Module Leader** | Saad Ibrahim Ahmed Hussein | | **e-mail** | Saad.ibrahim@uonbar.edu.iq | |
| **Module Leader's Acad. Title** | Assistant Professor | | **Module Leader's Qualification** | | Ph. D |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | / | | **e-mail** | / | |
| **Review Committee Approval** | DD/MM/YY | | **Version Number** | 2.0 | |

| Relation With Other Modules | |
|---|---|
| **Pre-requisites** | / |
| **Co-requisites** | |
| **Module Aims, Learning Outcomes and Indicative Contents** | |
| **Module Aims** | تعليم الطلبة على أساسيات اللغة العربية وقواعدها<br>تعليم الطلبة على كيفية الأعراب |
| **Module Learning Outcomes** | **أن يتعرف الطالب على قواعد اللغة العربية**<br>أن يعرف الطالب كيفية بناء الجمل واستخراجها للعنوان المطلوب |
| **Indicative Contents** | |

| | |
|---|---|
| **Learning and Teaching Strategies** | |
| **Strategies** | The main strategy that will be adopted in delivering this module are:<br>1. Power point presentation (Data show).<br>2. Explanation on the white board using different color markers.<br>3. Discussions with the student during teaching.<br>4. Interaction with students through daily problems practice through lecture.<br>5. Solve different problems with more exercises.<br>6. Submit assignment that develop student learning. |

| **Module Delivery** | |
|---|---|
| **Structured workload (h/w)** | 2.3 |
| **Unstructured workload (h/w)** | 4.3 |
| **Total workload (h/w)** | 6.6 |

**Module Evaluation**

| | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|
| **Quizzes** | 2 | 6% (6) | 5 and 10 | |
| **Assignments** | 2 | 6% (6) | 2 and 12 | |
| **Projects / Lab.** | 1 | 5% (5) | Continuous | |
| **Report** | 1 | 5% (5) | 13 | |
| **Midterm Exam** | 2 hr | 18% (18) | 7 | |
| **Final Exam** | 3 hr | 60% (60) | 16 | |
| **Total** | | 100% (100 Marks) | | |

**Learning and Teaching Resources**

| | Text | Available in the Library? |
|---|---|---|
| **Required Texts** | | Yes/No |
| **Recommended Texts** | | Yes/No |
| **Websites** | | |

| | |
|---|---|

| Delivery Plan (Weekly Syllabus) | |
|---|---|
| | **Material Covered** |
| **Week 1** | العدد تذكيره وتأنيثه |
| **Week 2** | الأعداد المفردة والمركبة |
| **Week 3** | ألفاظ العقود و الأعداد (مئة ، ألف ، مليون) |
| **Week 4** | تعريف العدد وتنكيره |
| **Week 5** | ما يصاغ من العدد على وزن فاعل |
| **Week 6** | كتابة الهمزة المتوسطة والمتطرفة |
| **Week 7** | Mid-Term Exam |
| **Week 8** | كتابة الألف اللينة |
| **Week 9** | كتابة التاء المربوطة والمبسوطة |
| **Week 10** | كتابة الضاد والظاء |
| **Week 11** | اللامات وأنواعها |
| **Week 12** | الهاءات وأنواعها |
| **Week 13** | النونات وأنواعها |
| **Week 14** | استعمالات (ما ، من) والفرق بين (أما ، إما) |
| **Week 15** | **Preparatory Week** |
| **Week 16** | **Final Exam** |

**APPENDIX:**

| UNIVERSITYof Anbar |
|---|
| GRADING SCHEME |

| Group | ECTS Grade | % of Students/Marks | Definition | GPA |
|---|---|---|---|---|
| **Success Group (50 - 100)** | **A** - Excellent | Best 10% | Outstanding Performance | **5** |
| | **B** - Very Good | Next 25% | Above average with some errors | **4** |
| | **C** - Good | Next 30% | Sound work with notable errors | **3** |
| | **D** - Satisfactory | Next 25% | Fair but with major shortcomings | **2** |
| | **E** - Sufficient | Next 10% | Work meets minimum criteria | **1** |
| **Fail Group (0 – 49)** | **FX** – Fail | (45-49) | More work required but credit awarded | |
| | **F** – Fail | (0-44) | Considerable amount of work required | |
| | | | | |

Note:

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

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|---|---|---|
| | Ministry of Higher Education and Scientific Research.<br>University of Anbar.<br>Department of Information System. | |

# MODULE DESCRIPTOR FORM

| Module Information | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Communication Skills** | | | **Module Type** | **Type c** |
| **Module Code** | **ISMT203** | | **ECTS Credits** | | **2** |
| **Module Level** | UGI | | **Semester of Delivery** | | **Two** |
| **Administering Department** | IS | | **Faculty** | CSIT | |
| **Module Leader** | **Mohammed .Rabeea** | | **e-mail** | **mohammed.rabeea@uoanbar.edu.iq** | |
| **Module Leader's Acad. Title** | Lecturer | | **Module Leader's Qualification** | | PhD |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | / | | **e-mail** | / | |
| **Review Committee Approval** | DD/MM/YY | | **Version Number** | 1.0 | |

| Relation With Other Modules | |
|---|---|
| **Pre-requisites** | / |
| **Co-requisites** | / |
| **Module Aims, Learning Outcomes and Indicative Contents** | |
| **Module Aims** | The aims of a module focused on communication skills typically revolve around equipping individuals with the tools and techniques necessary to effectively convey information, ideas, and emotions in various contexts. |
| **Module Learning Outcomes** | • A1- Define and explain the key concepts and theories of communication. |

| | |
|---|---|
| | • Identify and analyze the different types of communication.<br>• Apply communication skills in a variety of contexts.<br>• Evaluate the effectiveness of their own communication skills.<br>• Develop a plan to improve their communication skills. |
| **Indicative Contents** | |
| **Learning and Teaching Strategies** | |
| **Strategies** | The main strategy that will be adopted in delivering this module are:<br>1. Power point presentation (Data show).<br>2. Explanation on the white board using different color markers.<br>3. Discussions with the student during teaching.<br>4. Interaction with students through daily problems practice through lecture.<br>5. Solve different problems with more exercises.<br>6. Submit assignment that develop student learning. |

| **Module Delivery** | |
|---|---|
| **Structured workload (h/w)** | 5.4 |
| **Unstructured workload (h/w)** | 8 |
| **Total workload (h/w)** | 13.4 |

**Module Evaluation**

| | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|
| **Quizzes** | | % () | 3,7 and 11 | |
| **Assignments** | 4 | 5% (20) | 2 and 12 | |
| **Projects / Lab.** | 1/0 | 5% (5) | Continuous | |
| **Report** | 1 | 5% (5) | 13 | |
| **Midterm Exam** | 2 hr | 10% (10) | 7 | |
| **Final Exam** | 1Z | 50% (50) | 16 | |
| **Total** | | 100% (100 Marks) | | |

| Learning and Teaching Resources | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | Communication: Building Relationships by Judy C. Pearson, 10th Edition, Allyn & Bacon, 2019 | Yes/No |
| **Recommended Texts** | | Yes/No |
| **Websites** | | |

| Delivery Plan (Weekly Syllabus) | |
|---|---|
| | **Material Covered** |
| **Week 1** | Definition of communication and its significance |
| **Week 2** | Models of communication<br>The role of perception and context in communication |
| **Week 3** | Principles of effective writing<br>Grammar, punctuation, and sentence structure |
| **Week 4** | Crafting clear and concise messages<br>Writing for different audiences and purposes |
| **Week 5** | Public speaking fundamentals<br>Speech organization and delivery techniques |
| **Week 6** | Overcoming stage fright and anxiety<br>Practicing persuasive communication |
| **Week 7** | **Mid-Term Exam** |
| **Week 8** | Active listening skills<br>Empathetic communication and rapport-building |
| **Week 9** | Conflict resolution strategies<br>Cultural sensitivity and communication |
| **Week 10** | Understanding body language and facial expressions<br>Gestures, posture, and eye contact |
| **Week 11** | Interpreting non-verbal cues in communication |

| | |
|---|---|
| | Using non-verbal communication to enhance message clarity |
| **Week 12** | Ethical communication<br>Ethical principles in communication |
| **Week 13** | Communication in academic settings (presentations, group discussions) |
| **Week 14** | Professional communication (emails, meetings, networking) |
| **Week 15** | **Preparatory Week** |
| **Week 16** | **Final Exam** |

**APPENDIX:**

| **UNIVERSITYof Anbar** | | | | |
|---|---|---|---|---|
| **GRADING SCHEME** | | | | |
| **Group** | **ECTS Grade** | **% of Students/Marks** | **Definition** | **GPA** |
| **Success Group (50 - 100)** | **A** - Excellent | Best 10% | Outstanding Performance | **5** |
| | **B** - Very Good | Next 25% | Above average with some errors | **4** |
| | **C** - Good | Next 30% | Sound work with notable errors | **3** |
| | **D** - Satisfactory | Next 25% | Fair but with major shortcomings | **2** |
| | **E** - Sufficient | Next 10% | Work meets minimum criteria | **1** |
| **Fail Group (0 – 49)** | **FX** – Fail | (45-49) | More work required but credit awarded | |
| | **F** – Fail | (0-44) | Considerable amount of work required | |
| | | | | |

Note:

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Communication skills** | | | **Module Delivery** | |
| **Module Type** | **C** | | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | **CSDC123** | | | | |
| **ECTS Credits** | **2** | | | | |
| **SWL (hr/sem)** | **50** | | | | |
| **Module Level** | UGI | | **Semester of Delivery** | Two | |
| **Administering Department** | CSIT | | **College** | Type College Code | |
| **Module Leader** | Name | | **e-mail** | | |
| **Module Leader's Acad. Title** | Professor | | **Module Leader's Qualification** | Ph.D. | |
| **Module Tutor** | Name (if available) | | **e-mail** | E-mail | |
| **Peer Reviewer Name** | Name | | **e-mail** | E-mail | |
| **Scientific Committee Approval Date** | 01/06/2023 | | **Version Number** | 1.0 | |

| Relation with other Modules<br>العلاقة مع المواد الدراسية الأخرى | | | |
|---|---|---|---|
| **Prerequisite module** | None | **Semester** | |
| **Co-requisites module** | None | **Semester** | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | - Develop Effective Communication Strategies: Learn how to adapt communication styles for different audiences, situations, and purposes.<br>- Enhance Written Communication: Improve the ability to express thoughts and ideas clearly and concisely in written form, including emails, reports, and other written documents.<br>- Improve Presentation Skills: Learn how to prepare and deliver effective presentations, including structuring content, using visual aids, and engaging an audience. |
| **Module Learning Outcomes**<br>مخرجات التعلم للمادة الدراسية | On successful completion of the module, students will be able to:<br>- Articulate their thoughts and ideas clearly and concisely, with improved vocabulary and grammar.<br>- Produce well-structured, error-free written documents, such as emails, reports, and other written materials.<br>- Adapt their communication style to suit different audiences, situations, and purposes.<br>- Prepare and deliver engaging and informative presentations, utilizing appropriate structure, visual aids, and audience engagement techniques. |
| **Indicative Contents**<br>المحتويات الإرشادية | Introduction to communication skills<br>Study skills<br>Library skills<br>Listening skills<br>Presentation skills |

| Learning and Teaching Strategies<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | - The student should use utilities in the lab to apply scientific experiment<br>- The ability to execute the applications software. |

| Student Workload (SWL)<br>الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا | | | |
|---|---|---|---|
| **Structured SWL (h/sem)**<br>الحمل الدراسي المنتظم للطالب خلال الفصل | 33 | **Structured SWL (h/w)**<br>الحمل الدراسي المنتظم للطالب أسبوعيا | 2 |
| **Unstructured SWL (h/sem)**<br>الحمل الدراسي غير المنتظم للطالب خلال الفصل | 17 | **Unstructured SWL (h/w)**<br>الحمل الدراسي غير المنتظم للطالب أسبوعيا | 1 |
| **Total SWL (h/sem)**<br>الحمل الدراسي الكلي للطالب خلال الفصل | **50** | | |

## Module Evaluation
تقييم المادة الدراسية

| | | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|---|
| Formative assessment | Quizzes | 2 | 10% (10) | 5 and 10 | LO #1, #2 and #10, #11 |
| | Assignments | 2 | 10% (10) | 2 and 12 | LO #3, #4 and #6, #7 |
| | Projects / Lab. | 1 | 10% (10) | Continuous | All |
| | Report | 1 | 10% (10) | 13 | LO #5, #8 and #10 |
| Summative assessment | Midterm Exam | 2hr | 10% (10) | 7 | LO #1 - #7 |
| | Final Exam | 3hr | 50% (50) | 16 | All |
| Total assessment | | | 100% (100 Marks) | | |

