

| Al-Naji University                                                            |          |       |             |                                  |                                |          | جامعة الناجي                                                                   |             |            |           |            |             |             |             |              |            |  |        |                             |
|-------------------------------------------------------------------------------|----------|-------|-------------|----------------------------------|--------------------------------|----------|--------------------------------------------------------------------------------|-------------|------------|-----------|------------|-------------|-------------|-------------|--------------|------------|------------------------------------------------------------------------------------|--------|-----------------------------|
| Bachelor's level (First cycle) - Bachelor degree in Cybersecurity Engineering |          |       |             |                                  |                                |          | مستوى البكالوريوس (الدورة الأولى) - بكالوريوس في هندسة الأمن السيبراني         |             |            |           |            |             |             |             |              |            |                                                                                    |        |                             |
| Four years (Eight semesters) - 240 ECTS credits - 1 ECTS = 25hr               |          |       |             |                                  |                                |          | أربع سنوات (ثمانية فصول دراسية) - ٢٤٠ وحدة اوروبية - كل وحدة اوروبية = ٢٥ ساعة |             |            |           |            |             |             |             |              |            |                                                                                    |        |                             |
| Program Curriculum (2025 - 2026)                                              |          |       |             |                                  |                                |          | المنهاج الدراسي للعام 2025-2026                                                |             |            |           |            |             |             |             |              |            |                                                                                    |        |                             |
| 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 | 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     | CE1104      | Democracy & Human Rights         | الديمقراطية وحقوق الانسان      | Arabic   | 2                                                                              | 0           | 0          | 0         | 0          | 0           | 5           | 33          | 17           | 50         | 2                                                                                  | B      |                             |
|                                                                               |          | 2     | NUCSE101    | Arabic Language                  | اللغة العربية                  | Arabic   | 2                                                                              | 0           | 0          | 0         | 0          | 0           | 5           | 33          | 17           | 50         | 2                                                                                  | B      |                             |
|                                                                               |          | 3     | NU1102      | Computer Fundamentals            | اساسيات الحاسوب                | English  | 2                                                                              | 0           | 3          | 0         | 0          | 0           | 7           | 77          | 48           | 125        | 5                                                                                  | B      |                             |
|                                                                               |          | 4     | NU1101      | Calculus I                       | تفاضل وتكامل 1                 | English  | 3                                                                              | 0           | 0          | 0         | 1          | 0           | 5           | 61          | 89           | 150        | 6                                                                                  | S      |                             |
|                                                                               |          | 5     | CE1105      | Physics                          | الفيزياء                       | English  | 3                                                                              | 0           | 0          | 0         | 0          | 0           | 5           | 47          | 78           | 125        | 5                                                                                  | S      |                             |
|                                                                               |          | 6     | CE1108      | Biology                          | الاحياء                        | English  | 3                                                                              | 0           | 0          | 0         | 0          | 0           | 5           | 47          | 78           | 125        | 5                                                                                  | S      |                             |
|                                                                               |          | 7     | CSE1107     | Digital Logic Design             | تصميم المنطق الرقمي            | English  | 2                                                                              | 0           | 3          | 0         | 0          | 0           | 7           | 77          | 48           | 125        | 5                                                                                  | S      |                             |
| Total                                                                         |          |       |             |                                  |                                |          | 17                                                                             | 0           | 6          | 0         | 1          | 0           | 39          | 375         | 375          | 750        | 30                                                                                 |        |                             |
| Total SSWL                                                                    |          |       |             |                                  |                                |          | 24                                                                             |             |            |           |            |             |             |             |              |            |                                                                                    |        |                             |
| UGI                                                                           | Two      | 1     | NUCSE102    | New Headway Plus                 | اللغة الانكليزية               | English  | 2                                                                              | 0           | 0          | 0         | 0          | 0           | 5           | 33          | 17           | 50         | 2                                                                                  | B      |                             |
|                                                                               |          | 2     | CE1201      | Calculus II                      | تفاضل وتكامل 2                 | English  | 3                                                                              | 0           | 0          | 0         | 1          | 0           | 5           | 61          | 89           | 150        | 6                                                                                  | S      | CALC102                     |
|                                                                               |          | 3     | CSE1203     | Electrical Circuits Analysis     | تحليل الدوائر الكهربائية       | English  | 2                                                                              | 0           | 3          | 0         | 0          | 0           | 7           | 77          | 73           | 150        | 6                                                                                  | S      |                             |
|                                                                               |          | 4     | CSE1204     | Computer Networks I              | شبكات الحاسوب I                | English  | 2                                                                              | 0           | 3          | 0         | 0          | 0           | 7           | 77          | 48           | 125        | 5                                                                                  | C      |                             |
|                                                                               |          | 5     | CSE1205     | Introduction to Cybersecurity    | مقدمة في هندسة الأمن السيبراني | English  | 3                                                                              | 0           | 0          | 0         | 0          | 0           | 5           | 47          | 78           | 125        | 5                                                                                  | C      |                             |
