# List of courses <br> School of Information and Computer Science 

## University Requirement Courses

## Categories

All University Programs must fulfill those courses requirements offered externally to the school of Business. They are designed to constitute an integrative aspect to the university so that a learner signs for the University and not only to an individual Program in a segregated perspective. University requirement courses (UR) are of the following categories:

| University Requirement Category | Courses to be taken from Category | Credits |
| :--- | :---: | :---: |
| Arts or sports | 1 | 3 |
| English Lang | 3 | 9 |
| Cultural study | 1 | 3 |
| Law or ethics | 1 | 3 |
| Math | 1 | 3 |
| Computer | 1 | 3 |
| Research | 1 | 3 |
| Total | $\mathbf{9}$ | $\mathbf{2 7}$ |

List of UR courses per category

| Category | Code | Course Name |
| :--- | :--- | :--- |
| Arts or sports | ART200 | History of Islamic and |
|  |  | International Art |
|  | ART205 | Basic of Photography <br>  <br>  <br>  <br>  <br>  <br> SPO290 <br> Sports |
|  | SPO200 | Recreational activities |
|  | ENG 101 | English Language |
|  | ENG 300 | Sophomore Rhetoric <br> Communication Art |
|  | ENG 305 | Academic writing |
| Cultural studies | CULT205 | History of civilization |
|  | SOCI205 | Sociology |
|  | CULT200 | Culture 1/ Emirates History |
| Law or ethics | ETH200 | Ethics and Practice |
|  | LAW200 | Food Governing Bodies |
|  | LAW205 | labor law |
|  | LAW210 | Trade Law |
| Math | MATH200 | Applied Statistics |
|  | MATH205 | Business Mathematics |
| Computer | COMP200 | Introduction to computers |
|  | COMP205 | Information Technology |
| Research | STAT400 | Methodology of research |

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## Core Courses

Core courses are the courses taken by all information and computer science program learners:

| Course Code | Course Name | Credits |
| :--- | :--- | :--- |
| MATH 207 | Calculus 1 | 3 |
| MATH 208 | Calculus 2 | 3 |
| MATH 307 | Calculus 3 | 3 |
| MATH 210 | Discreet structures 1 | 3 |
| MATH 310 | Discreet structures 2 | 3 |
| CSC201 | Introduction to object oriented programing | 3 |
| CSC203 | Objects and data abstraction | 3 |
| CSC302 | Algorithm and data structure | 3 |
| CSC250 | Computer Architecture and organization | 3 |
| CSC251 | Computer Architecture and organization lab | 1 |
| CSC304 | Operating systems | 3 |
| CSC306 | Data Base management | 3 |
| CSC405 | Systems and networking | 3 |
| CSC403 | Parallel programing and cluster systems | 3 |
| CSC460 | Software engineering | 3 |
| $* 390$ | Internship | 1 |
| $* 399$ | Seminar | 1 |
| $* 499$ | Graduation Project | 3 |
|  |  | Total |

*: can be CSCG, CSCS or CSSC according to learner's choice of emphasis.

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## Information and Computer Science Program Emphasis

## Emphasis 1: Computer Science (CSCS)

## Courses to be taken:

CSCS courses to be taken if information and computer science program learner chooses to emphasize on computer science.

| Course Code | Course Name | Credits |
| :--- | :--- | :--- |
| CSCS202 | Digital systems design | 3 |
| CSCS301 | Advanced object oriented programing | 3 |
| CSCS302 | Computer Vision | 3 |
| CSCS401 | Deep learning | 3 |
| CSCS463 | Computer Graphics | 3 |
|  |  | Total |
|  | $\mathbf{1 5}$ |  |

CSCS Elective List
CSCS elective list constituting of courses that information and computer science program learner desiring to emphasize on computer science should choose 3 from.

| Course Code | Course Name | Credits |
| :--- | :--- | :--- |
| CSC355 | Biometrics Fundamentals | 3 |
| CSC365 | Artificial intelligence | 3 |
| CSC375 | Introduction to modeling simulation | 3 |
| CSSC355 | Security foundations | 3 |
| CSC455 | Webprograming | 3 |
| CSCG465 | Introduction to game design |  |
| CSC475 | Data comunication and networks |  |

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## Emphasis 2: Cyber Security (CSSC)

Courses to be taken:
CSSC courses to be taken if information and computer science program learner chooses to emphasize on cyber security.

| Course Code | Course Name | Credits |
| :--- | :--- | :--- |
| CSSC202 | Security Foundations | 3 |
| CSSC301 | Disaster recovery | 3 |
| CSSC302 | Digital forensics | 3 |
| CSSC401 | Authentications and audits | 3 |
| CSSC463 | Cryptography | 3 |
|  |  | Total |

## CSSC Technical Elective List

CSSC elective list constituting of courses that information and computer science program learner desiring to emphasize on cyber security should choose $\mathbf{3}$ from.

| Course Code | Course Name | Credits |
| :--- | :--- | :--- |
| CSC355 | Biometrics Fundamentals | 3 |
| CSC365 | Artificial intelligence | 3 |
| CSC375 | Introduction to modeling simulation | 3 |
| CSSC365 | Wireless Networking Security | 3 |
| CSC455 | Web programing | 3 |
| CSCG465 | Introduction to game design |  |
| CSC475 | Data communication and networks |  |

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## Emphasis 3: Gaming (CSCG)

Courses to be taken:
CSCG courses to be taken if information and computer science program learner chooses to emphasize on gaming.

| Course Code | Course Name | Credits |  |  |
| :--- | :--- | :--- | :---: | :---: |
| CSCG202 | Introduction to game design | 3 |  |  |
| CSCG301 | Gaming and Simulations | 3 |  |  |
| CSCG302 | 2 D game development | 3 |  |  |
| CSCG401 | 3 D game development | 3 |  |  |
| CSCG463 | Collaborative Game Development | 3 |  |  |
| Total |  |  |  | $\mathbf{1 5}$ |

## CSCG Elective List

CSCG elective list constituting of courses that information and computer science program learner desiring to emphasize on accounting should choose 3 from.

| Course Code | Course Name | Credits |
| :--- | :--- | :--- |
| CSC355 | Biometrics Fundamentals | 3 |
| CSC365 | Artificial intelligence | 3 |
| CSC375 | Introduction to modeling simulation | 3 |
| CSSC355 | Security foundations | 3 |
| CSC455 | Web-programing | 3 |
| CSC465 | Computer vision | 3 |
| CSC475 | Data communication and networks |  |