## Delivery Plan (Weekly Syllabus)
المنهاج الاسبوعي النظري

| | Material Covered |
|---|---|
| Week 1 | INTRODUCTION TO COMMUNICATION SKILLS |
| Week 2 | Verbal Communication |
| Week 3 | Communication cycle |
| Week 4 | Study skills |
| Week 5 | Presentation of Work |
| Week 6 | Planning work |
| Week 7 | Mid-term exam |
| Week 8 | Library skills |
| Week 9 | Academic library |
| Week 10 | Research libraries |
| Week 11 | LISTENING SKILLS |
| Week 12 | Why You Need Good Listening Skills |
| Week 13 | Barriers to effective listening |
| Week 14 | READING SKILLS |
| Week 15 | Types and methods of reading |

| Delivery Plan (Weekly Lab. Syllabus)<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | |
| **Week 2** | |
| **Week 3** | |
| **Week 4** | |
| **Week 5** | |

| Learning and Teaching Resources<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | Communication skills vol.I<br>Wambui et al. | No |
| **Recommended Texts** | | No |
| **Websites** | | |

| Grading Scheme<br>مخطط الدرجات | | | | |
|---|---|---|---|---|
| **Group** | **Grade** | التقدير | **Marks %** | **Definition** |
| **Success Group (50 - 100)** | **A** - Excellent | امتياز | 90 - 100 | Outstanding Performance |
| | **B** - Very Good | جيد جدا | 80 - 89 | Above average with some errors |
| | **C** - Good | جيد | 70 - 79 | Sound work with notable errors |
| | **D** - Satisfactory | متوسط | 60 - 69 | Fair but with major shortcomings |
| | **E** - Sufficient | مقبول | 50 - 59 | Work meets minimum criteria |
| **Fail Group (0 – 49)** | **FX** – Fail | راسب (قيد المعالجة) | (45-49) | More work required but credit awarded |
| | **F** – Fail | راسب | (0-44) | Considerable amount of work required |
| | | | | |

**Note:** Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

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|---|---|---|
| | Ministry of Higher Education and Scientific Research.<br>University of Anbar.<br>Department of Information System. | |

# MODULE DESCRIPTOR FORM

| Module Information | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Office Application** | | **Module Type** | TYPE C | |
| **Module Code** | ISOA204 | | **ECTS Credits** | 6 | |
| **Module Level** | UGI | | **Semester of Delivery** | Two | |
| **Administering Department** | IS | | **Faculty** | CSIT | |
| **Module Leader** | **Khalid Shaker Jasim** | | **e-mail** | **khalidalhity@uoanbar.edu.iq** | |
| **Module Leader's Acad. Title** | Lecturer | | **Module Leader's Qualification** | PhD | |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | / | | **e-mail** | / | |
| **Review Committee Approval** | DD/MM/YY | | **Version Number** | 1.0 | |

| Relation With Other Modules | |
|---|---|
| **Pre-requisites** | / |
| **Co-requisites** | / |
| **Module Aims, Learning Outcomes and Indicative Contents** | |
| **Module Aims** | This module aims to equip students with the knowledge and skills to effectively utilize a suite of office applications for various business and productivity needs. |
| **Module Learning Outcomes** | • Demonstrate a strong understanding of the core functionalities of common office applications (e.g., word processing, spreadsheet, presentation software).<br>• Apply these functionalities to create professional documents, presentations, and spreadsheets for diverse purposes.<br>• Employ advanced features of the software to enhance the efficiency and |

| | |
|---|---|
| | effectiveness of their work.<br>• Collaborate effectively on documents and projects within a team setting using the application's collaborative tools.<br>• Analyze and interpret data effectively using spreadsheet functions and data visualization tools. |
| **Indicative Contents** | |
| **Learning and Teaching Strategies** | |
| **Strategies** | The main strategy that will be adopted in delivering this module are:<br>1. Power point presentation (Data show).<br>2. Explanation on the white board using different color markers.<br>3. Discussions with the student during teaching.<br>4. Interaction with students through daily problems practice through lecture.<br>5. Solve different problems with more exercises.<br>6. Submit assignment that develop student learning. |

| **Module Delivery** | |
|---|---|
| **Structured workload (h/w)** | 5.4 |
| **Unstructured workload (h/w)** | 8 |
| **Total workload (h/w)** | 13.4 |

## Module Evaluation

| | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|
| **Quizzes** | 3 | 6% (6) | 3,7 and 11 | LO #1, #2, #4, #5 and #10, #11 |
| **Assignments** | 2 | 6% (6) | 2 and 12 | LO #3, #4 and #6, #7 |
| **Projects / Lab.** | 1 | 15% (15) | Continuous | ALL |
| **Report** | 1 | 5% (5) | 13 | LO #9, #11 |
| **Midterm Exam** | 2 hr | 18% (18) | 7 | LO #1 - #7 |
| **Final Exam** | 3 hr | 50% (50) | 16 | ALL |
| **Total** | | 100% (100 Marks) | | |

| Learning and Teaching Resources | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | | Yes/No |
| **Recommended Texts** | | Yes/No |
| **Websites** | Both Microsoft (https://support.microsoft.com/en-us/training) and (https://support.google.com/a/users/answer/9282959) offer extensive tutorials, video guides, and documentation for their respective office suites (Microsoft Office & Google Workspace). | |

| Delivery Plan (Weekly Syllabus) | |
|---|---|
| | **Material Covered** |
| **Week 1** | Introduction to Office Applications<br>Word Processing Basic |
| **Week 2** | Advanced Word Processing<br>Spreadsheets Basics |
| **Week 3** | Presentations Basics |
| **Week 4** | Basic Computer Components |
| **Week 5** | Advanced Presentations |
| **Week 6** | Advanced Databases |
| **Week 7** | **Mid-Term Exam** |
| **Week 8** | Advanced Email |
| **Week 9** | Office Applications in the Workplace |
| **Week 10** | Accessibility and Assistive Technologies |
| **Week 11** | Troubleshooting and Problem Solving |
| **Week 12** | Ethics and Legal Issues |

| | |
|---|---|
| **Week 13** | Resume Writing and Interviewing Skills |
| **Week 14** | Final Project Presentations |
| **Week 15** | **Preparatory Week** |

**APPENDIX:**

| **UNIVERSITYof Anbar** | | | | |
|---|---|---|---|---|
| **GRADING SCHEME** | | | | |
| **Group** | **ECTS Grade** | **% of Students/Marks** | **Definition** | **GPA** |
| **Success Group (50 - 100)** | **A** - Excellent | Best 10% | Outstanding Performance | **5** |
| | **B** - Very Good | Next 25% | Above average with some errors | **4** |
| | **C** - Good | Next 30% | Sound work with notable errors | **3** |
| | **D** - Satisfactory | Next 25% | Fair but with major shortcomings | **2** |
| | **E** - Sufficient | Next 10% | Work meets minimum criteria | **1** |
| **Fail Group (0 – 49)** | **FX** – Fail | (45-49) | More work required but credit awarded | |
| | **F** – Fail | (0-44) | Considerable amount of work required | |
| | | | | |

Note:

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

| | | |
|---|---|---|
| | Ministry of Higher Education and Scientific Research.<br>University of Anbar.<br>Department of Information System. | |

# MODULE DESCRIPTOR FORM

| Module Information | | | | | |
|---|---|---|---|---|---|
| **Module Title** | Discrete Mathematics | | **Module Type** | TYPE B | |
| **Module Code** | CCIT061 | | **ECTS Credits** | 6 | |
| **Module Level** | | | **Semester of Delivery** | Two | |
| **Administering Department** | IS | | **Faculty** | CSIT | |
| **Module Leader** | Akeel A Thulnoon | | **e-mail** | akeelalhadithy@uoanbar.edu.iq | |
| **Module Leader's Acad. Title** | Lecturer | | **Module Leader's Qualification** | PhD. | |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | / | | **e-mail** | / | |
| **Review Committee Approval** | 25/02/2024 | | **Version Number** | 2.0 | |

| Relation With Other Modules | |
|---|---|
| **Pre-requisites** | / |
| **Co-requisites** | / |
| **Module Aims, Learning Outcomes and Indicative Contents** | |
| **Module Aims** | The aim of studying of discrete mathematics equips you with the tools to analyze and solve problems involving distinct, countable objects. It builds foundational skills in logical reasoning, counting techniques, and analyzing relationships between structures. Mastering these concepts empowers you to tackle problems in various fields, including computer science, cryptography, information theory, and areas of mathematics itself. By understanding the fundamental properties of discrete structures, you gain the ability to model and analyze real-world scenarios with precision and efficiency. |

| | |
|---|---|
| **Module Learning Outcomes** | A1. Enhanced problem-solving skills<br>A2. Strong foundation in logical thinking<br>A3. Proficiency in counting techniques.<br>A4. Understanding of discrete structures<br>B. Ability to model real-world scenarios |
| **Indicative Contents** | |
| **Learning and Teaching Strategies** | |
| **Strategies** | The main strategy that will be adopted in delivering this module are:<br>1. Power point presentation (Data show).<br>2. Explanation on the white board using different color markers.<br>3. Discussions with the student during teaching.<br>4. Interaction with students through daily problems practice through lecture.<br>5. Solve different problems with more exercises.<br>6. Submit assignment that develop student learning. |

| **Module Delivery** | |
|---|---|
| **Structured workload (h/w)** | 2.34 |
| **Unstructured workload (h/w)** | 4.34 |
| **Total workload (h/w)** | 6.68 |

**Module Evaluation**

| | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|
| **Quizzes** | 2 | 6% (6) | 5 and 10 | |
| **Assignments** | 2 | 6% (6) | 2 and 12 | |
| **Projects / Lab.** | | 5% (5) | Continuous | |
| **Report** | 1 | 5% (5) | 13 | |
| **Midterm Exam** | 2 hr | 18% (18) | 7 | |
| **Final Exam** | 3 hr | 60% (60) | 16 | |
| **Total** | | 100% (100 Marks) | | |

| Learning and Teaching Resources | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | | Yes/No |
| **Recommended Texts** | | Yes/No |
| **Websites** | | |

| Delivery Plan (Weekly Syllabus) | |
|---|---|
| | **Material Covered** |
| **Week 1** | Introduction, Sets |
| **Week 2** | Relations, Practice |
| **Week 3** | Mathematical Logic (Propositional logic, Propositional calculus) |
| **Week 4** | Mathematical Logic (Predicate logic, Practice) |
| **Week 5** | Group Theory (Basic Concept) |
| **Week 6** | Group operations |
| **Week 7** | **Mid-Term Exam** |
| **Week 8** | Counting Theory ( counting principles) |
| **Week 9** | Pigeonhole principle |
| **Week 10** | Probability (Basic concepts) |
| **Week 11** | Counting techniques, Bayes' theorem |
| **Week 12** | Mathematical Induction and Recurrence Relations |
| **Week 13** | Graph Theory and Trees |
| **Week 14** | Boolean Algebra |

| | |
|---|---|
| **Week 15** | **Preparatory Week** |
| **Week 16** | **Final Exam** |

**APPENDIX:**

| UNIVERSITYof Anbar | | | | |
|---|---|---|---|---|
| GRADING SCHEME | | | | |
| **Group** | **ECTS Grade** | **% of Students/Marks** | **Definition** | **GPA** |
| **Success Group (50 - 100)** | **A** - Excellent | Best 10% | Outstanding Performance | **5** |
| | **B** - Very Good | Next 25% | Above average with some errors | **4** |
| | **C** - Good | Next 30% | Sound work with notable errors | **3** |
| | **D** - Satisfactory | Next 25% | Fair but with major shortcomings | **2** |
| | **E** - Sufficient | Next 10% | Work meets minimum criteria | **1** |
| **Fail Group (0 – 49)** | **FX** – Fail | (45-49) | More work required but credit awarded | |
| | **F** – Fail | (0-44) | Considerable amount of work required | |
| | | | | |

Note:

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

| | | |
|---|---|---|
| | Ministry of Higher Education and Scientific Research.<br>University of Anbar.<br>Department of Information System. | |

# MODULE DESCRIPTOR FORM

| Module Information | | | | | |
|---|---|---|---|---|---|
| **Module Title** | Object Oriented Programming I | | **Module Type** | TYPE C | |
| **Module Code** | ISOO301 | | **ECTS Credits** | 8 | |
| **Module Level** | UGII | | **Semester of Delivery** | Three | |
| **Administering Department** | IS | | **Faculty** | CSIT | |
| **Module Leader** | Doaa Yaseen Khudhur Abdul Rahman Al-ani | | **e-mail** | co.doaa.yassin@uoanbar.edu.iq | |
| **Module Leader's Acad. Title** | Lecturer | | **Module Leader's Qualification** | | |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | / | | **e-mail** | / | |
| **Review Committee Approval** | DD/MM/YY | | **Version Number** | 2.0 | |

| Relation With Other Modules | |
|---|---|
| **Pre-requisites** | |
| **Co-requisites** | |
| **Module Aims, Learning Outcomes and Indicative Contents** | |
| **Module Aims** | The student's acquisition of the concept of entity programming, classes, and objects, and how to deal with them.<br>Clarify the concept of classes, what are the functions and properties of them, and the objects of each class.<br>Giving the student experience in dealing with objects and classes and the distribution of properties and functions. The study of structured |

| | |
|---|---|
| | programming, entity programming and what is known as object-oriented programming, knowledge of injunctions and functions to prepare the student to know how to write a set of commands, knowing what are injunctions, how to build classes and objects, what the class has of properties and functions, how to build several classes and several objects, and how properties are inherited between them. |
| **Module Learning Outcomes** | A Knowledge and Understanding<br>A1. Gain the ability and skill to distinguish and deal with program instructions and functions of entity programming.<br>A2- Acquire the skill of distinguishing between objects, classes and functions and linking them.<br>A3- Dealing with the attributes and characteristics of each class and programming functions.<br>B. Subject-specific skills<br>B1. summer training<br>B2. Graduate Research<br>B3. Scientific Reports |
| **Indicative Contents** | |

## Learning and Teaching Strategies

| | |
|---|---|
| **Strategies** | The main strategy that will be adopted in delivering this module are:<br>1. Power point presentation (Data show).<br>2. Explanation on the white board using different color markers.<br>3. Discussions with the student during teaching.<br>4. Interaction with students through daily problems practice through lecture.<br>5. Solve different problems with more exercises.<br>6. Submit assignment that develop student learning. |