|                                                                               |          | 6     | CSE1206     | Computer Programming             | برمجة الحاسوب                  | English  | 2                                                                              | 0           | 3          | 0         | 0          | 0           | 7           | 77          | 73           | 150        | 6                                                                                  | C      |                             |
|                                                                               |          | Total |             |                                  |                                |          |                                                                                |             | 14         | 0         | 9          | 0           | 1           | 0           | 36           | 372        | 378                                                                                | 750    | 30                          |
| Total SSWL                                                                    |          |       |             |                                  |                                |          | 24                                                                             |             |            |           |            |             |             |             |              |            |                                                                                    |        |                             |
| 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 | 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     | URBRC       | Ba'ath Regime Crimes             | جرائم نظام البعث في العراق     | Arabic   | 2                                                                              | 0           | 0          | 0         | 0          | 0           | 5           | 33          | 17           | 50         | 2                                                                                  | B      |                             |
|                                                                               |          | 2     | URENG2      | New Headway Plus Pre-Intermediat | اللغة الانكليزية               | English  | 2                                                                              | 0           | 0          | 0         | 0          | 0           | 5           | 33          | 17           | 50         | 2                                                                                  | B      | URENG1                      |
|                                                                               |          | 3     | ENMA201     | Engineering Mathematics I        | رياضيات هندسية 1               | English  | 3                                                                              | 0           | 0          | 0         | 1          | 0           | 5           | 61          | 89           | 150        | 6                                                                                  | S      | CALC151                     |
|                                                                               |          | 4     | PRST202     | Probability and Statistics       | الاحتمالات والإحصاء            | English  | 3                                                                              | 0           | 0          | 0         | 0          | 0           | 5           | 47          | 78           | 125        | 5                                                                                  | S      |                             |
|                                                                               |          | 5     | CONE203     | Computer Networks II             | شبكات الحاسوب                  | English  | 2                                                                              | 0           | 3          | 0         | 0          | 0           | 7           | 77          | 48           | 125        | 5                                                                                  | C      | CONE153                     |
|                                                                               |          | 6     | OOPJ204     | Object Oriented Programming      | البرمجة الشيئية الموجهة        | English  | 2                                                                              | 0           | 2          | 0         | 0          | 0           | 7           | 63          | 62           | 125        | 5                                                                                  | C      | CORP155                     |
|                                                                               |          | 7     | DSDE205     | Digital Systems Design           | تصميم النظم الرقمية            | English  | 2                                                                              | 0           | 2          | 0         | 0          | 0           | 7           | 63          | 62           | 125        | 5                                                                                  | E      | DLDE105                     |
| Total                                                                         |          |       |             |                                  |                                |          | 16                                                                             | 0           | 7          | 0         | 1          | 0           | 41          | 377         | 373          | 750        | 30                                                                                 |        |                             |
| Total SSWL                                                                    |          |       |             |                                  |                                |          | 24                                                                             |             |            |           |            |             |             |             |              |            |                                                                                    |        |                             |
| UGII                                                                          | Four     | 1     | URARA2      | Arabic Language 2                | اللغة العربية 2                | Arabic   | 2                                                                              | 0           | 0          | 0         | 0          | 0           | 5           | 33          | 17           | 50         | 2                                                                                  | B      | URARA                       |
|                                                                               |          | 2     | ENMA251     | Engineering Mathematics II       | رياضيات هندسية 2               | English  | 3                                                                              | 0           | 0          | 0         | 1          | 0           | 5           | 61          | 89           | 150        | 6                                                                                  | S      | ENMA201                     |
|                                                                               |          | 3     | SNPR252     | Secure Network Protocols         | بروتوكولات الشبكة الآمنة       | English  | 2                                                                              | 0           | 3          | 0         | 0          | 0           | 7           | 77          | 73           | 150        | 6                                                                                  | C      | CONE203                     |
|                                                                               |          | 4     | DASY253     | Database Systems                 | أنظمة قواعد البيانات           | English  | 2                                                                              | 0           | 3          | 0         | 0          | 0           | 7           | 77          | 73           | 150        | 6                                                                                  | C      |                             |
|                                                                               |          | 5     | ITAC254     | Information Theory and Coding    | نظرية المعلومات والترميز       | English  | 3                                                                              | 0           | 0          | 0         | 0          | 0           | 5           | 47          | 78           | 125        | 5                                                                                  | C      | PRST202                     |
|                                                                               |          | 6     | WEPR255     | Web Programming                  | برمجة الويب                    | English  | 2                                                                              | 0           | 3          | 0         | 0          | 0           | 7           | 77          | 48           | 125        | 5                                                                                  | E      |                             |
|                                                                               |          | Total |             |                                  |                                |          |                                                                                |             | 14         | 0         | 9          | 0           | 1           | 0           | 36           | 372        | 378                                                                                | 750    | 30                          |
