

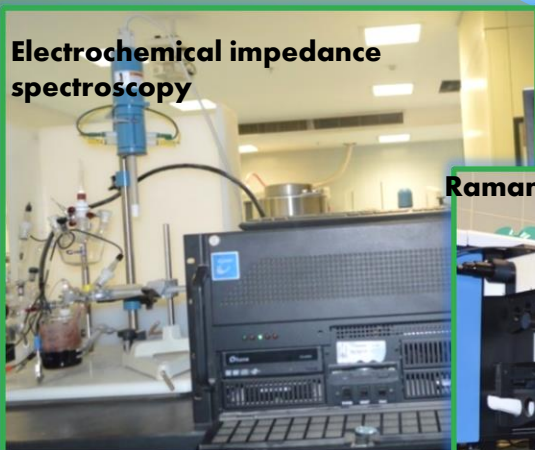


King Faisal University
جامعة الملك فيصل

VISION رؤية
2030
المملكة العربية السعودية
KINGDOM OF SAUDI ARABIA

Master program in Physics

Electrochemical impedance spectroscopy



Raman spectroscopy



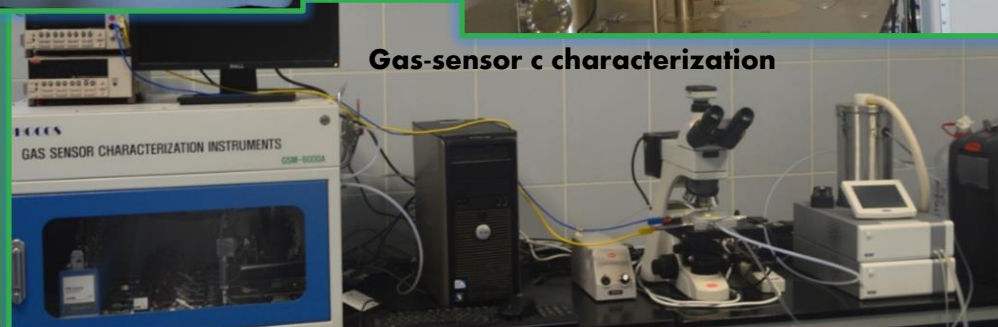
Differential scanning calorimetry (DSC)



X-ray photoelectron spectroscopy



Gas-sensor characterization



College of Science – Physics Department

King Faisal University – College of Science

Master Program in Physics

General

Program Provider:	College of Science-Physics Department
Major:	Physics
Name of Degree:	Master of Science
Language:	English
Duration:	Two Years minimum

Requirements

- Satisfying the higher education council regulations for master programs in Saudi Arabia.
- Obtaining grade very good at least in the Bachelor degree in Physics.
- Passing the written examination prepared by the department.
- Obtaining the English language certificate in: (TOEFL-53), (IELTS-4.5) or (STEP- 75%).

Study plans

A student can choose one of the following two tracks

- **Thesis track (Courses and thesis)**
A student must orally defend his/her thesis to get the degree.
- **Non-Thesis track (Courses-only)**
A student must pass a comprehensive exam to get the degree.

Study Plans

1. Thesis track

Compulsory courses:

9 credit hours (3 or 4 courses) from this list must be passed.

Courses	Credit hours	Courses	Credit hours
Mathematical Physics (1)	3	Electrodynamics (1)	3
Classical Mechanics	3	Statistical Physics	3
Quantum Mechanics1	3	Design of Experiments	2
Physics self-study	1		

Elective courses:

18 credit hours (6 courses) from the list below must be passed.

Mathematical Physics (2)	Crystallography	Many Particles Physics	Theory of General Relativity
Quantum Mechanics (2)	Superconductors	Plasma Physics	Digital Electronics
Electrodynamics (2)	Nano structures	Elementary Particle Physics	Advanced Physics Lab
Computation Physics	New materials science	High Energy Physics	Astrophysics
Solid State physics (1)	Liquid crystals	Atomic and Molecular Physics	Biophysics
Solid State physics (2)	Ferroelectricity	Laser Physics	Special Topics
Polymer's	Nuclear Physics (1)	Quantum Optics	Research Project
Quantum field theory	Nuclear Physics (2)	Theory of Special Relativity	

Writing and defending the thesis are equivalent to 6 credit hours. In total, 33 credit hours must be passed for graduation.

Study Plans

2. Non- thesis track (courses)

Compulsory courses:

All courses in the list below must be passed (21 credits)

Courses	Credit hours	Courses	Credit hours
Mathematical Physics (1)	3	Electrodynamics (1)	3
Classical Mechanics	3	Statistical Physics	3
Quantum Mechanics ¹	3	Design of Experiments	2
Research Project	3	Physics self-study	1

Elective courses:

21 credit hours (7 courses) from the list below must be passed.

Mathematical Physics (2)	Crystallography	Many Particles Physics	Theory of General Relativity
Quantum Mechanics (2)	Superconductors	Plasma Physics	Digital Electronics
Electrodynamics (2)	Nano structures	Elementary Particle Physics	Advanced Physics Lab
Computation Physics	New materials science	High Energy Physics	Astrophysics
Solid State physics (1)	Liquid crystals	Atomic and Molecular Physics	Biophysics
Solid State physics (2)	Ferroelectricity	Laser Physics	Special Topics
Polymer's	Nuclear Physics (1)	Quantum Optics	Quantum field theory
	Nuclear Physics (2)	Theory of Special Relativity	

In addition to the comprehensive exam, 42 credit hours must be passed for graduation.