## Module Delivery

| | |
|---|---|
| **Structured workload (h/w)** | 5.34 |
| **Unstructured workload (h/w)** | 8 |
| **Total workload (h/w)** | 13.34 |

| Module Evaluation | | | | |
|---|---|---|---|---|
| | **Time/Number** | **Weight (Marks)** | **Week Due** | **Relevant Learning Outcome** |
| **Quizzes** | 3 | 6% (6) | 3,7 and 11 | |
| **Assignments** | 2 | 6% (6) | 2 and 12 | |
| **Projects / Lab.** | 1 | 15% (15) | Continuous | |
| **Report** | 1 | 5% (5) | 13 | |
| **Midterm Exam** | 2 hr | 18% (18) | 7 | |
| **Final Exam** | 3 hr | 50% (50) | 16 | |
| **Total** | | 100% (100 Marks) | | |

| Learning and Teaching Resources | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | | Yes/No |
| **Recommended Texts** | | Yes/No |
| **Websites** | | |

| Delivery Plan (Weekly Syllabus) | |
|---|---|
| | **Material Covered** |
| **Week 1** | Programming principles<br>Overview to Programming Language |
| **Week 2** | Algorithms and Flow Charts |
| **Week 3** | Character set Identifiers Getting Started with C++. Variables Declaration |
| **Week 4** | Variables Constants Arithmetic Operations The “math.h” Library Unary Minus Increment and /decrement Operators. |
| **Week 5** | Unary Minus Increment and /decrement Operators. |

| | |
|---|---|
| **Week 6** | Operational Assignment Operators Relational Operators Logical Operators. Bitwise Operator Logical Operators. Bitwise Operator |
| **Week 7** | **Mid-Term Exam** |
| **Week 8** | Selection Statements the Single. The Switch Selection Statement (Selector |
| **Week 9** | Nested If and If/else Statements If Statement Structure Conditional Statement |
| **Week 10** | The Switch Selection Statement |
| **Week 11** | While Repetition Structure. Do/While Statement for Statement |
| **Week 12** | Do/While Statement for Statement |
| **Week 13** | For Statement |
| **Week 14** | Break and Continue Control Statements Nested Loops |
| **Week 15** | **Preparatory Week** |
| **Week 16** | **Final Exam** |

**APPENDIX:**

| **UNIVERSITY of Anbar** | | | | |
|---|---|---|---|---|
| **GRADING SCHEME** | | | | |
| **Group** | **ECTS Grade** | **% of Students/Marks** | **Definition** | **GPA** |
| **Success Group (50 - 100)** | **A** - Excellent | Best 10% | Outstanding Performance | **5** |
| | **B** - Very Good | Next 25% | Above average with some errors | **4** |
| | **C** - Good | Next 30% | Sound work with notable errors | **3** |
| | **D** - Satisfactory | Next 25% | Fair but with major shortcomings | **2** |
| | **E** - Sufficient | Next 10% | Work meets minimum criteria | **1** |
| **Fail Group (0 – 49)** | **FX** – Fail | (45-49) | More work required but credit awarded | |
| | **F** – Fail | (0-44) | Considerable amount of work required | |
| | | | | |
| Note: | | | | |

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

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| | Ministry of Higher Education and Scientific Research.<br>University of Anbar.<br>Department of Information System. | |

# MODULE DESCRIPTOR FORM

| Module Information | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **DATA STRUCTURES** | | **Module Type** | TYPE C | |
| **Module Code** | ISDS302 | | **ECTS Credits** | 6 | |
| **Module Level** | UGII | | **Semester of Delivery** | Three | |
| **Administering Department** | IS | | **Faculty** | CSIT | |
| **Module Leader** | **Mahmoud Hilal** | | **e-mail** | **mah2005hilal@uoanbar.edu.iq** | |
| **Module Leader's Acad. Title** | Lecture | | **Module Leader's Qualification** | PHD | |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | / | | **e-mail** | / | |
| **Review Committee Approval** | DD/MM/YY | | **Version Number** | 2.0 | |

| Relation With Other Modules | |
|---|---|
| **Pre-requisites** | |
| **Co-requisites** | / |
| **Module Aims, Learning Outcomes and Indicative Contents** | |
| **Module Aims** | 1. The student will be able to understand and understand the mechanics of their algorithmic data repair problems in terms of their degree of complexity.<br>2. Trees, how to build them in C++, self-recall, and how to deal with them<br>3.. that the student be able to understand the working mechanics of algorithms for data structures<br>4. What are the best search algorithms, and the criteria for choosing the type of algorithm?<br>5.sorting algorithm |

| | |
|---|---|
| **Module Learning Outcomes** | A- Knowledge and Understanding<br>This article is based on knowledge<br>B. Subject-specific skills<br>Learn to program in C++ in a professional way |
| **Indicative Contents** | |

## Learning and Teaching Strategies

| | |
|---|---|
| **Strategies** | The main strategy that will be adopted in delivering this module are:<br>1. Power point presentation (Data show).<br>2. Explanation on the white board using different color markers.<br>3. Discussions with the student during teaching.<br>4. Interaction with students through daily problems practice through lecture.<br>5. Solve different problems with more exercises.<br>6. Submit assignment that develop student learning. |

## Module Delivery

| | |
|---|---|
| **Structured workload (h/w)** | 4.4 |
| **Unstructured workload (h/w)** | 5.6 |
| **Total workload (h/w)** | 10 |

## Module Evaluation

| | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|
| **Quizzes** | 3 | 6% (6) | 3,7 and 11 | |
| **Assignments** | 2 | 6% (6) | 2 and 12 | |
| **Projects / Lab.** | 1 | 15% (15) | Continuous | |
| **Report** | 1 | 5% (5) | 13 | |
| **Midterm Exam** | 2 hr | 18% (18) | 7 | |
| **Final Exam** | 3 hr | 50% (50) | 16 | |
| **Total** | | 100% (100 Marks) | | |

## Learning and Teaching Resources

| | Text | Available in the Library? |
|---|---|---|
| **Required Texts** | | Yes/No |
| **Recommended Texts** | | Yes/No |
| **Websites** | | |

| Delivery Plan (Weekly Syllabus) | |
|---|---|
| | **Material Covered** |
| **Week 1** | The general structure of the subject and the study vocabulary.<br>general vocabulary.<br>general vocabulary |
| **Week 2** | Define algorithms, their properties, and how to write them<br>Introduction to the article. |
| **Week 3** | complexity of the algorithm in terms of time and execution<br>Calculate the complexity of the algorithm in terms of time and steps |
| **Week 4** | Recursion |
| **Week 5** | Study all previous lectures with homework<br>Solve the assessment methods in the previous 3 lectures |
| **Week 6** | How to choose the type of sorting algorithm according to the data<br>Introduction for sorting algorithm |
| **Week 7** | **Mid-Term Exam** |
| **Week 8** | Understand the workings of the algorithm.<br>selection sort algorithm |
| **Week 9** | Insertion sort algorithm |
| **Week 10** | Bubble sort algorithm |
| **Week 11** | Solve the assessment methods in the previous 3 lectures |
| **Week 12** | Representing data as a tree.<br>the trees |

| | |
|---|---|
| **Week 13** | Programmatically represent the tree.<br>Print, delete and add to the tree in the form of code |
| **Week 14** | How to search in trees.<br>search algorithms |
| **Week 15** | **Preparatory Week** |
| **Week 16** | **Final Exam** |

**APPENDIX:**

| **UNIVERSITYof Anbar** | | | | |
|---|---|---|---|---|
| **GRADING SCHEME** | | | | |
| **Group** | **ECTS Grade** | **% of Students/Marks** | **Definition** | **GPA** |
| **Success Group (50 - 100)** | **A** - Excellent | Best 10% | Outstanding Performance | **5** |
| | **B** - Very Good | Next 25% | Above average with some errors | **4** |
| | **C** - Good | Next 30% | Sound work with notable errors | **3** |
| | **D** - Satisfactory | Next 25% | Fair but with major shortcomings | **2** |
| | **E** - Sufficient | Next 10% | Work meets minimum criteria | **1** |
| **Fail Group (0 – 49)** | **FX** – Fail | (45-49) | More work required but credit awarded | |
| | **F** – Fail | (0-44) | Considerable amount of work required | |
| | | | | |
| Note: | | | | |

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

| | | |
|---|---|---|
| | Ministry of Higher Education and Scientific Research.<br>University of Anbar.<br>Department of Information System. | |

# MODULE DESCRIPTOR FORM

| Module Information | | | | | |
|---|---|---|---|---|---|
| **Module Title** | Advanced Mathematics | | **Module Type** | TYPE C | |
| **Module Code** | ISAM307 | | **ECTS Credits** | 5 | |
| **Module Level** | UGII | | **Semester of Delivery** | Three | |
| **Administering Department** | IS | | **Faculty** | CSIT | |
| **Module Leader** | Taisir Ahmed yaseen | | **e-mail** | taisir.ahmed@uoanbar.edu.iq | |
| **Module Leader's Acad. Title** | Lecturer | | **Module Leader's Qualification** | | |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | / | | **e-mail** | / | |
| **Review Committee Approval** | DD/MM/YY | | **Version Number** | 2.0 | |

| Relation With Other Modules | |
|---|---|
| **Pre-requisites** | |
| **Co-requisites** | |
| **Module Aims, Learning Outcomes and Indicative Contents** | |
| **Module Aims** | 1-To describe the aim of study advance mathematics<br>2-To understand what difference between ordinary equation and differential equation<br>3- To understand the difference between the type of differential equation<br>4- To learn the type of method to solve the differential equation<br>5- To apply the application of differential equation |
| **Module Learning Outcomes** | A- Knowledge and Understanding<br>A1. Understand the concept of ordinary and partial |

| | |
|---|---|
| | A2.Understand the method of solving the first order differential equation<br>A3.Understand the method of solving second order differential equation<br>A4. Understand the Laplace transform<br>A5.Underst and the Fourier series<br>B. Subject-specific skills<br>B1.expliean what mean of ordinary and partial<br>B2.classify the method of solving<br>B3. Classify the differential equation |
| **Indicative Contents** | |

## Learning and Teaching Strategies

| | |
|---|---|
| **Strategies** | The main strategy that will be adopted in delivering this module are:<br>1. Power point presentation (Data show).<br>2. Explanation on the white board using different color markers.<br>3. Discussions with the student during teaching.<br>4. Interaction with students through daily problems practice through lecture.<br>5. Solve different problems with more exercises.<br>6. Submit assignment that develop student learning. |

## Module Delivery

| | |
|---|---|
| **Structured workload (h/w)** | 3.4 |
| **Unstructured workload (h/w)** | 5 |
| **Total workload (h/w)** | 8.34 |

## Module Evaluation

| | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|
| **Quizzes** | 2 | 10% (10) | 5 and 10 | |
| **Assignments** | 2 | 10% (10) | 2 and 12 | |
| **Projects / Lab.** | 1 | 10% (10) | Continuous | |
| **Report** | 1 | 10% (10) | 13 | |
| **Midterm Exam** | 2 hr | 10% (18) | 7 | |
| **Final Exam** | 3 hr | 50% (50) | 16 | |
| **Total** | | 100% (100 Marks) | | |

## Learning and Teaching Resources

| | Text | Available in the |
|---|---|---|

| | | Library? |
|---|---|---|
| **Required Texts** | | Yes/No |
| **Recommended Texts** | | Yes/No |
| **Websites** | | |

| Delivery Plan (Weekly Syllabus) | |
|---|---|
| | **Material Covered** |
| **Week 1** | Abstract of differential equation |
| **Week 2** | Separable equation |
| **Week 3** | Solve some example |
| **Week 4** | Homogenous equation |
| **Week 5** | Exact equation |
| **Week 6** | Linear equation |
| **Week 7** | **Mid-Term Exam** |
| **Week 8** | Some example |
| **Week 9** | Bernoulli equation |
| **Week 10** | Second order differential equation |
| **Week 11** | Some example |
| **Week 12** | Laplace transform |
| **Week 13** | Power series , Fourier series |
| **Week 14** | Review |
| **Week 15** | **Preparatory Week** |

| Week 16 | Final Exam |
|---|---|

**APPENDIX:**

| UNIVERSITYof Anbar | | | | |
|---|---|---|---|---|
| GRADING SCHEME | | | | |
| **Group** | **ECTS Grade** | **% of Students/Marks** | **Definition** | **GPA** |
| **Success Group (50 - 100)** | **A** - Excellent | Best 10% | Outstanding Performance | **5** |
| | **B** - Very Good | Next 25% | Above average with some errors | **4** |
| | **C** - Good | Next 30% | Sound work with notable errors | **3** |
| | **D** - Satisfactory | Next 25% | Fair but with major shortcomings | **2** |
| | **E** - Sufficient | Next 10% | Work meets minimum criteria | **1** |
| **Fail Group (0 – 49)** | **FX** – Fail | (45-49) | More work required but credit awarded | |
| | **F** – Fail | (0-44) | Considerable amount of work required | |
| | | | | |
| Note: | | | | |

