



Welcome to STEM programs

(SCIENCE, TECHNOLOGY, ENGINEERING
AND MATHEMATICS STEM)



active participation of STEM students in the university's innovation and entrepreneurship competition (Ain Shams Innovates) in the presence of the Dean of the College, Prof. Dr. Safaa Shehata

The Vision of the programs:

The vision of the bachelor's programs in STEM education in five disciplines (biology, physics, chemistry, geology, and mathematics) where the language of study is English. was formed in preparing a thinking, creative practitioner, communicative, collaborative researcher-teacher capable of self-learning.

STEM programs seek also to prepare a teacher who is able to develop students in an integrated manner in terms of the knowledge content of the specialization as well as the technological and social aspects and is able to employ knowledge in solving educational and societal problems within the framework of integration between academic courses and adopting the major challenges of Egypt in designing scientific subjects curricula For STEM fields.

The Methodology of teaching is based mainly on active learning, self-learning, and project-based learning.



Honoring STEM students by Excellency
Prof. Dr. Abdel-Fattah Saud, Vice President
of Ain Shams University for Education and
Student Affairs



STEM students and professors participating in the
international African conference on research in
chemistry education- workshop of STEM education



participation in SU Real Life competition '24 in



The visit of the American team to one of STEM
laboratories and the exchange of experiences in the
presence of the Dean of the Faculty,
Prof. Dr. Safaa Shehata



STEM students practice different active learning
techniques in laboratories and some research
projects



Honoring STEM students for their participation in
the university competition (Ain Shams Innovates)

Why STEM:

STEM (Science, Technology, Engineering, and Mathematics) study to deal with developing students' skills in scientific and technological fields through exploration and experimentation. Projects are implemented in a practical and interactive manner, where the beholder works on a specific solution using scientific and analytical knowledge and skills.

DESCRIPTION OF COURSES

EDUCATIONAL COURSES:

The educational courses aim to teach the student some strategies for education, including the scientific and psychological side of the student and how to deal with students in different ways to provide information.

TECHNOLOGICAL COURSES :

These courses deal with the technological aspect of the need to involve it in the educational process at the present time and in the future.

DISCIPLINARY AND INTERDISCIPLINARY COURSES:

It includes courses that are studied in an integrated and overlapping manner between different sciences (biology / chemistry / physics / geology / mathematics) and the disciplinary courses which focus on one discipline according to the chosen discipline.

CAPSTONE :

A course that includes study of Egypt's challenges and students groups are formed to work on projects aiming at solving these problems through projects.



STEM students after completing presentations for the 2022/2023 Capstone inside one of the programs' classroom STEM

ENGLISH COURSES:

It aims to develop students' English language and communication skills and enhance research skills in English in various specializations

Scientific visits and trips



Participation of STEM students in the African International Conference on Research in Chemistry Education - Science, Technology, Engineering and Mathematics (STEM) Education Workshop



STEM students visit Zewail University



A scientific trip to the National Institute for Astronomical and Geophysical Research - Helwan



A visit to the Arab Council for Childhood and Development and taking a photo with Prince Abdulaziz bin Talal

Main Features

- ACHIEVING INTEGRATION BETWEEN THE DIFFERENT SUBJECTS, WHETHER ACADEMIC OR EDUCATIONAL.
- THE PRESENCE OF ENGINEERING DESIGN CAPSTONE PROJECTS ENHANCES RESEARCH AND PROBLEM SOLVING SKILLS IN THE ACADEMIC AND EDUCATIONAL FIELDS.
- DIVERSITY OF STUDENT PERFORMANCE EVALUATION THAT INCLUDE FIELD STUDIES, CASE STUDIES OR PROBLEM ANALYSIS AND PRESENTATION
- GIVING A GREATER PERCENTAGE OF EVALUATION TO THE WORK OF THE STUDENT TEACHER DURING THE ACADEMIC YEAR THAN THE PERCENTAGE OF THE FINAL EVALUATION.
- Enabling the student teacher to deal efficiently with ICT.
- Developing English language skills
- PRACTICAL TEACHING PRACTICE THROUGH FIELD TRAINING IN STEM SCHOOLS SINCE THE FIRST YEAR

AVAILABLE DISCIPLINES

PHYSICS - CHEMISTRY - MATHEMATICS
- BIOLOGY - GEOLOGY

SCIENTIFIC DEGREE

Bachelor's degree in Science and Education (Science, Technology, Engineering and Mathematics STEM Education) specialization (Physics, Chemistry, Biology, Geology, Mathematics) in English