

برنامج تكنولوجيا المعلومات  
**Information Technology**

هيكل البرنامج

**Program Structure**

**First Year**

<b>1<sup>st</sup> Semester</b>						
No.	course	Credit hours	Lecture	Tutorial	Lab / workshop	Total hours
1	Intro. to Cyber Security	1	1	0	0	1
2	IT Essentials	3	2	0	3	5
3	Technical English 1	3	2	2	0	4
4	Mathematics 1	3	2	2	0	4
5	physics	3	2	2	0	4
6	Programming Essentials in python	3	2	0	3	5
	<b>Total for 1<sup>st</sup> Semester</b>	<b>16</b>	<b>11</b>	<b>6</b>	<b>6</b>	<b>23</b>
<b>2<sup>nd</sup> Semester</b>						
No.	course	Credit hours	Lecture	Tutorial	Lab / workshop	Total hours
1	Programming Essentials in C	3	2	0	3	5
2	Cyber Security Essentials	2	2	0	0	2
3	Intro to IoT& Connecting Things	3	2	0	3	5
4	MS office	2	1	0	4	5
5	Technical English II	3	2	2	0	4
6	Mathematics II	3	2	2	0	4
	<b>Total for 2<sup>nd</sup> Semester</b>	<b>16</b>	<b>11</b>	<b>4</b>	<b>10</b>	<b>25</b>

MS

## Second Year

1 <sup>st</sup> Semester						
No.	course	Credit hours	Lecture	Tutorial	Lab / workshop	Total hours
1	Linux Essentials	3	2	0	3	5
2	Programming Essentials in C++	3	2	0	3	5
3	Web Programming I	3	1	0	6	7
4	Introduction to DB	2	2	0	0	2
5	Digital Engineering	3	2	0	3	5
6	Operating System	2	2	0	0	2
	Total for 1 <sup>st</sup> Semester	16	11	0	15	26
2 <sup>nd</sup> Semester						
No.	course	Credit hours	Lecture	Tutorial	Lab / workshop	Total hours
1	Java Programming I	3	1	0	6	7
2	Web Programming II	3	1	0	6	7
3	CCNA R&S I	3	2	0	3	5
4	Data Structure	3	2	0	3	5
5	Database Programming	2	1	0	4	5
6	Capstone Design	2	0	0	6	6
	Total for 2 <sup>nd</sup> Semester	16	7	0	28	35

## Third Year

## S/W development Track

<b>1<sup>st</sup> Semester</b>						
No.	course	Credit hours	Lecture	Tutorial	Lab / workshop	Total hours
1	Advanced Programming in C	3	2	0	3	5
2	Data Communication	2	2	0	0	2
3	Java Programming II	3	1	0	6	7
4	Computer Architecture	2	2	0	0	2
5	Microprocessor	3	2	0	3	5
6	Computer Graphics	3	2	0	3	5
	<b>Total for 1<sup>st</sup> Semester</b>	<b>16</b>	<b>11</b>	<b>0</b>	<b>15</b>	<b>26</b>
<b>2<sup>nd</sup> Semester</b>						
No.	course	Credit hours	Lecture	Tutorial	Lab / workshop	Total hours
1	Advanced Programming in C++	3	2	0	3	5
2	Mobile Programming I	3	1	0	6	7
3	Embedded System	3	2	0	3	5
4	Network Programming	3	2	0	4	6
5	Algorithm	2	2	0	0	2
6	S/W Engineering	2	2	0	0	2
	<b>Total for 2<sup>nd</sup> Semester</b>	<b>16</b>	<b>11</b>	<b>0</b>	<b>16</b>	<b>27</b>

## Network Track

<b>1<sup>st</sup> Semester</b>						
No.	course	Credit hours	Lecture	Tutorial	Lab / workshop	Total hours
1	CCNA R&S II	3	2	0	3	5

2	Java Programming II	3	1	0	6	7
3	Data Communication	2	2	0	0	2
4	Network Administration	3	2	0	4	6
5	Microprocessor	3	2	0	4	6
6	Computer Architecture	2	2	0	0	2
	<b>Total for 1<sup>st</sup> Semester</b>	<b>16</b>	<b>11</b>	<b>0</b>	<b>17</b>	<b>28</b>
<b>2<sup>nd</sup> Semester</b>						
<b>No.</b>	<b>course</b>	<b>Credit hours</b>	<b>Lecture</b>	<b>Tutorial</b>	<b>Lab / workshop</b>	<b>Total hours</b>
1	CCNA R&S III	3	2	0	3	5
2	Network Programming	3	2	0	4	6
3	CCNA Security	3	2	0	3	5
4	Embedded System	3	2	0	4	6
5	Distributed System	2	2	0	0	2
6	S/W Engineering	2	2	0	0	2
	<b>Total for 2<sup>nd</sup> Semester</b>	<b>16</b>	<b>12</b>	<b>0</b>	<b>14</b>	<b>26</b>

## Fourth Year

### S/W development Track

<b>1<sup>st</sup> Semester</b>						
<b>No.</b>	<b>course</b>	<b>Credit hours</b>	<b>Lecture</b>	<b>Tutorial</b>	<b>Lab / workshop</b>	<b>Total hours</b>
1	CCNA R&S II	3	2	0	3	5
2	Mobile Programming II	3	1	0	6	7
3	IoT Architecture & Protocols/IoT Programming	3	2	0	3	5
4	Artificial Intelligence	2	2	0	0	2

5	Windows Programming I	3	1	0	6	7
6	Signal Processing	2	2	0	0	2
	Total for 1 <sup>st</sup> Semester	16	10	0	18	28
<b>2<sup>nd</sup> Semester</b>						
No.	course	Credit hours	Lecture	Tutorial	Lab / workshop	Total hours
1	Robotics	3	2	0	3	5
2	Windows Programming II	3	1	0	6	7
3	Big Data & Analytics	2	1	0	3	4
4	IoT Security	3	2	0	3	5
5	Machine Learning	2	2	0	0	2
6	Entrepreneurship	1	1	0	0	1
7	Graduation Project	2	0	0	0	6
	Total for 2 <sup>nd</sup> Semester	16	9	0	15	30

## Network Track

<b>1<sup>st</sup> Semester</b>						
No.	course	Credit hours	Lecture	Tutorial	Lab / workshop	Total hours
1	CCNA R&S IV	3	2	0	3	5
2	IoT Architecture & Protocols/IoT Programming	3	2	0	3	5
3	Artificial Intelligence	2	2	0	0	2
4	CCNA Cybersecurity Operations	3	2	0	3	5
5	Server Administration	3	2	0	4	6
6	Encryption Algorithm	2	2	0	0	2
	Total for 1 <sup>st</sup> Semester	16	12	0	13	25

<b>2<sup>nd</sup> Semester</b>						
<b>No.</b>	<b>course</b>	<b>Credit hours</b>	<b>Lecture</b>	<b>Tutorial</b>	<b>Lab / workshop</b>	<b>Total hours</b>
<b>1</b>	<b>CCNP Route</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>5</b>
<b>2</b>	<b>CCNP Switch</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>5</b>
<b>3</b>	<b>Big Data &amp; Analytics</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>4</b>
<b>4</b>	<b>IoT Security</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>5</b>
<b>5</b>	<b>Machine Learning</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>
<b>6</b>	<b>Entrepreneurship</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>
<b>7</b>	<b>Graduation Project</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>
	<b>Total for 2<sup>nd</sup> Semester</b>	<b>16</b>	<b>10</b>	<b>0</b>	<b>12</b>	<b>28</b>