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

# ISDC202MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Design and Analysis of Information Systems** | | | **Module Delivery** | |
| **Module Type** | **Elective learning activity (E)** | | | ☒**Theory**<br>☒**Lecture**<br>☐**Lab**<br>☐**Tutorial**<br>☐**Practical**<br>☐**Seminar** | |
| **Module Code** | **ISDA305** | | | | |
| **ECTS Credits** | **3** | | | | |
| **SWL (hr/sem)** | | | | | |
| **Module Level** | 2 | | **Semester of Delivery** | 3 | |
| **Administering Department** | CSIT | | **College** | Type College Code | |
| **Module Leader** | **Dr. Waleed Abdulmaged Hammood** | | **e-mail** | E-mail: waleed.abdulmaged@uoanbar.edu.iq | |
| **Module Leader's Acad. Title** | Lecturer | | **Module Leader's Qualification** | Ph.D. | |
| **Module Tutor** | Name (if available) | | **e-mail** | E-mail | |
| **Peer Reviewer Name** | Name | | **e-mail** | E-mail | |
| **Scientific Committee Approval Date** | 01/06/2023 | | **Version Number** | 1.0 | |

| Relation with other Modules<br>العلاقة مع المواد الدراسية الأخرى | | | |
|---|---|---|---|
| **Prerequisite module** | None | **Semester** | |
| **Co-requisites module** | None | **Semester** | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | The Design and Analysis of Information Systems module aims to provide students with a comprehensive understanding of the principles and techniques involved in designing and analyzing complex information systems. The specific aims of this module may include:<br>System Design Principles: The module aims to introduce students to the fundamental principles and concepts involved in designing information systems. This includes understanding system requirements, system modeling techniques, system architecture, and system integration |
| **Module Learning Outcomes**<br><br>مخرجات التعلم للمادة الدراسية | Software Development Lifecycle: Students will learn about the various phases of the software development lifecycle, including requirements gathering, system analysis, system design, implementation, testing, deployment, and maintenance. The aim is to familiarize students with industry-standard practices and methodologies for developing robust and scalable information systems.<br>Database Design and Management: The module aims to provide students with a solid understanding of database design principles and techniques. This includes conceptual data modeling, entity-relationship modeling, normalization, database query languages (e.g., SQL), and database management systems (DBMS). |
| **Indicative Contents**<br>المحتويات الإرشادية | **Indicative content includes the following:**<br>**The main strategy that will be adopted in delivering this module are:**<br>**1. Power point presentation (Data show).**<br>**2. Explanation on the white board using different color markers.**<br>**3. Discussions with the student during teaching.**<br>**4. Interaction with students through daily problems practice through lecture.**<br>**5. Solve different problems with more exercises.**<br>**6. Submit assignment that develop student learning.**<br><br>**Modeling and Design:** Use a range of specialist models to model the problems of computer and communication systems, such as deadlock, and design efficient and effective handling procedures. [15 hrs]<br><br>**Creative:** Extend knowledge in information systems to construct specific and effective solution to manage and control computer resources.[11 hrs]<br><br>**Presentation:** All students should participate in different presentations about different subjects. [11 hrs] |

| Learning and Teaching Strategies |
|---|

| استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | 1. Providing students with the fundamentals and topics related to thinking.<br>2. Giving students daily assignments.<br>3. Encouraging the formation of group discussions during the lecture.<br>4. Present stimulating questions during the lecture, such as 'how' and 'why. |

| **Student Workload (SWL)**<br>الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا | | | |
|---|---|---|---|
| **Structured SWL (h/sem)**<br>الحمل الدراسي المنتظم للطالب خلال الفصل | 91 | **Structured SWL (h/w)**<br>الحمل الدراسي المنتظم للطالب أسبوعيا | 3.4 |
| **Unstructured SWL (h/sem)**<br>الحمل الدراسي غير المنتظم للطالب خلال الفصل | 3.9 | **Unstructured SWL (h/w)**<br>الحمل الدراسي غير المنتظم للطالب أسبوعيا | 3.8 |
| **Total SWL (h/sem)**<br>الحمل الدراسي الكلي للطالب خلال الفصل | **125** | | |

**Module Evaluation**
تقييم المادة الدراسية

| | | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|---|
| **Formative assessment** | **Quizzes** | 2 | 5% (5) | 5 and 10 | LO #1, #2 and #10, #11 |
| | **Assignments** | 2 | 10% (10) | 2 and 12 | LO #3, #4 and #6, #7 |
| | **Projects / Lab.** | 1 | 10% (10) | Continuous | All |
| | **Report** | 1 | 5% (5) | 13 | LO #5, #8 and #10 |
| **Summative assessment** | **Midterm Exam** | 2hr | 20% (20) | 7 | LO #1 - #7 |
| | **Final Exam** | 3hr | 50% (50) | 16 | All |
| **Total assessment** | | | 100% (100 Marks) | | |

**Delivery Plan (Weekly Syllabus)**
المنهاج الاسبوعي النظري

| | **Material Covered** |
|---|---|
| **Week 1** | Defining Analysis of Information System |
| **Week 2** | Role of a system analyst |

| | |
|---|---|
| **Week 3** | Qualities of systems Analyst |
| **Week 4** | Types of Subsystems |
| **Week 5** | A framework for system approach |
| **Week 6** | System Characteristic |
| **Week 7** | **Mid-term Exam** |
| **Week 8** | Executive Support System (ESS) |
| **Week 9** | Decision Support System (DSS) |
| **Week 10** | Office Automation System (OAS) |
| **Week 11** | Transaction Processing System (TPS) |
| **Week 12** | System Development Strategies |
| **Week 13** | Unified Methodology Approach |
| **Week 14** | Technique Approach |
| **Week 15** | **Preparatory Week** |
| **Week 16** | **Final Exam** |

| **Delivery Plan (Weekly Lab. Syllabus)**<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | |
| **Week 2** | |
| **Week 3** | |
| **Week 4** | |
| **Week 5** | |
| **Week 6** | |
| **Week 7** | |

| **Learning and Teaching Resources**<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | Davis, W. S., & Yen, D. C. (Eds.). (2019). *The information system consultant's handbook: Systems analysis and design*. CRC press. | Yes |
| **Recommended Texts** | | Yes |

| | |
|---|---|
| **Websites** | https://link.springer.com/book/10.1007/978-1-84628-655-1 |

| **Grading Scheme**<br>مخطط الدرجات | | | | |
|---|---|---|---|---|
| **Group** | **Grade** | التقدير | **Marks %** | **Definition** |
| **Success Group (50 - 100)** | **A -** Excellent | امتياز | 90 - 100 | Outstanding Performance |
| | **B -** Very Good | جيد جدا | 80 - 89 | Above average with some errors |
| | **C -** Good | جيد | 70 - 79 | Sound work with notable errors |
| | **D -** Satisfactory | متوسط | 60 - 69 | Fair but with major shortcomings |
| | **E -** Sufficient | مقبول | 50 - 59 | Work meets minimum criteria |
| **Fail Group (0 – 49)** | **FX –** Fail | راسب (قيد المعالجة) | (45-49) | More work required but credit awarded |
| | **F –** Fail | راسب | (0-44) | Considerable amount of work required |
| | | | | |

**Note:** Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Computation Theory** | | | **Module Delivery** | |
| **Module Type** | **Core** | | | ☒**Theory**<br>☒**Lecture**<br>☒**Lab**<br>☐**Tutorial**<br>☐**Practical**<br>☐**Seminar** | |
| **Module Code** | ISCT303 | | | | |
| **ECTS Credits** | **4** | | | | |
| **SWL (hr/sem)** | | | | | |
| **Module Level** | 1 | | **Semester of Delivery** | 1 | |
| **Administering Department** | Type Dept. Code | | **College** | Type College Code | |
| **Module Leader** | **Dr. Ehab abd-aljabar** | | **e-mail** | **E-mail: iehab.a.k@uoanbar.edu.iq** | |
| **Module Leader's Acad. Title** | | | **Module Leader's Qualification** | Ph.D. | |
| **Module Tutor** | | | **e-mail** | E-mail | |
| **Peer Reviewer Name** | Name | | **e-mail** | E-mail | |
| **Scientific Committee Approval Date** | | | **Version Number** | 1.0 | |

| Relation with other Modules<br>العلاقة مع المواد الدراسية الأخرى | | | |
|---|---|---|---|
| **Prerequisite module** | None | **Semester** | |
| **Co-requisites module** | None | **Semester** | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | Finite automata are useful models for many important kinds of hardware and software. Here are the most important kinds: Software for designing and checking the behavior of digital circuits; The “lexical analyzer” of a typical complier, that is, the compiler component that breaks the input text into logical units, such as identifiers, keywords, and punctuation; Software for scanning large bodies of text, such as collections of Web pages, to find occurrences of words, phrases, or other patterns; Software for verifying systems of all types that have a finite number of distinct states, such as communication protocols or protocols for secure exchange of information. |
| **Module Learning Outcomes**<br><br>مخرجات التعلم للمادة الدراسية | • Knowledge and understanding<br>- Acquire a full understanding and mentality of Automata Theory as the basis of all computer science<br>languages design<br>- Have a clear understanding of the Automata theory concepts such as RE's, DFA's, NFA's, Stack's, Turing machines, and Grammars<br>• Cognitive skills (thinking and analysis).<br>- Be able to design FAs, NFAs, Grammars, languages modelling, small compilers basics<br>- Be able to design sample automata<br>• Communication skills (personal and academic).<br>- Be able to minimize FA's and Grammars of Context Free Languages<br>• Practical and subject specific skills (Transferable Skills). |
| **Indicative Contents**<br>المحتويات الإرشادية | • Training in the applied use of key coding languages for creative computing<br>• Training in key frameworks for creative computing<br>• Introduction to online collaboration for creative computing |

| Learning and Teaching Strategies<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | Class discussions with examples. |

| Student Workload (SWL)<br>الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا | | | |
|---|---|---|---|
| **Structured SWL (h/sem)**<br>الحمل الدراسي المنتظم للطالب خلال الفصل | 109 | **Structured SWL (h/w)**<br>الحمل الدراسي المنتظم للطالب أسبوعيا | 7 |
| **Unstructured SWL (h/sem)**<br>الحمل الدراسي غير المنتظم للطالب خلال الفصل | 91 | **Unstructured SWL (h/w)**<br>الحمل الدراسي غير المنتظم للطالب أسبوعيا | 6 |
| **Total SWL (h/sem)** | **200** | | |

| | |
|---|---|
| الحمل الدراسي الكلي للطالب خلال الفصل | |

| Module Evaluation<br>تقييم المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| | | **Time/Number** | **Weight (Marks)** | **Week Due** | **Relevant Learning Outcome** |
| **Formative assessment** | **Quizzes** | 2 | 10% (10) | 5 and 10 | LO #1, #2 and #10, #11 |
| | **Assignments** | 2 | 10% (10) | 2 and 12 | LO #3, #4 and #6, #7 |
| | **Projects / Lab.** | 1 | 10% (10) | Continuous | All |
| | **Report** | 1 | 10% (10) | 13 | LO #5, #8 and #10 |
| **Summative assessment** | **Midterm Exam** | 2hr | 10% (10) | 7 | LO #1 - #7 |
| | **Final Exam** | 3hr | 50% (50) | 16 | All |
| **Total assessment** | | | 100% (100 Marks) | | |

| Delivery Plan (Weekly Syllabus)<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | Reglual grammar |
| **Week 2** | Context-Free Grammars |
| **Week 3** | Parse Trees; Ambiguity in Grammars and Languages |
| **Week 4** | Standard Forms; Chomsky Normal Forms; |
| **Week 5** | Chomsky normal form |
| **Week 6** | Greibach normal Forms. |
| **Week 7** | Minimization of CFG's. |
| **Week 8** | Pushdown Automata (PDA) |
| **Week 9** | Deterministic and Non-Deterministic (PDA); Formal definition of NPDA. |
| **Week 10** | Mid exam |
| **Week 11** | Transition functions of NPDA; NPDA Execution. |
| **Week 12** | Accepting Strings with NPDA; Equivalence of PDAs and CFG |
| **Week 13** | The Turing Machine. |
| **Week 14** | Programming Techniques for Turing Machines; Formal definition of TM's. |

| | |
|---|---|
| **Week 15** | Decidable Languages and NP-Complete Problems |
| **Week 16** | **Preparatory week before the final Exam** |

| **Delivery Plan (Weekly Lab. Syllabus)**<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | |
| **Week 2** | |
| **Week 3** | |
| **Week 4** | |
| **Week 5** | |
| **Week 6** | |
| **Week 7** | |

| **Learning and Teaching Resources**<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | Introduction to Computer Theory, Daniel I. A. Cohen, Prentice-Hall, Second Edition, 1997. | Yes |
| **Recommended Texts** | JohnE.Hopcroft, RajeevMotwani, JeffreyD.Ullman: Introduc-tiontoAutomataTheory,Languages, and Computation; Addison Wesley,2000. | No |
| **Websites** | https://www.coursera.org/courses?query=theory%20of%20computation | |

| **Grading Scheme**<br>مخطط الدرجات | | | | |
|---|---|---|---|---|
| **Group** | **Grade** | التقدير | **Marks %** | **Definition** |
| **Success Group (50 - 100)** | **A -** Excellent | امتياز | 90 - 100 | Outstanding Performance |
| | **B -** Very Good | جيد جدا | 80 - 89 | Above average with some errors |
| | **C -** Good | جيد | 70 - 79 | Sound work with notable errors |
| | **D -** Satisfactory | متوسط | 60 - 69 | Fair but with major shortcomings |
| | **E -** Sufficient | مقبول | 50 - 59 | Work meets minimum criteria |
| **Fail Group (0 – 49)** | **FX –** Fail | راسب (قيد المعالجة) | (45-49) | More work required but credit awarded |
| | **F –** Fail | راسب | (0-44) | Considerable amount of work required |
| | | | | |