| Total SSWL                                                                    |          |       |             |                                  |                                |          | 24                                                                             |             |            |           |            |             |             |             |              |            |                                                                                    |        |                             |
| 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 | Prerequisite Module(s) Code |
|                                                                               |          |       |             |                                  |                                |          | CL (hr/w)                                                                      | Lect (hr/w) | Lab (hr/w) | Pr (hr/w) | Tut (hr/w) | Semn (hr/w) |             |             |              |            |                                                                                    |        |                             |
| UGII                                                                          | Five     | 1     | PRMA300     | Principles of Management         | مبادئ الإدارة                  | English  | 2                                                                              | 0           | 0          | 0         | 0          | 0           | 5           | 33          | 17           | 50         | 2                                                                                  | B      |                             |
|                                                                               |          | 2     | NUME301     | Numerical Methods                | الطرق العددية                  | English  | 2                                                                              | 0           | 2          | 0         | 1          | 0           | 7           | 77          | 73           | 150        | 6                                                                                  | S      |                             |
|                                                                               |          | 3     | CRYP302     | Cryptography                     | التشفير                        | English  | 2                                                                              | 0           | 2          | 0         | 0          | 0           | 7           | 63          | 87           | 150        | 6                                                                                  | C      |                             |
|                                                                               |          | 4     | DACO303     | Data Communications              | اتصالات البيانات               | English  | 3                                                                              | 0           | 2          | 0         | 0          | 0           | 7           | 77          | 48           | 125        | 5                                                                                  | C      | ITAC254                     |
|                                                                               |          | 5     | COAR304     | Computer Architecture            | معمارية الحاسوب                | English  | 3                                                                              | 0           | 0          | 0         | 0          | 0           | 5           | 47          | 78           | 125        | 5                                                                                  | C      | DSDE205                     |
|                                                                               |          | 6     | NEPR305     | Networks Programming             | برمجة الشبكات                  | English  | 2                                                                              | 0           | 3          | 0         | 0          | 0           | 7           | 77          | 73           | 150        | 6                                                                                  | E      | OOPJ204                     |
| Total                                                                         |          |       |             |                                  |                                |          | 14                                                                             | 0           | 9          | 0         | 1          | 0           | 38          | 374         | 376          | 750        | 30                                                                                 |        |                             |
| Total SSWL                                                                    |          |       |             |                                  |                                |          | 24                                                                             |             |            |           |            |             |             |             |              |            |                                                                                    |        |                             |
| 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 | Prerequisite                |

| 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)      |             |             |              |              |            |             |                             |                             |  |
|                                                                    |          |                    |                              |                                      |                                      |                     | CL (hr/w)   | Lect (hr/w) | Lab (hr/w) | Pr (hr/w) | Tut (hr/w)             | Semn (hr/w)      |             |             |              |              |            |             |                             |                             |  |
| UGIV                                                               | Seven    | 1                  | URETH                        | Ethics                               | أخلاقيات المهنة                      | English             | 2           | 0           | 0          | 0         | 0                      | 0                | 5           | 33          | 17           | 50           | 2          | B           |                             |                             |  |
|                                                                    |          | 2                  | GRPR401                      | Graduation Project I                 | مشروع التخرج 1                       | English             | 0           | 0           | 0          | 2         | 0                      | 0                | 5           | 33          | 67           | 100          | 4          | C           |                             |                             |  |
|                                                                    |          | 3                  | DIFO402                      | Digital Forensics                    | الأدلة الجنائية الرقمية              | English             | 3           | 0           | 0          | 0         | 1                      | 0                | 5           | 61          | 89           | 150          | 6          | C           |                             |                             |  |
|                                                                    |          | 4                  | ARIN403                      | Artificial Intelligence              | الذكاء الاصطناعي                     | English             | 3           | 0           | 3          | 0         | 0                      | 0                | 7           | 91          | 59           | 150          | 6          | C           |                             |                             |  |
|                                                                    |          | 5                  | STRA404                      | Security Threats and Risk Analysis   | التحديات الأمنية وتحليل المخاطر      | English             | 2           | 0           | 3          | 0         | 0                      | 0                | 7           | 77          | 73           | 150          | 6          | E           | INSE350                     |                             |  |
|                                                                    |          | 6                  | CCAS405                      | Cloud Computing and Security         | الحوسبة والأمن السحابي               | English             | 2           | 0           | 3          | 0         | 0                      | 0                | 7           | 77          | 73           | 150          | 6          | E           | NESE351                     |                             |  |
|                                                                    |          |                    |                              |                                      |                                      |                     | Total       | 12          | 0          | 9         | 2                      | 1                | 0           | 36          | 372          | 378          | 750        | 30          |                             |                             |  |
|                                                                    |          |                    |                              |                                      |                                      |                     | Total SSWL  | 24          |            |           |                        |                  |             |             |              |              |            |             |                             |                             |  |
