



Internal Training Course Specification



1. Basic Information

| | |
|---|--|
| Program Title | ECE |
| Department offering the Program | Electronics and Communications Engineering |
| Department Responsible for the Course | Electronics and Communications Engineering |
| Course Code | ---- |
| Year/ Level | 1 st Year –Summer semester |
| Specialization | Major |
| Authorization data of course specification | |
| Time Period | 4 Weeks / Semester |

2. Course aims:

| No. | Aim |
|-----|---|
| 1 | Brief exposure to the multiple sub-specialties in the field of electronics and communications for students to be able to choose their long term future specialty. |
| 2 | Design a system to meet the required needs with considering the impacts of engineering solutions on development of industrial instruments in companies. |
| 5 | Display professional and ethical responsibilities, contextual understanding and effective communication within multi-disciplinary teams during the electrical and communication engineering training. |

3. Intended Learning Outcomes (ILOs):

a. Knowledge and Understanding:

| No. | Knowledge and Understanding |
|-----|--|
| a1 | Demonstrate the theoretical concepts to moral issues at real work environment |
| a2 | Recognize the role of electronic and communication engineer in companies and outside community |
| a3 | Identify the characteristics of engineering materials related to electronic and communication engineering |
| a4 | Explain ethical and legal principles of professional practice in the area of electronic and communication engineering. |
| a9 | Discuss management, finance, liability and quality control as related to electronic and communication engineering field. |
| a12 | Study the impacts of engineering solutions on society and environment |



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b. Intellectual Skills

| No. | Intellectual Skills |
|-----|---|
| b6 | Investigate the characteristics of electronic and communication engineering systems and perform failure analysis. |
| b7 | Solve engineering problems, often on the basis of limited and possibly contradicting information. |
| b19 | Apply suitable tools to the electronic and communication engineering problems. |

c. Professional Skills

| No. | Professional Skills |
|-----|--|
| c6 | Use a wide range of analytical tools, techniques, equipment, hardware, and software packages pertaining to electronic and communication engineering equipment. |
| c11 | Apply quality assurance procedures when designing and implementing the new instruments and follow codes and standards |
| c16 | Visualize the industry ecology of the different subspecialties of the field and list the big names and the role of each. |

d. General Skills

| No. | General Skills |
|-----|---|
| d4 | Demonstrate efficient IT capabilities. |
| d5 | Lead individuals |
| d7 | Search for information and engage in life-long self-learning discipline |
| d8 | Acquire entrepreneurial skills |



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4. Course Contents:

| No. | Topics |
|-----|---|
| 1 | Developing mobile applications using Android. |
| 2 | Coding using the Python programming language. |
| 3 | Design of electronic circuits. |
| 4 | Computer network fundamentals |

5. Teaching and Learning Methods:

| No. | Teaching Method | Knowledge and Understanding | Intellectual Skills | Professional Skills | General Skills |
|-----|---------------------|-----------------------------|---------------------|---------------------|----------------|
| 1 | Discussion Sessions | a1, a9 | b19 | c16 | d5 |
| 2 | Practical | a3, a12 | b6 | c6 | d4 |
| 3 | Case Studies | a2, a4 | b7 | c11 | d7, d8 |

6. Teaching and Learning Methods Of Disabled Students:

| No. | Teaching Method |
|-----|--|
| 1 | Lean on others |
| 2 | Keep instructions simple |
| 3 | More solved examples (practical case Study) to develop student understanding |

7. Student Assessment:

7.1 Student Assessment Methods:

| No. | Assessment Method | ILOs |
|-----|-----------------------------------|-----------------|
| 1 | Observation [authority – faculty] | a1-a2-a3, b6-b7 |
| 2 | Short Reports | c6 |
| 3 | Small Projects | c6- c11 |
| 4 | Discussion by a committee | d4-d5-d7-d8 |

7.2 Assessment Schedule:

| No. | Assessment Method | Weeks |
|-----|-----------------------------------|---------------|
| 1 | Observation [authority – faculty] | Every week |
| 2 | Short Reports | Every 2 weeks |
| 3 | Small Project | Week 4 |



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7.3 Weighting of Assessment:

| No. | Assessment Method | Weights |
|-------|------------------------------|---------|
| 1 | Short Reports, Observation | 50 % |
| 2 | Final report (Small Project) | 50 % |
| Total | | 100% |

8. List of References

| No. | Reference List |
|-----|--|
| 1 | Lectures Notes |
| 2 | Online sessions presentations |
| 3 | Scientific References and reports related to the discipline. |

9. Facilities Required for Teaching and Learning:

| No. | Facility |
|-----|------------------------|
| 1 | Authority for training |
| 2 | Library |
| 3 | Internet |
| 4 | Data Show System |
| 6 | Presenter |
| 7 | Laboratories |
| 8 | Laboratories equipment |

10. Matrix of Knowledge and Skills of the Course:

| No. | Topic | aim | Knowledge & Understanding | Intellectual Skills | Professional Skills | General Skills |
|-----|---|-------|---------------------------|---------------------|---------------------|-----------------|
| 1 | The activities of the authority and the relation with the discipline. | 1,2,5 | a1- a2- a3- a4-a9-a12 | b6- b7- b19 | c6- c11- c16 | d4-d5- d7-d8 |