**Note:** Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

# ISDC202MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Introduction to E-Business Systems** | | | **Module Delivery** | |
| **Module Type** | **Elective learning activity (E)** | | | ☒**Theory**<br>☒**Lecture**<br>☐**Lab**<br>☐**Tutorial**<br>☐**Practical**<br>☐**Seminar** | |
| **Module Code** | **ISEI304** | | | | |
| **ECTS Credits** | **3** | | | | |
| **SWL (hr/sem)** | | | | | |
| **Module Level** | 2 | | **Semester of Delivery** | 3 | |
| **Administering Department** | CSIT | | **College** | Type College Code | |
| **Module Leader** | **Dr. Waleed Abdulmaged Hammood** | | **e-mail** | E-mail: waleed.abdulmaged@uoanbar.edu.iq | |
| **Module Leader's Acad. Title** | Lecturer | | **Module Leader's Qualification** | Ph.D. | |
| **Module Tutor** | Name (if available) | | **e-mail** | E-mail | |
| **Peer Reviewer Name** | Name | | **e-mail** | E-mail | |
| **Scientific Committee Approval Date** | 01/06/2023 | | **Version Number** | 1.0 | |

| Relation with other Modules<br>العلاقة مع المواد الدراسية الأخرى | | | |
|---|---|---|---|
| **Prerequisite module** | None | **Semester** | |
| **Co-requisites module** | None | **Semester** | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | 1. Introduce information systems concepts, terminology, and provide an understanding of the differences between various types of computer-based Information systems.<br>2. Review applications and models utilizing information systems solutions to<br>3. Business problems.<br>4. Study current trends in Information Technology, the impact of IT on Organizations, managers, and users, as well as ethical, social and legal issues.<br>5. Improve computer skills through individual assignments with spreadsheet, Access and other software. |
| **Module Learning Outcomes**<br><br>مخرجات التعلم للمادة الدراسية | 1) Fundamentals of Human Resource Information systems (HRIS)<br>2) Group Decision Support Systems (GDSS) in HRIS<br>3) Computer Crimes, Ethics and Human Resource Information System Security Control. |
| **Indicative Contents**<br>المحتويات الإرشادية | **Indicative content includes the following:**<br>**The main strategy that will be adopted in delivering this module are:**<br>**1. Power point presentation (Data show).**<br>**2. Explanation on the white board using different color markers.**<br>**3. Discussions with the student during teaching.**<br>**4. Interaction with students through daily problems practice through lecture.**<br>**5. Solve different problems with more exercises.**<br>**6. Submit assignment that develop student learning.**<br><br>**Modeling and Design:** Use a range of specialist models to model the problems of computer and communication systems, such as deadlock, and design efficient and effective handling procedures. [15 hrs]<br><br>**Creative:**<br>Helping students to explore specific technologies enables organizations to succeed. Especially focus on the decision models in spread sheet.<br>Providing students with a view of how to plan, develop and manage the information technology applications in an organization.<br>[11 hrs].<br><br>**Presentation:** All students should participate in different presentations about different subjects. [11 hrs] |

| Learning and Teaching Strategies<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | 1. Providing students with the fundamentals and topics related to thinking.<br>2. Giving students daily assignments.<br>3. Encouraging the formation of group discussions during the lecture.<br>4. Present stimulating questions during the lecture, such as 'how' and 'why. |

| Student Workload (SWL)<br>الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا | | | |
|---|---|---|---|
| **Structured SWL (h/sem)**<br>الحمل الدراسي المنتظم للطالب خلال الفصل | 91 | **Structured SWL (h/w)**<br>الحمل الدراسي المنتظم للطالب أسبوعيا | 3.4 |
| **Unstructured SWL (h/sem)**<br>الحمل الدراسي غير المنتظم للطالب خلال الفصل | 3.9 | **Unstructured SWL (h/w)**<br>الحمل الدراسي غير المنتظم للطالب أسبوعيا | 3.8 |
| **Total SWL (h/sem)**<br>الحمل الدراسي الكلي للطالب خلال الفصل | **125** | | |

| Module Evaluation<br>تقييم المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| | | **Time/Number** | **Weight (Marks)** | **Week Due** | **Relevant Learning Outcome** |
| **Formative assessment** | **Quizzes** | 2 | 5% (5) | 5 and 10 | LO #1, #2 and #10, #11 |
| | **Assignments** | 2 | 10% (10) | 2 and 12 | LO #3, #4 and #6, #7 |
| | **Projects / Lab.** | 1 | 10% (10) | Continuous | All |
| | **Report** | 1 | 5% (5) | 13 | LO #5, #8 and #10 |
| **Summative assessment** | **Midterm Exam** | 2hr | 20% (20) | 7 | LO #1 - #7 |
| | **Final Exam** | 3hr | 50% (50) | 16 | All |
| **Total assessment** | | | 100% (100 Marks) | | |

| Delivery Plan (Weekly Syllabus)<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | HRIS Basics |
| **Week 2** | Human resource policies and practices enabled by HRIS |

| | |
|---|---|
| **Week 3** | Internet recruiting and applicant tracking |
| **Week 4** | E-learning and other forms of technology-based training |
| **Week 5** | Telecommuting and the virtual workplace |
| **Week 6** | Personnel Administration Data Systems, Database considerations, Database tables, Subsystems, Personnel Status Reporting, Personnel action data system, Applications of HRIS |
| **Week 7** | **Mid-term Exam** |
| **Week 8** | Evolution of Group decision support system, Applications of GDSS in human resource area, Classification, Design and development |
| **Week 9** | Design principles of DSS, Application in commercial environments |
| **Week 10** | Introduction to Artificial Intelligence, General concepts, Planning, Decision making and problem solving, Introduction to Expert systems, Application of expert systems |
| **Week 11** | Enterprise Resource Planning (ERP) - Introductory concepts, ERP basics, ERP design and implementation, ERP applications, Business process re-engineering |
| **Week 12** | Security issues, Vendor evaluation, Ethics, Fraud, Internal Control |
| **Week 13** | Business Ethics, Areas of Business Ethics. |
| **Week 14** | Computer Ethics, Factors that Contribute to Fraud, Computer Fraud Schemes |
| **Week 15** | Limitations of Internal Controls, IT Controls. |
| **Week 16** | **Final Exam** |

| **Delivery Plan (Weekly Lab. Syllabus)**<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | |
| **Week 2** | |
| **Week 3** | |
| **Week 4** | |
| **Week 5** | |
| **Week 6** | |
| **Week 7** | |

| **Learning and Teaching Resources**<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | Davis, W. S., & Yen, D. C. (Eds.). (2019). *The information system consultant's handbook: Systems analysis and design*. CRC press. | Yes |

| | | |
|---|---|---|
| **Recommended Texts** | | Yes |
| **Websites** | https://link.springer.com/book/10.1007/978-1-84628-655-1 | |

| **Grading Scheme**<br>مخطط الدرجات | | | | |
|---|---|---|---|---|
| **Group** | **Grade** | التقدير | **Marks %** | **Definition** |
| **Success Group (50 - 100)** | **A -** Excellent | امتياز | 90 - 100 | Outstanding Performance |
| | **B -** Very Good | جيد جدا | 80 - 89 | Above average with some errors |
| | **C -** Good | جيد | 70 - 79 | Sound work with notable errors |
| | **D -** Satisfactory | متوسط | 60 - 69 | Fair but with major shortcomings |
| | **E -** Sufficient | مقبول | 50 - 59 | Work meets minimum criteria |
| **Fail Group (0 – 49)** | **FX –** Fail | راسب (قيد المعالجة) | (45-49) | More work required but credit awarded |
| | **F –** Fail | راسب | (0-44) | Considerable amount of work required |
| | | | | |

**Note:** Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

| | | |
|---|---|---|
| | Ministry of Higher Education and Scientific Research.<br>University of Anbar.<br>Department of Information System. | |

# MODULE DESCRIPTOR FORM

| Module Information | | | | | |
|---|---|---|---|---|---|
| **Module Title** | Object Oriented Programming II | | **Module Type** | TYPE C | |
| **Module Code** | ISOO401 | | **ECTS Credits** | 8 | |
| **Module Level** | UGII | | **Semester of Delivery** | Four | |
| **Administering Department** | IS | | **Faculty** | CSIT | |
| **Module Leader** | Doaa Yaseen Khudhur Abdul Rahman Al-ani | | **e-mail** | co.doaa.yassin@uoanbar.edu.iq | |
| **Module Leader's Acad. Title** | Lecturer | | **Module Leader's Qualification** | | |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | / | | **e-mail** | / | |
| **Review Committee Approval** | DD/MM/YY | | **Version Number** | 2.0 | |

| Relation With Other Modules | |
|---|---|
| **Pre-requisites** | |
| **Co-requisites** | |
| **Module Aims, Learning Outcomes and Indicative Contents** | |
| **Module Aims** | The student's acquisition of the concept of entity programming, classes, and objects, and how to deal with them.<br>Clarify the concept of classes, what are the functions and properties of them, and the objects of each class.<br>Giving the student experience in dealing with objects and classes and the distribution of properties and functions. The study of structured |

| | |
|---|---|
| | programming, entity programming and what is known as object-oriented programming, knowledge of injunctions and functions to prepare the student to know how to write a set of commands, knowing what are injunctions, how to build classes and objects, what the class has of properties and functions, how to build several classes and several objects, and how properties are inherited between them. |
| **Module Learning Outcomes** | A Knowledge and Understanding<br>A1. Gain the ability and skill to distinguish and deal with program instructions and functions of entity programming.<br>A2- Acquire the skill of distinguishing between objects, classes and functions and linking them.<br>A3- Dealing with the attributes and characteristics of each class and programming functions.<br>B. Subject-specific skills<br>B1. summer training<br>B2. Graduate Research<br>B3. Scientific Reports |
| **Indicative Contents** | |
| **Learning and Teaching Strategies** | |
| **Strategies** | The main strategy that will be adopted in delivering this module are:<br>1. Power point presentation (Data show).<br>2. Explanation on the white board using different color markers.<br>3. Discussions with the student during teaching.<br>4. Interaction with students through daily problems practice through lecture.<br>5. Solve different problems with more exercises.<br>6. Submit assignment that develop student learning. |

| **Module Delivery** | |
|---|---|
| **Structured workload (h/w)** | 5.34 |
| **Unstructured workload (h/w)** | 8 |
| **Total workload (h/w)** | 13.34 |

| Module Evaluation | | | | |
|---|---|---|---|---|
| | **Time/Number** | **Weight (Marks)** | **Week Due** | **Relevant Learning Outcome** |
| **Quizzes** | 3 | 6% (6) | 3,7 and 11 | |
| **Assignments** | 2 | 6% (6) | 2 and 12 | |
| **Projects / Lab.** | 1 | 15% (15) | Continuous | |
| **Report** | 1 | 5% (5) | 13 | |
| **Midterm Exam** | 2 hr | 18% (18) | 7 | |
| **Final Exam** | 3 hr | 50% (50) | 16 | |
| **Total** | | 100% (100 Marks) | | |

| Learning and Teaching Resources | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | | Yes/No |
| **Recommended Texts** | | Yes/No |
| **Websites** | | |

| Delivery Plan (Weekly Syllabus) | |
|---|---|
| | **Material Covered** |
| **Week 1** | Introduction to Operator Overloading |
| **Week 2** | Operator Overloading Using Member Functions |
| **Week 3** | Unary Operators Overloading |
| **Week 4** | Operator Overloading Tips and Restrictions |
| **Week 5** | Nonmember Operator Functions |
| **Week 6** | Using a Friend to Overload a Unary Operator |

| | |
|---|---|
| **Week 7** | Overloading the Relational and Logical Operators |
| **Week 8** | Introducing Inheritance |
| **Week 9** | Base Class Access Control |
| **Week 10** | Using protected Members |
| **Week 11** | Inheriting Multiple Base Classes |
| **Week 12** | Constructors, Destructors, and Inheritance |
| **Week 13** | Passing Parameters to Base Class Constructors |
| **Week 14** | Virtual Base Classes |
| **Week 15** | Final Exam |

**APPENDIX:**

| **UNIVERSITY of Anbar** | | | | |
|---|---|---|---|---|
| **GRADING SCHEME** | | | | |
| **Group** | **ECTS Grade** | **% of Students/Marks** | **Definition** | **GPA** |
| **Success Group (50 - 100)** | **A** - Excellent | Best 10% | Outstanding Performance | **5** |
| | **B** - Very Good | Next 25% | Above average with some errors | **4** |
| | **C** - Good | Next 30% | Sound work with notable errors | **3** |
| | **D** - Satisfactory | Next 25% | Fair but with major shortcomings | **2** |
| | **E** - Sufficient | Next 10% | Work meets minimum criteria | **1** |
| **Fail Group (0 – 49)** | **FX** – Fail | (45-49) | More work required but credit awarded | |
| | **F** – Fail | (0-44) | Considerable amount of work required | |
| | | | | |

Note:

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

| | | |
|---|---|---|
| | Ministry of Higher Education and Scientific Research.<br>University of Anbar.<br>Department of Information System. | |

# MODULE DESCRIPTOR FORM

| Module Information | | | | | |
|---|---|---|---|---|---|
| **Module Title** | Numerical Analysis | | **Module Type** | TYPE C | |
| **Module Code** | CCIT062 | | **ECTS Credits** | 5 | |
| **Module Level** | UGII | | **Semester of Delivery** | Four | |
| **Administering Department** | IS | | **Faculty** | CSIT | |
| **Module Leader** | Dr. Abdul Azim Zaili | | **e-mail** | ab72d74@uoanbar.edu.iq | |
| **Module Leader's Acad. Title** | Lecturer | | **Module Leader's Qualification** | Ph D. | |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | / | | **e-mail** | / | |
| **Review Committee Approval** | DD/MM/YY | | **Version Number** | 2.0 | |

| Relation With Other Modules | |
|---|---|
| **Pre-requisites** | ISDC203 |
| **Co-requisites** | |
| **Module Aims, Learning Outcomes and Indicative Contents** | |
| **Module Aims** | A-Understanding the concept of numerical analysis, its methods and applications.<br>B-Explain the concept of the Matrices and its application in numerical analysis.<br>C-Understanding the relationship between the numerical methods and the real problems and how to deal with it. |
| **Module Learning Outcomes** | A1. Knowledge and Understanding<br>A2. Gain the ability and skill to distinguish the numerical methods and deal with them.<br>A3. Gain the ability and skills of the matrices applications. |

| | |
|---|---|
| | A4. Dealing with the different numerical methods.<br>B. Subject-specific skills B1. Summer Training<br>B2. Fourth year projects<br>B3. Scientific projects |
| **Indicative Contents** | |