|                                                                    |          | 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 |  |
|                                                                    | Eight    | 1                  | ETHA450                      | Ethical Hacking                      | القرصنة الأخلاقية                    | English             | 3           | 0           | 3          | 0         | 0                      | 0                | 7           | 91          | 59           | 150          | 6          | C           | STRA404                     |                             |  |
| 2                                                                  |          | GRPR451            | Graduation Project II        | مشروع التخرج 2                       | English                              | 0                   | 0           | 0           | 2          | 0         | 0                      | 5                | 33          | 67          | 100          | 4            | C          | GRPR401     |                             |                             |  |
| 3                                                                  |          | MAWS455            | Mobile and Wireless Security | الأمن المحمول واللاسلكي              | English                              | 3                   | 0           | 0           | 0          | 0         | 0                      | 5                | 47          | 78          | 125          | 5            | C          | NESE351     |                             |                             |  |
| 4                                                                  |          | WESE453            | Web Security                 | أمن الويب                            | English                              | 2                   | 0           | 3           | 0          | 0         | 0                      | 7                | 77          | 48          | 125          | 5            | C          | WEPR255     |                             |                             |  |
| 5                                                                  |          | NEFO454            | Network Forensics            | الأدلة الجنائية للشبكة               | English                              | 2                   | 0           | 0           | 0          | 1         | 0                      | 5                | 47          | 78          | 125          | 5            | E          | DIFO402     |                             |                             |  |
| 6                                                                  |          | CPSE457            | Cyber Physical Security      | الأمن المادي السيبراني               | English                              | 2                   | 0           | 3           | 0          | 0         | 0                      | 7                | 77          | 48          | 125          | 5            | E          | COAR304     |                             |                             |  |
|                                                                    |          |                    |                              |                                      |                                      | Total               | 12          | 0           | 9          | 2         | 1                      | 0                | 36          | 372         | 378          | 750          | 30         |             |                             |                             |  |
|                                                                    |          |                    |                              |                                      |                                      | Total SSWL          | 24          |             |            |           |                        |                  |             |             |              |              |            |             |                             |                             |  |
| Relationships to fulfill the requirements of the Bachelor's Degree |          |                    |                              |                                      |                                      |                     | Total       | 113         | 0          | 67        | 4                      | 8                | 0           | 300         | 2988         | 3012         | 6000       | 240         |                             | Must be 240 ECTS            |  |
| Structured SWL (hr/w) type                                         | CL       | Class Lecture      | Module type                  | B                                    | Basic learning activities            |                     |             |             |            |           | SWL:                   | Student Workload |             |             |              |              |            |             |                             |                             |  |
|                                                                    | Lab      | Laboratory         |                              | C                                    | Core learning activity               |                     |             |             |            |           | SSWL:                  | Structured SWL   |             |             |              |              |            |             |                             |                             |  |
|                                                                    | Pr       | Practical Training |                              | S                                    | Support or related learning activity |                     |             |             |            |           | USSWL:                 | Unstructured SWL |             |             |              |              |            |             |                             |                             |  |
|                                                                    | Tut      | Tutorial           |                              | E                                    | Elective learning activity           |                     |             |             |            |           |                        |                  |             |             |              |              |            |             |                             |                             |  |
|                                                                    | Lect     | Online lecture     |                              |                                      |                                      |                     |             |             |            |           |                        |                  |             |             |              |              |            |             |                             |                             |  |
|                                                                    | Semn     | Seminar            |                              |                                      |                                      |                     |             |             |            |           |                        |                  |             |             |              |              |            |             |                             |                             |  |
|                                                                    |          |                    |                              | Module Type                          | Hours Total                          | % Hours             | Units Total |             | % Units    |           |                        |                  |             |             |              |              |            |             |                             |                             |  |
|                                                                    |          |                    |                              | Basic learning activities            | 650                                  | 10.83%              | 26          |             | 10.83%     |           | University Requirement |                  |             |             |              |              |            |             |                             |                             |  |
|                                                                    |          |                    |                              | Support or related learning activity | 1400                                 | 23.33%              | 56          |             | 23.33%     |           | College Requirement    |                  |             |             |              |              |            |             |                             |                             |  |
|                                                                    |          |                    |                              | Elective & Core learning activity    | 3950                                 | 65.83%              | 158         |             | 65.83%     |           | Department Requirement |                  |             |             |              |              |            |             |                             |                             |  |
|                                                                    |          |                    |                              | Total                                | 6000.00                              | 100.00%             | 240.00      |             | 100.00%    |           |                        |                  |             |             |              |              |            |             |                             |                             |  |