# Jordan University of Science and Technology
## Faculty of Engineering
## Electrical Engineering Department

| EE322 Electronic Circuits Lab |
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| First Semester 2021-2022 |

| Course Catalog |
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| 1 Credit Hours. Diode characteristics, Diode applications. DC and AC characteristics. Bipolar junction transistor and field effect transistor characteristics and Biasing. Single- and multi-stage amplifiers. Frequency response of amplifier circuits. Differential amplifier. Operational amplifiers characteristics and applications. Filters. Oscillators. Lab project. |

| Text Book | |
|---|---|
| Title | Electronic Circuits, Discrete and Integrated |
| Author(s) | D. L. Schilling et al |
| Edition | 3rd Edition |
| Short Name | 1 |
| Other Information | |

**Course References**

| Short name | Book name | Author(s) | Edition | Other Information |
|---|---|---|---|---|
| 2 | Electronic Devices and Circuits | T. F. Bogart, Jr., J. S. Beasley, and G. Rico | 6th Edition | |
| 3 | Experiments in Electronic Devices and Circuits | T. F. Bogart, Jr., and J. W. Brown Sr. | 4th Edition | |

| Instructor | |
|---|---|
| Name | **Prof. Mohammed Al Salameh** |
| Office Location | E2L3 |
| Office Hours | Sun : 08:30 - 10:00<br>Sun : 13:00 - 14:30<br>Mon : 08:00 - 09:00<br>Wed : 08:00 - 09:00<br>Thu : 15:30 - 16:30 |

| Email | salameh@just.edu.jo |
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## Instructor

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|---|---|
| Name | **Dr. Mohammad Banat** |
| Office Location | E1L3 |
| Office Hours | Mon : 10:00 - 11:00<br>Tue : 08:30 - 11:30<br>Wed : 10:00 - 11:00<br>Thu : 08:30 - 10:30 |
| Email | banat@just.edu.jo |

## Instructor

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|---|---|
| Name | **Dr. Fadi Nessir Zghoul** |
| Office Location | E2-L3 |
| Office Hours | |
| Email | frnessirzghoul@just.edu.jo |

## Class Schedule & Room

Section 2:
  Lecture Time: Thu : 11:30 - 14:30
  Room: LAB

Section 3:
  Lecture Time: Thu : 14:30 - 17:30
  Room: LAB

Section 4:
  Lecture Time: Thu : 08:30 - 11:30
  Room: LAB

Section 5:
  Lecture Time: Sun : 14:30 - 17:30
  Room: LAB

## Tentative List of Topics Covered

| Weeks | Topic | References |
|---|---|---|
| Week 1 | Introduction to laboratory procedure and test & measurement equipment | |
| Weeks 2, 3 | Diode characteristics and wave shaping | |
| Week 4 | Bipolar transistor characteristics | |
| Week 5 | BJT amplifiers and frequency response | |
| Week 6 | JFET characteristics and applications | |
| Week 7 | Multistage amplifiers | |

| Week 8 | Differential amplifier | |
|---|---|---|
| Week 9 | Operational amplifier characteristics | |
| Week 10 | Operational amplifier applications: summation, differentiation, and integration | |
| Week 11 | Oscillators | |

| Mapping of Course Outcomes to Program Student Outcomes | Course Outcome Weight (Out of 100%) | Assessment method |
|---|---|---|
| Ability to assemble basic circuits, verify theoretical concepts, and interpret experimental results concerning the characteristics of diodes, bipolar transistors, and field-effect transistors. [1ABET1, 1ABET6] | 50% | |
| Ability to assemble basic circuits, verify theoretical concepts, and interpret experimental results concerning device applications including multistage amplifiers, differential amplifiers, operational amplifiers, and oscillators. [1ABET1, 1ABET6] | 50% | |

| Relationship to Program Student Outcomes (Out of 100%) | | | | | | |
|---|---|---|---|---|---|---|
| ABET1 | ABET2 | ABET3 | ABET4 | ABET5 | ABET6 | ABET7 |
| 50 | | | | | 50 | |

| Evaluation | |
|---|---|
| Assessment Tool | Weight |
| Mid Exam | 25% |
| Lab work | 25% |
| Final Exam | 50% |

| Policy | |
|---|---|
| Attendance | Every Lab |
| Prelab | To be submitted at the beginning of each Lab |
| Post Lab | To be submitted at the beginning of the next Lab |

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