## Learning and Teaching Strategies

| | |
|---|---|
| **Strategies** | The main strategy that will be adopted in delivering this module are:<br>1. Power point presentation (Data show).<br>2. Explanation on the white board using different color markers.<br>3. Discussions with the student during teaching.<br>4. Interaction with students through daily problems practice through lecture.<br>5. Solve different problems with more exercises.<br>6. Submit assignment that develop student learning. |

## Module Delivery

| | |
|---|---|
| **Structured workload (h/w)** | 4.4 |
| **Unstructured workload (h/w)** | 5.6 |
| **Total workload (h/w)** | 10 |

## Module Evaluation

| | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|
| **Quizzes** | 3 | 6% (6) | 3,7 and 11 | |
| **Assignments** | 2 | 6% (6) | 2 and 12 | |
| **Projects / Lab.** | 1 | 15% (15) | Continuous | |
| **Report** | 1 | 5% (5) | 13 | |
| **Midterm Exam** | 2 hr | 18% (18) | 7 | |
| **Final Exam** | 3 hr | 50% (50) | 16 | |
| **Total** | | 100% (100 Marks) | | |

## Learning and Teaching Resources

| | Text | Available in the Library? |
|---|---|---|
| **Required Texts** | | Yes/No |
| **Recommended Texts** | | Yes/No |
| **Websites** | | |

| Delivery Plan (Weekly Syllabus) | |
|---|---|
| | **Material Covered** |
| **Week 1** | Direct Methods<br>Direct methods for solving linear system of equation<br>Theoretical and Experimental |
| **Week 2** | Gaussian Elimination<br>Simple Gaussian elimination method, gauss elimination method with partial pivoting,<br>Theoretical and Experimental |
| **Week 3** | Determinant<br>determinant evaluation, gauss Jordan method,<br>Theoretical and Experimental |
| **Week 4** | LU decomposition<br>L U decompositions Doolittle's LU decomposition, Doolittle's method with row interchange<br>Theoretical and Experimental |
| **Week 5** | Matrix inverse<br>Finding Matrix Inverse<br>Theoretical and Experimental |
| **Week 6** | Iteration methods<br>Iterative methods for solving linear systems of equations<br>Theoretical and Experimental |
| **Week 7** | **Mid-Term Exam** |
| **Week 8** | **Jacobian iteration.**<br>**Jacobian iteration, gauss – seidel method,**<br>**Theoretical and Experimental** |
| **Week 9** | gauss – seidel method,<br>Successive over relaxation method (sort method)<br>Theoretical and Experimental |

| | |
|---|---|
| **Week 10** | Newton-Raphson's.<br>Newton-Raphson's Method.<br>Theoretical and Experimental |
| **Week 11** | Runge-kutta.<br>Runge-kutta Method.<br>Theoretical and Experimental |
| **Week 12** | Polynomial, Data Approximation.<br>Interpolation and the Lagrange Polynomial, Data Approximation and Neville's Method,<br>Theoretical and Experimental |
| **Week 13** | Differential Equation method<br>Numerical Analysis Methods for Differential Equation<br>Experimental |
| **Week 14** | Integral Equation methos.<br>Numerical Analysis Methods for Integral Equation<br>Theoretical and Experimental.<br>Numerical Analysis Methods for Integral Equation |
| **Week 15** | **Preparatory Week** |
| **Week 16** | **Final Exam** |

**APPENDIX:**

| **UNIVERSITY of Anbar** | | | | |
|---|---|---|---|---|
| **GRADING SCHEME** | | | | |
| **Group** | **ECTS Grade** | **% of Students/Marks** | **Definition** | **GPA** |
| **Success Group (50 - 100)** | **A** - Excellent | Best 10% | Outstanding Performance | **5** |
| | **B** - Very Good | Next 25% | Above average with some errors | **4** |
| | **C** - Good | Next 30% | Sound work with notable errors | **3** |
| | **D** - Satisfactory | Next 25% | Fair but with major shortcomings | **2** |
| | **E** - Sufficient | Next 10% | Work meets minimum criteria | **1** |
| **Fail Group (0 – 49)** | **FX** – Fail | (45-49) | More work required but credit awarded | |
| | **F** – Fail | (0-44) | Considerable amount of work required | |
| | | | | |

Note:

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

# ISDC202MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Design Internet Pages** | | | **Module Delivery** | |
| **Module Type** | **Type E** | | | ☒**Theory**<br>☒**Lecture**<br>☒**Lab**<br>☐**Tutorial**<br>☐**Practical**<br>☐**Seminar** | |
| **Module Code** | **ISDI404** | | | | |
| **ECTS Credits** | **5** | | | | |
| **SWL (hr/sem)** | | | | | |
| **Module Level** | Fourth | | **Semester of Delivery** | | |
| **Administering Department** | IS | | **College** | Type College Code | |
| **Module Leader** | **Dr. mohanad Abdulsalam younis gedan** | | **e-mail** | **E-mail: mohanad.abdul@uoanbar.edu.iq** | |
| **Module Leader's Acad. Title** | Lecturer | | **Module Leader's Qualification** | | Ph.D. |
| **Module Tutor** | mohanad Abdulsalam younis gedan | | **e-mail** | mohanad.abdul@uoanbar.edu.iq | |
| **Peer Reviewer Name** | Name | | **e-mail** | E-mail | |
| **Scientific Committee Approval Date** | 2024-2025 | | **Version Number** | 2.0 | |

| Relation with other Modules<br>العلاقة مع المواد الدراسية الأخرى | | | |
|---|---|---|---|
| **Prerequisite module** | None | **Semester** | |
| **Co-requisites module** | CUE31012 | **Semester** | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | The course covers the basics of designing and building web pages, types of web pages, and how to publish pages and websites on the Internet. The course also deals with the use of one of the commonly used web page editing programs in building a personal or educational website. |
| **Module Learning Outcomes** | A-Knowledge and Understanding<br>A1. Explains the basics of designing and building web pages and related matters |

| | |
|---|---|
| مخرجات التعلم للمادة الدراسية | Concepts, terminology and steps.<br>A2. Explains the types of pages and websites and the languages used in design and building pages and websites<br>A3. Explains the components, specifications, and standards for page design and websites and their interfaces and uses them to evaluate the sites<br>A4. It discusses the most important and famous programs and tools for building and designing websites and pages and compares them.<br>B. Subject-specific skills<br>B1. summer training<br>B2. Graduate Research<br>B3. Scientific Reports |
| **Indicative Contents**<br>المحتويات الإرشادية | |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | Sudden daily and continuous weekly tests.<br>Exercises and activities in the classroom.<br>Guide students to some websites to benefit from them.<br><br>1. Providing students with the fundamentals and topics related to thinking.<br>2. Giving students daily assignments.<br>3. Encouraging the formation of group discussions during the lecture.<br>4. Present stimulating questions during the lecture, such as 'how' and 'why. |

| **Student Workload (SWL)**<br>الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا | | | |
|---|---|---|---|
| **Structured SWL (h/sem)**<br>الحمل الدراسي المنتظم للطالب خلال الفصل | 91 | **Structured SWL (h/w)**<br>الحمل الدراسي المنتظم للطالب أسبوعيا | 3.4 |
| **Unstructured SWL (h/sem)**<br>الحمل الدراسي غير المنتظم للطالب خلال الفصل | 3.9 | **Unstructured SWL (h/w)**<br>الحمل الدراسي غير المنتظم للطالب أسبوعيا | 3.8 |
| **Total SWL (h/sem)**<br>الحمل الدراسي الكلي للطالب خلال الفصل | **125** | | |

| **Module Evaluation**<br>تقييم المادة الدراسية | | | | |
|---|---|---|---|---|
| | **Time/Number** | **Weight (Marks)** | **Week Due** | **Relevant Learning Outcome** |

| | | | | | |
|---|---|---|---|---|---|
| **Formative assessment** | **Quizzes** | 1 or 2 | 6% (6) | 5 or 5, 10 | |
| | **Assignments** | 2 | 6% (6) | At the start | |
| | **Projects / Lab.** | 1 | 5% (5) | Continuous | |
| | **Report** | 1 | 5% (5) | | |
| **Summative assessment** | **Midterm Exam** | 2 hr | 18% (18) | 8 | |
| | 60% (60) | 3hr | 50% (50) | 16 | All |
| **Total assessment** | | | 100% (100 Marks) | | |

| **Delivery Plan (Weekly Syllabus)**<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | The basics of designing and building web pages and websites, the main concepts, steps and stages of website design. |
| **Week 2** | Types of websites: fixed-content websites and variable-content websites |
| **Week 3** | Components, specifications and standard standards for designing pages and websites and designing user interfaces and screens |
| **Week 4** | Languages and applications used to design web pages and associated tools Microsoft Word, HTML, FrontPage, Dreamweaver, php, CSS, (CS5 and java scripts, cgi scripts (Linux based) and VB scripts |
| **Week 5** | World Wide Web |
| **Week 6** | World Wide Web -History |
| **Week 7** | Uniform Resource Locator |
| **Week 8** | CSS |
| **Week 9** | JavaScript |
| **Week 10** | Why Study JavaScript? |
| **Week 11** | JavaScript Can Change HTML Content |
| **Week 12** | JavaScript Can Change HTML Attribute Values |
| **Week 13** | JavaScript Functions and Events |
| **Week 14** | **Preparatory Week** |
| **Week 15** | **Final Exam** |

| Delivery Plan (Weekly Lab. Syllabus)<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | |
| **Week 2** | |
| **Week 3** | |
| **Week 4** | |
| **Week 5** | |
| **Week 6** | |
| **Week 7** | |

| Learning and Teaching Resources<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | 1. Designing and Developing Web Applications Using Microsoft .NET Framework 4 by Tony Northrup (Nov 3, 2011)<br>2. HTML5: Designing Rich Internet Applications (Visualizing the Web) by Matthew David (Jul 28, 2010)<br>3. Nielsen, J. (2006) Prioritizing Web Usability. Berkeley, CA: New Riders. (0-321- 35031-6) | Yes |
| **Recommended Texts** | • المحاضرات المقدمة من قبل مدرس المادة<br>• الكتب المتوفرة في مكتبة الكلية | |
| **Websites** | | |

| Grading Scheme<br>مخطط الدرجات | | | | |
|---|---|---|---|---|
| **Group** | **Grade** | التقدير | **Marks %** | **Definition** |
| **Success Group (50 - 100)** | **A -** Excellent | امتياز | 90 - 100 | Outstanding Performance |
| | **B -** Very Good | جيد جدا | 80 - 89 | Above average with some errors |
| | **C –** Good | جيد | 70 - 79 | Sound work with notable errors |
| | **D -** Satisfactory | متوسط | 60 - 69 | Fair but with major shortcomings |
| | **E -** Sufficient | مقبول | 50 - 59 | Work meets minimum criteria |
| **Fail Group (0 – 49)** | **FX –** Fail | راسب (قيد المعالجة) | (45-49) | More work required but credit awarded |
| | **F –** Fail | راسب | (0-44) | Considerable amount of work required |
| | | | | |