Course Coordinators:

Dr.Elsaeed Marzouq

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Internal Training Course Specification



Dr. Doaa adel abdel salam

Head of Department:

Prof. Sherief elsaid kishk

Date of Approval:

28/ 12/ 2020



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1. Basic Information

| | |
|---|--|
| Program Title | ECE |
| Department offering the Program | Electronics and Communications Engineering |
| Department Responsible for the Course | Electronics and Communications Engineering |
| Course Code | ----- |
| Year/ Level | 2 nd Year - Summer semester 3 rd Year - Summer semester |
| Specialization | Major |
| Authorization data of course specification | |

| | |
|--------------------|--------------------|
| Time Period | 4 Weeks / Semester |
|--------------------|--------------------|

2. Course aims:

| No. | Aim |
|-----|---|
| 1 | Brief exposure to the multiple sub-specialties in the field of electronics and communications for students to be able to choose their long term future specialty. |
| 2 | Use the techniques, skills, and appropriate engineering tools, necessary for engineering practice. |

3. Intended Learning Outcomes (ILOs):

a. Knowledge and Understanding:

| No. | Knowledge and Understanding |
|-----|--|
| 3 | List a number of real life products/applications that fall within the domain of electronics and communications engineering practice. |
| 9 | Describe the current engineering technologies. |
| 10 | Recognize topics related to electronics and communication interests and moral issues. |
| 12 | Study the Professional ethics and impacts of engineering solutions on society and environment. |

b. Intellectual Skills

| No. | Intellectual Skills |
|-----|---------------------|
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|---|---|
| 5 | Assess the characteristics and performance of components, systems and processes. |
| 9 | Judge engineering decisions considering balanced costs, benefits, safety, quality, reliability, and environmental impact. |

c. Professional Skills

| No. | Professional Skills |
|-----|--|
| 12 | Exchange knowledge and skills with engineering community and industry. |
| 13 | Prepare technical reports. |

d. General Skills

| No. | General Skills |
|-----|--|
| 1 | Collaborate within multidisciplinary team. |
| 3 | Communicate effectively. |
| 5 | Motivate individuals. |
| 7 | Search for information. |
| 9 | Refer to relevant literatures. |

4. Course Contents:

| No. | Topics |
|-----|--|
| 1 | The activities of the authority and the relation with the discipline |

5. Teaching and Learning Methods:

| No. | Teaching Method |
|-----|------------------------|
| 1 | Workshop |
| 2 | Discussion Sessions |
| 3 | Practical |
| 4 | Problem based learning |



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6. Teaching and Learning Methods Of Disabled Students:

| No. | Teaching Method |
|-----|--|
| 1 | Lean on others |
| 2 | Keep instructions simple |
| 3 | More solved examples (practical case Study) to develop student understanding |

7. Student Assessment:

7.1 Student Assessment Methods:

| No. | Assessment Method | ILOs |
|-----|-----------------------------------|---|
| 1 | Observation [authority – faculty] | d1-d3-d5 |
| 2 | Short Reports | a9 – a10 – a12 – c12 – c13 – d7 – d9 |
| 3 | Final Report | b5 – b9 – c11 – c12 – c13 – d1 – d3 – d7 – d9 |
| 4 | Discussion by a committee | a9- a10 – a12 – b5 – b9 – c2 – c3 – d7 – d9 |

7.2 Assessment Schedule:

| No. | Assessment Method | Weeks |
|-----|-----------------------------------|---------------|
| 1 | Observation [authority – faculty] | Every week |
| 2 | Short Reports | Every 2 weeks |
| 3 | Final Report | 5 |
| 4 | Discussion by a committee | 5 |

7.3 Weighting of Assessment:

| No. | Assessment Method | Weights |
|-------|-----------------------------------|---------|
| 1 | Observation [authority – faculty] | 20 % |
| 2 | Short report | 5 % |
| 3 | Final report | 25% |
| 4 | Discussion by a committee | 50% |
| Total | | 100% |



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8. List of References

| No. | Reference List |
|-----|--|
| 3 | Scientific References and reports related to the discipline. |

9. Facilities Required for Teaching and Learning:

| No. | Facility |
|-----|------------------------|
| 1 | Authority for training |
| 2 | Library |
| 3 | Internet |
| 4 | Data Show System |
| 6 | Presenter |
| 7 | Laboratories |
| 8 | Laboratories equipment |

10. Matrix of Knowledge and Skills of the Course:

| No. | Topic | aim | Knowledge & Understanding | Intellectual Skills | Professional Skills | General Skills |
|-----|---|------|---------------------------|---------------------|---------------------|-----------------------------|
| 1 | The activities of the authority and the relation with the discipline. | 1, 4 | a3- a9 - a10 - a12 | b5- b9 | c11 - c12 - c13 | d1 - d3 - d5 - d7 -d9 |

Course Coordinators:



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Head of Department:

Prof. Sherief elsaid kishk

Date of Approval:

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