**Note:** Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

# ISDC202MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Algorithms** | | | **Module Delivery** | |
| **Module Type** | C | | | ☒**Theory**<br>☒**Lecture**<br>☐**Lab**<br>☐**Tutorial**<br>☐**Practical**<br>☐**Seminar** | |
| **Module Code** | ISDD402 | | | | |
| **ECTS Credits** | **7** | | | | |
| **SWL (hr/sem)** | | | | | |
| **Module Level** | 2 | | **Semester of Delivery** | Four | |
| **Administering Department** | CSIT | | **College** | Type College Code | |
| **Module Leader** | **Dr. Mahmoud Hilal Farhan** | | **e-mail** | E-mail: mah2005hilal@uoanbar.edu.iq | |
| **Module Leader's Acad. Title** | Lecturer | | **Module Leader's Qualification** | Ph.D. | |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | | | **e-mail** | | |
| **Scientific Committee Approval Date** | 01/09/2024 | | **Version Number** | 2.0 | |

| Relation with other Modules<br>العلاقة مع المواد الدراسية الأخرى | | | |
|---|---|---|---|
| **Prerequisite module** | None | **Semester** | |
| **Co-requisites module** | None | **Semester** | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | The module aims to build a strong foundation in algorithms by introducing their fundamental principles, characteristics, and importance in problem-solving. Learners will explore algorithm analysis techniques, focusing on time and space complexity using Big-O notation. The course emphasizes algorithm design and development, including problem-solving paradigms like recursion. Core topics include searching and sorting algorithms, highlighting their efficiency and real-world applications. Additionally, learners will implement graph-based algorithms for traversal, shortest paths, and network optimization. By the end of the module, students will be proficient in analyzing, designing, and coding efficient algorithms to solve diverse computational problems. |
| **Module Learning Outcomes**<br><br>مخرجات التعلم للمادة الدراسية | By the end of this module, learners will be able to:<br><br>1. Comprehend fundamental concepts of algorithms, their characteristics, and their role in problem-solving.<br>2. Analyze algorithms using time and space complexity, employing Big-O notation to evaluate performance.<br>3. Design and develop algorithms using paradigms like recursion, divide-and-conquer, and dynamic programming.<br>4. Implement and compare searching algorithms (e.g., binary search) and sorting algorithms (e.g., quicksort, mergesort) for efficiency and application.<br>5. Develop and apply graph algorithms, including traversal (DFS, BFS), shortest path (<br>6. Solve computational problems with well-optimized algorithmic solutions. |
| **Indicative Contents**<br>المحتويات الإرشادية | **Indicative content includes the following:**<br>**The main strategy that will be adopted in delivering this module are:**<br>**1. Power point presentation (Data show).**<br>**2. Explanation on the white board using different color markers.**<br>**3. Discussions with the student during teaching.**<br>**4. Interaction with students through daily problems practice through lecture.**<br>**5. Solve different problems with more exercises.**<br>**6. Submit assignment that develop student learning.**<br><br>**Modeling and Design:** Use a range of specialist models to model the problems of computer and communication systems, such as deadlock, and design efficient and effective handling procedures. [15 hrs]<br><br>**Creative:** Extend knowledge in information systems to construct specific and effective solution to manage and control computer resources. [11 hrs]<br><br>**Presentation:** All students should participate in different presentations about different subjects. [11 hrs] |

| Learning and Teaching Strategies<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | 1. Providing students with the fundamentals and topics related to thinking.<br>2. Giving students daily assignments.<br>3. Encouraging the formation of group discussions during the lecture.<br>4. Present stimulating questions during the lecture, such as 'how' and 'why. |

| Student Workload (SWL)<br>الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا | | | |
|---|---|---|---|
| **Structured SWL (h/sem)**<br>الحمل الدراسي المنتظم للطالب خلال الفصل | | **Structured SWL (h/w)**<br>الحمل الدراسي المنتظم للطالب أسبوعيا | |
| **Unstructured SWL (h/sem)**<br>الحمل الدراسي غير المنتظم للطالب خلال الفصل | | **Unstructured SWL (h/w)**<br>الحمل الدراسي غير المنتظم للطالب أسبوعيا | |
| **Total SWL (h/sem)**<br>الحمل الدراسي الكلي للطالب خلال الفصل | | | |

| Module Evaluation<br>تقييم المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| | | **Time/Number** | **Weight (Marks)** | **Week Due** | **Relevant Learning Outcome** |
| **Formative assessment** | **Quizzes** | 2 | 20% (10) | 5 and 10 | LO #1, #2 and #10, #11 |
| | **Assignments** | 2 | 10% (10) | 2 and 12 | LO #3, #4 and #6, #7 |
| | **Projects / Lab.** | 1 | 30% (15) | Continuous | All |
| | **Report** | 1 | 10% (5) | 13 | LO #5, #8 and #10 |
| **Summative assessment** | **Midterm Exam** | 2hr | 20% (10) | 7 | LO #1 - #7 |
| | **Final Exam** | 3hr | 50% (50) | 16 | All |
| **Total assessment** | | | 100% (100 Marks) | | |

| Delivery Plan (Weekly Syllabus)<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | **Introduction**: Importance of Algorithms in Computer Science, Analysis of Algorithms. |
| **Week 2** | **Introduction**: Types of Algorithms, Big O Notation, and Space and Time complexity |
| **Week 3** | **Recursion:** Recursion Essentials, Types of Recursions, Factorial, Fibonacci Sequence |
| **Week 4** | **Recursion:** GCD, Integer Power, Tower of Hanoi, Non-attacking Eight Queens |
| **Week 5** | **Searching Algorithms:** Linear Search, and Binary Search |
| **Week 6** | **Sorting Algorithm:** Bubble Sort, Insertion Sort, and Selection Sort |
| **Week 7** | **Advanced Sorting Algorithm:** Quick Sort and Merge Sort |
| **Week 8** | **Mid-term Exam** |
| **Week 9** | **Graph:** Introduction to Graphs, Graph Terminology, Types of Graphs, and Cyclic and Acyclic Graphs |
| **Week 10** | **Graph:** Connected and Disconnected Graphs, Bipartite Graphs, Complete Graphs, and Sparse and Dense Graphs |
| **Week 11** | **Graph Representation**: Adjacency Matrix, Adjacency List, Edge List |
| **Week 12** | **Graph Traversal Methods:** Traversal Strategies, Comparison of Traversal Strategies |
| **Week 13** | **Applications of Graph Traversals**: Depth-First Search (DFS) |
| **Week 14** | **Applications of Graph Traversals**: Breadth-First Search (BFS) |
| **Week 15** | **Preparatory Week** |
| **Week 16** | **Final Exam** |

| Delivery Plan (Weekly Lab. Syllabus)<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | A set of different programs as introduction |
| **Week 2** | Factorial, Fibonacci Sequence |
| **Week 3** | GCD, Integer Power |
| **Week 4** | Linear Search, and Binary Search |
| **Week 5** | Insertion Sort, and Selection Sort |
| **Week 6** | Bubble Sort |
| **Week 7** | Merge Sort |
| **Week 8** | Quick Sort |
| **Week 9** | **Mid-term Exam** |
| **Week 10** | Adjacency Matrix, |
| **Week 11** | Adjacency List |
| **Week 12** | Edge List |
| **Week 13** | Depth-First Search (DFS) |
| **Week 14** | Breadth-First Search (BFS) |
| **Week 15** | **Preparatory Week** |
| **Week 16** | **Final Exam** |

| Learning and Teaching Resources<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | Davis, W. S., & Yen, D. C. (Eds.). (2019). *The information system consultant's handbook: Systems analysis and design*. CRC press. | Yes |
| **Recommended Texts** | | Yes |
| **Websites** | https://link.springer.com/book/10.1007/978-1-84628-655-1 | |

| Grading Scheme<br>مخطط الدرجات | | | | |
|---|---|---|---|---|
| **Group** | **Grade** | التقدير | **Marks %** | **Definition** |
| **Success Group (50 - 100)** | **A -** Excellent | امتياز | 90 - 100 | Outstanding Performance |
| | **B -** Very Good | جيد جدا | 80 - 89 | Above average with some errors |
| | **C -** Good | جيد | 70 - 79 | Sound work with notable errors |
| | **D -** Satisfactory | متوسط | 60 - 69 | Fair but with major shortcomings |
| | **E -** Sufficient | مقبول | 50 - 59 | Work meets minimum criteria |
| **Fail Group (0 – 49)** | **FX –** Fail | راسب (قيد المعالجة) | (45-49) | More work required but credit awarded |
| | **F –** Fail | راسب | (0-44) | Considerable amount of work required |
| | | | | |

**Note:** Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

| | | |
|---|---|---|
| | Ministry of Higher Education and Scientific Research.<br>University of Anbar.<br>Department of Information System. | |

# MODULE DESCRIPTOR FORM

| Module Information | | | | | |
|---|---|---|---|---|---|
| **Module Title** | ENGLISH (2) | | **Module Type** | TYPE S | |
| **Module Code** | UOA004 | | **ECTS Credits** | 2 | |
| **Module Level** | UGII | | **Semester of Delivery** | FOUR | |
| **Administering Department** | IS | | **Faculty** | CSIT | |
| **Module Leader** | | | **e-mail** | | |
| **Module Leader's Acad. Title** | Lecturer | | **Module Leader's Qualification** | | |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | / | | **e-mail** | / | |
| **Review Committee Approval** | DD/MM/YY | | **Version Number** | 2.0 | |

| Relation With Other Modules | |
|---|---|
| **Pre-requisites** | UOA140 |
| **Co-requisites** | |
| **Module Aims, Learning Outcomes and Indicative Contents** | |
| **Module Aims** | Enhancing English speaking, reading and writing<br>Memorize a big number of vocabularies<br>Helping students to deal with the English language in easier ways |
| **Module Learning Outcomes** | A1. Reading<br>A2. writing<br>A3. Speaking.<br>A4. Listening<br>B. Subject-specific skills |

| | |
|---|---|
| | B1. Learn scanning and skimming skills in reading<br>B2. Right pronunciation<br>B3. Vocabularies |
| **Indicative Contents** | |
| **Learning and Teaching Strategies** | |
| **Strategies** | The main strategy that will be adopted in delivering this module are:<br>1. Power point presentation (Data show).<br>2. Explanation on the white board using different color markers.<br>3. Discussions with the student during teaching.<br>4. Interaction with students through daily problems practice through lecture.<br>5. Solve different problems with more exercises.<br>6. Submit assignment that develop student learning. |

| **Module Delivery** | |
|---|---|
| **Structured workload (h/w)** | 2.34 |
| **Unstructured workload (h/w)** | 4.34 |
| **Total workload (h/w)** | 6.68 |

**Module Evaluation**

| | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|---|---|---|---|---|
| **Quizzes** | 2 | 6% (6) | 5 and 10 | |
| **Assignments** | 2 | 6% (6) | 2 and 12 | |
| **Projects / Lab.** | 1 | 5% (5) | Continuous | |
| **Report** | 1 | 5% (5) | 13 | |
| **Midterm Exam** | 2 hr | 18% (18) | 7 | |
| **Final Exam** | 3 hr | 60% (60) | 16 | |
| **Total** | | 100% (100 Marks) | | |

| Learning and Teaching Resources | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | New Headway Plus Pre-Intermediate Student's Book<br>New Headway Plus Pre-Intermediate Student's WorkBook | Yes/No |
| **Recommended Texts** | | Yes/No |
| **Websites** | | |

| Delivery Plan (Weekly Syllabus) | |
|---|---|
| | **Material Covered** |
| **Week 1** | Grammar, reading, writing, listening, vocabulary<br>Unit 1: Getting to know you |
| **Week 2** | Grammar, reading, writing, listening, vocabulary.<br>Unit 2: The way we live |
| **Week 3** | Grammar, reading, writing, listening, vocabulary<br>Unit 3:it all went wrong |
| **Week 4** | Grammar, reading, writing, listening, vocabulary.<br>Unit 4: Let's go shopping |
| **Week 5** | Grammar, reading, writing, listening, vocabulary.<br>Unit 5: What do you want to do? |
| **Week 6** | Grammar, reading, writing, listening, vocabulary.<br>Unit 5: What do you want to do? |
| **Week 7** | **Mid-Term Exam** |
| **Week 8** | Grammar, reading, writing, listening, vocabulary.<br>Unit 6: Tell me what's it like? |
| **Week 9** | Grammar, reading, writing, listening, vocabulary.<br>Unit 7: Famous couples |
| **Week 10** | Grammar, reading, writing, listening, vocabulary.<br>Unit 8: Do's and Don'ts |
| **Week 11** | Grammar, reading, writing, listening, vocabulary.<br>Unit 9: Going places |

| | |
|---|---|
| **Week 12** | Grammar, reading, writing, listening, vocabulary.<br>Unit 10: Scared to death |
| **Week 13** | Grammar, reading, writing, listening, vocabulary.<br>English for Computer Science |
| **Week 14** | listening.<br>Revision of most important topics in the subject |
| **Week 15** | **Preparatory Week** |
| **Week 16** | **Final Exam** |

**APPENDIX:**

| **UNIVERSITY of Anbar** | | | | |
|---|---|---|---|---|
| **GRADING SCHEME** | | | | |
| **Group** | **ECTS Grade** | **% of Students/Marks** | **Definition** | **GPA** |
| **Success Group (50 - 100)** | **A -** Excellent | Best 10% | Outstanding Performance | **5** |
| | **B -** Very Good | Next 25% | Above average with some errors | **4** |
| | **C -** Good | Next 30% | Sound work with notable errors | **3** |
| | **D -** Satisfactory | Next 25% | Fair but with major shortcomings | **2** |
| | **E -** Sufficient | Next 10% | Work meets minimum criteria | **1** |
| **Fail Group (0 – 49)** | **FX –** Fail | (45-49) | More work required but credit awarded | |
| | **F –** Fail | (0-44) | Considerable amount of work required | |
| | | | | |

Note:

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The university has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **The crimes of the defunct Ba'ath party** | | | **Module Delivery** | |
| **Module Type** | **S** | | | ☒**Theory**<br>☐**Lecture**<br>☒**Lab**<br>☒**Tutorial**<br>☐**Practical**<br>☐**Seminar** | |
| **Module Code** | UOA006 | | | | |
| **ECTS Credits** | **2** | | | | |
| **SWL (hr/sem)** | **50** | | | | |
| **Module Level** | 1 | | **Semester of Delivery** | 3 | |
| **Administering Department** | Type Dept. Code | | **College** | Type College Code | |
| **Module Leader** | DR. Walaa Ahmed rashied | | **e-mail** | | |
| **Module Leader's Acad. Title** | Asst. Professor | | **Module Leader's Qualification** | Ph.D. | |
| **Module Tutor** | Name (if available) | | **e-mail** | E-mail | |
| **Peer Reviewer Name** | Name | | **e-mail** | E-mail | |
| **Scientific Committee Approval Date** | 01/06/2023 | | **Version Number** | 1.0 | |

| Relation with other Modules<br>العلاقة مع المواد الدراسية الأخرى | | | |
|---|---|---|---|
| **Prerequisite module** | None | **Semester** | |
| **Co-requisites module** | None | **Semester** | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | تغطي هذه الوحدة القضايا التالية:<br>مفهوم الجرائم وأنواعها، تعريف الجريمة ومصطلحاتها، أنواع الجرائم الدولية، القرارات الصادرة من المحكمة الجنائية العراقية العليا، الجرائم النفسية والاجتماعية وآثارها، الجرائم البيئية. |
| **Module Learning Outcomes**<br><br>مخرجات التعلم للمادة الدراسية | - مفهوم الجرائم وأنواعها، تعريف الجريمة ومصطلحاتها، أنواع الجرائم الدولية، القرارات الصادرة من المحكمة الجنائية العراقية العليا، الجرائم النفسية والاجتماعية وآثارها، الجرائم البيئية. |
| **Indicative Contents**<br>المحتويات الإرشادية | - مفهوم الجرائم وأنواعها، تعريف الجريمة ومصطلحاتها، أنواع الجرائم الدولية، القرارات الصادرة من المحكمة الجنائية العليا، الجرائم النفسية والاجتماعية وآثارها، الجرائم البيئية. |

| Learning and Teaching Strategies<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | - مفهوم الجرائم وأنواعها، تعريف الجريمة ومصطلحاتها، أنواع الجرائم الدولية، القرارات الصادرة من المحكمة الجنائية العليا، الجرائم النفسية والاجتماعية وآثارها، الجرائم البيئية. |

| Student Workload (SWL)<br>الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا | | | |
|---|---|---|---|
| **Structured SWL (h/sem)**<br>الحمل الدراسي المنتظم للطالب خلال الفصل | 33 | **Structured SWL (h/w)**<br>الحمل الدراسي المنتظم للطالب أسبوعيا | ٢ |
| **Unstructured SWL (h/sem)**<br>الحمل الدراسي غير المنتظم للطالب خلال الفصل | 17 | **Unstructured SWL (h/w)**<br>الحمل الدراسي غير المنتظم للطالب أسبوعيا | ١ |
| **Total SWL (h/sem)**<br>الحمل الدراسي الكلي للطالب خلال الفصل | **50** | | |

| Module Evaluation<br>تقييم المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| | | **Time/Number** | **Weight (Marks)** | **Week Due** | **Relevant Learning Outcome** |
| **Formative assessment** | **Quizzes** | 2 | 10% (10) | 5 and 10 | LO #1, #2 and #10, #11 |
| | **Assignments** | 2 | 10% (10) | 2 and 12 | LO #3, #4 and #6, #7 |

| | | | | | |
|---|---|---|---|---|---|
| | **Projects / Lab.** | 1 | 10% (10) | Continuous | All |
| | **Report** | 1 | 10% (10) | 13 | LO #5, #8 and #10 |
| **Summative assessment** | **Midterm Exam** | 2hr | 10% (10) | 7 | LO #1 - #7 |
| | **Final Exam** | 3hr | 50% (50) | 16 | All |
| **Total assessment** | | | 100% (100 Marks) | | |

| **Delivery Plan (Weekly Syllabus)**<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | جرائم نظام البعث وفق قانون المحكمة الجنائية العراقية العليا لعام ٢٠٠٥<br>تعريف الجريمة ومصطلحاتها |
| **Week 2** | أنواع الجرائم<br>جرائم نظام البعث وفق توثيق قانون المحكمة الجنائية العراقية العليا لعام ٢٠٠٥ |
| **Week 3** | الجرائم النفسية والاجتماعية وآثارها<br>الجرائم النفسية |
| **Week 4** | الجرائم النفسية<br>اليات الجرائم النفسية |
| **Week 5** | الجرائم الاجتماعية<br>اثار الجرائم النفسية |
| **Week 6** | عسكرة المجتمع<br>انتهاكات القوانين العراقية |
| **Week 7** | امتحان |
| **Week 8** | الجرائم البيئية لنظام البعث في العراق ( التلوث الحربي والاشعاعي وانفجار الالغام ) |
| **Week 9** | تدمير المدن والقرى |
| **Week 10** | تجفيف الاهوار |
| **Week 11** | تجريف البساتين |
| **Week 12** | جرائم المقابر الجماعية |
| **Week 13** | احداث مقابر الابادة الجماعية المرتكبة من النظام البعثي في العراق |
| **Week 14** | احداث الانتفاضة الشعبانية عام ١٩٩١ وعلاقتها بالمقابر الجماعية |
| **Week 15** | مقابر الابادة الجماعية لضحايا لمجزرة الانفال للمدة (١٩٨٧-١٩٨٨) |

## Learning and Teaching Resources

| مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | https://www.uoanbar.edu.iq/ComputerCollege//catalog/INFO_depart/lectures/infoS_2_1_baathall_compressed.pdf | No |
| **Recommended Texts** | | No |
| **Websites** | https://www.uoanbar.edu.iq/ComputerCollege//catalog/INFO_depart/lectures/infoS_2_1_baathall_compressed.pdf | |

| **Grading Scheme**<br>مخطط الدرجات | | | | |
|---|---|---|---|---|
| **Group** | **Grade** | التقدير | **Marks %** | **Definition** |
| **Success Group (50 - 100)** | **A** - Excellent | امتياز | 90 - 100 | Outstanding Performance |
| | **B** - Very Good | جيد جدا | 80 - 89 | Above average with some errors |
| | **C** - Good | جيد | 70 - 79 | Sound work with notable errors |
| | **D** - Satisfactory | متوسط | 60 - 69 | Fair but with major shortcomings |
| | **E** - Sufficient | مقبول | 50 - 59 | Work meets minimum criteria |
| **Fail Group (0 – 49)** | **FX** – Fail | راسب (قيد المعالجة) | (45-49) | More work required but credit awarded |
| | **F** – Fail | راسب | (0-44) | Considerable amount of work required |
| | | | | |

**Note:** Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **اللغة العربية ٢** | | | **Module Delivery** | |
| **Module Type** | **Type S** | | | ☒**Theory**<br>☒**Lecture**<br>☒**Lab**<br>☐**Tutorial**<br>☐**Practical**<br>☐**Seminar** | |
| **Module Code** | **UOA002** | | | | |
| **ECTS Credits** | **2** | | | | |
| **SWL (hr/sem)** | **50** | | | | |
| **Module Level** | | 1 | **Semester of Delivery** | | Four |
| **Administering Department** | | CSIT | **College** | Type College Code | |
| **Module Leader** | Dr. SAAD IBRAHIM AHMAD | | **e-mail** | E-mail: saad.ibrahim@uoanbar.edu.iq | |
| **Module Leader's Acad. Title** | | Lecturer | **Module Leader's Qualification** | | Ph.D. |
| **Module Tutor** | Name (if available) | | **e-mail** | E-mail | |
| **Peer Reviewer Name** | | Name | **e-mail** | E-mail | |
| **Scientific Committee Approval Date** | | 01/06/2023 | **Version Number** | 1.0 | |

| Relation with other Modules<br>العلاقة مع المواد الدراسية الأخرى | | | |
|---|---|---|---|
| **Prerequisite module** | None | **Semester** | |
| **Co-requisites module** | None | **Semester** | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | ١- تعليم الطلبة على اساسيات اللغة العربية وقواعدها<br>٢- تعليم الطلبة على كيفية الاعراب<br>٣- ان يتعلم الطالب على قواعد اللغة العربية<br>٤- أن يتعلم الطالب كيفية بناء الجمل واستخراجها للعنوان المطلوب<br>٥- القدرة على استعمال العبارات الصحيحة<br>٦- القدرة على مشاركة الآخرين في الحوار الصحيح<br>٧- تطوير قدرة الطالب على الحوار والمناقشة في الامور العامة والخاصة<br>٨- تطوير قدرات الطالب في القيام بالأنشطة اللغوية والأدبية<br>٩- تطوير قدرات الطالب على التعامل مع الكتب الرسمية والمخاطبات باللغة السليمة |
| **Module Learning Outcomes**<br><br>مخرجات التعلم للمادة الدراسية | ١- ادارة المحاضرة على نحو تطبيقي مرتبط بواقع الحياة اليومية<br>٢- تكليف الطالب ببعض الانشطة والواجبات<br>٣- المشاركة الفاعلة في قاعة الدرس دليل التزام الطالب وتحمله المسؤولية<br>٤- الالتزام بالموعد المحدد في تقديم الواجبات والبحث<br>٥- الاختبارات الاسبوعية والشهرية ونهاية الفصل تعبر عن الالتزام والتحصيل المعرفي |
| **Indicative Contents**<br>المحتويات الإرشادية | ١- حث الطلبة على الاهتمام بالجانب الصحي<br>٢- حث الطلبة على الاهتمام بالجانب العلمي<br>٣- ارشاد الطلبة في مجال المحافظة على توقيتات المحاضرات |

| Learning and Teaching Strategies<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | ١- المشاركة بالتحضير في قاعة الدرس<br>٢- طريقة الاسئلة والاجوبة في قاعة الدرس<br>٣- الاختبارات الاسبوعية والشهرية ونهاية الفصل |

| Student Workload (SWL)<br>الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا | | | |
|---|---|---|---|
| **Structured SWL (h/sem)**<br>الحمل الدراسي المنتظم للطالب خلال الفصل | 93 | **Structured SWL (h/w)**<br>الحمل الدراسي المنتظم للطالب أسبوعيا | 6.2 |
| **Unstructured SWL (h/sem)**<br>الحمل الدراسي غير المنتظم للطالب خلال الفصل | 57 | **Unstructured SWL (h/w)**<br>الحمل الدراسي غير المنتظم للطالب أسبوعيا | 3.8 |
| **Total SWL (h/sem)**<br>الحمل الدراسي الكلي للطالب خلال الفصل | **150** | | |

| Module Evaluation<br>تقييم المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| | | **Time/Number** | **Weight (Marks)** | **Week Due** | **Relevant Learning Outcome** |
| **Formative assessment** | **Quizzes** | 2 | 5% (5) | 5 and 10 | LO #1, #2 and #10, #11 |
| | **Assignments** | 2 | 10% (10) | 2 and 12 | LO #3, #4 and #6, #7 |
| | **Projects / Lab.** | 1 | 10% (10) | Continuous | All |
| | **Report** | 1 | 5% (5) | 13 | LO #5, #8 and #10 |
| **Summative assessment** | **Midterm Exam** | 2hr | 20% (20) | 7 | LO #1 - #7 |
| | **Final Exam** | 3hr | 50% (50) | 16 | All |
| **Total assessment** | | | 100% (100 Marks) | | |

| Delivery Plan (Weekly Syllabus)<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | ظرف الزمان وظرف المكان |
| **Week 2** | الضمير وأقسامه |
| **Week 3** | همزة الوصل |
| **Week 4** | الحروف الصغيرة الزائدة على الرسم |
| **Week 5** | النسبة والاختصاص |
| **Week 6** | الاغراء والتحذير |
| **Week 7** | مفردات الاستهلال في الكتب الرسمية |
| **Week 8** | علامات الترقيم في الكتابة العربية ومواضع استعمالها : تعريفها ، اقسامها ، اهميتها |
| **Week 9** | الفاصلة (،) والفاصلة المنقوطة (؛) |
| **Week 10** | النقطة (.) والنقطتان الرأسيتان (:) |
| **Week 11** | الشارحة أو الوصلة (-) والشارحتان (--) |
| **Week 12** | علامة الاستفهام (؟) وعلامة التعجب (!) وعلامة الحذف (...) |
| **Week 13** | الأقواس ، والأقواس المزدوجة ، والألوان |
| **Week 14** | الاشارة المائلة (/) والاشارة المائلة المعاكسة (\) واشارة القوة (^) واشارة الضرب (*) واشارة العطف (&) |
| **Week 15** | طرق التخلص من التقاء الساكنين عند القراءة |
| **Week 16** | امتحان |

| Delivery Plan (Weekly Lab. Syllabus)<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | |
| **Week 2** | |
| **Week 3** | |
| **Week 4** | |
| **Week 5** | |
| **Week 6** | |
| **Week 7** | |

| Learning and Teaching Resources<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | ١- الكتاب : الحوار في شرح الاجرومية ، تأليف السيد بن حسن الديب ، تقريظ : (أ.د. حمزة بن عبدالله – د. عبدالله بن محمد) ، الناشر : (دار الارقم ، مصر) – (دار الرسالة العالمية ، بيروت – لبنان)، الطبعة الاولى ، ١٤٣٣هـ - ٢٠١٢م .<br>٢- الكتاب : قواعد اللغة العربية المبسطة ، تأليف : عبد اللطيف السعيد ، الطبعة الثالثة- ٢٠٠٦ .<br>٣- الكتاب : إضاءات لغوية في المخاطبات الادارية ، تأليف: صفاء صابر مجيد البياتي مطبعة المجمع العلمي العراقي، بغداد- العراق ، ط١ ، ١٤٤٥هـ-٢٠٢٣م. | Yes |
| **Recommended Texts** | | Yes |
| **Websites** | https://www.os-book.com/OS9/ | |

| Grading Scheme<br>مخطط الدرجات | | | | |
|---|---|---|---|---|
| **Group** | **Grade** | التقدير | **Marks %** | **Definition** |
| **Success Group (50 - 100)** | **A -** Excellent | امتياز | 90 - 100 | Outstanding Performance |
| | **B -** Very Good | جيد جدا | 80 - 89 | Above average with some errors |
| | **C -** Good | جيد | 70 - 79 | Sound work with notable errors |
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| | **E -** Sufficient | مقبول | 50 - 59 | Work meets minimum criteria |
| **Fail Group (0 – 49)** | **FX –** Fail | راسب (قيد المعالجة) | (45-49) | More work required but credit awarded |
| | **F –** Fail | راسب | (0-44) | Considerable amount of work required |

| | | | | |
|---|---|---|---|---|
| | | | | |

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