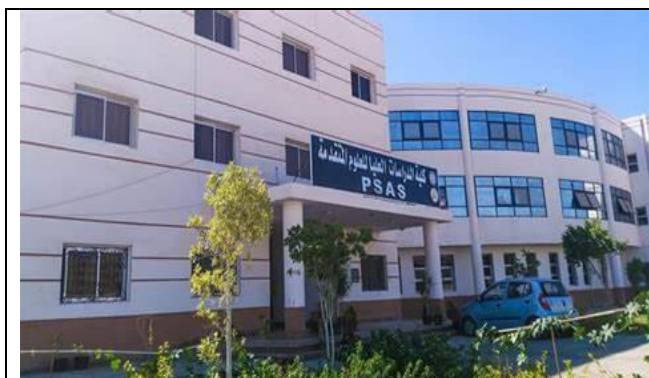


## Beni-Suef University

### Physical Facilities for Interdisciplinary Research

#### [1] Eight Faculties Specialized in Interdisciplinary Areas

The university has eight unique faculties specialized in critical interdisciplinary fields. These faculties are considered the first of their kind in Egypt and Middle East. These faculties are faculty of earth science, faculty of special needs science, institute of elderly science studies, faculty of post graduate studies for applied sciences, laser institute for research and application (LIRA), faculty of science of navigation and space technology, research institute of medical and aromatic plants, institute of small and medium enterprises.



Faculty of Postgraduate Studies for Applied Sciences



Faculty of Special Needs Science





Institute of Elderly Science Studies



Institute of Small and Medium Enterprises

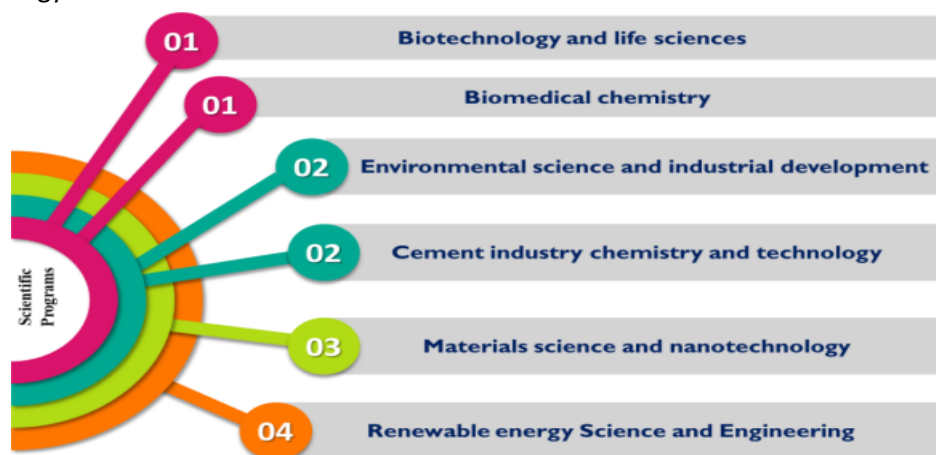


<p>Research Institute of Medical and Aromatic Plants</p>	<p>Laser Institute for Research and Application (LIRA)</p>
	
<p>Faculty of Navigation Science and Space Technology</p>	<p>Faculty of Earth Science</p>

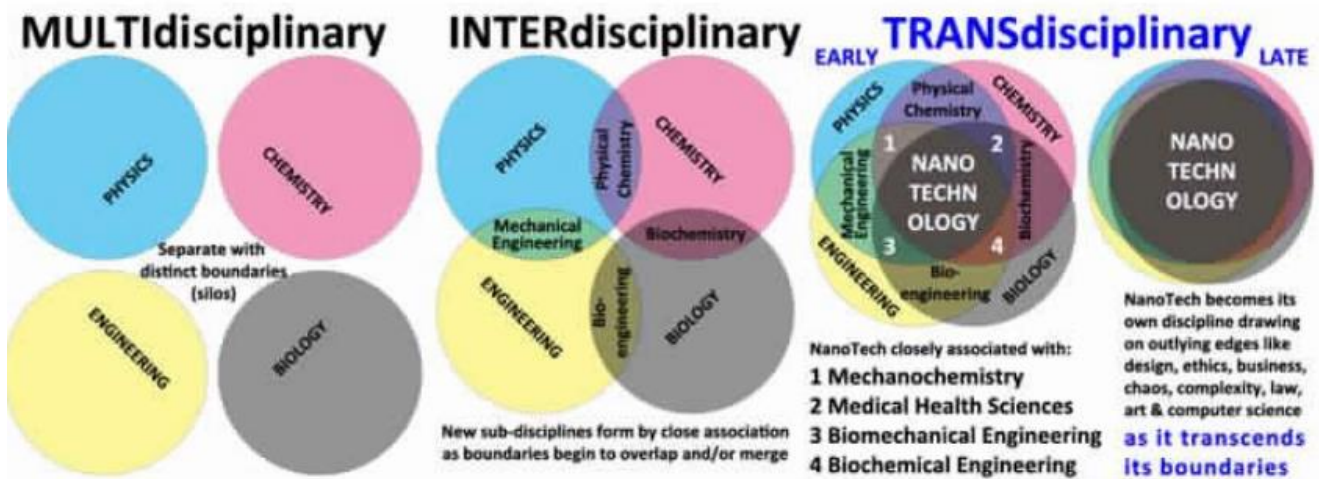
## [2] Multiple Departments Derived from Interdisciplinary Areas

### 2.1 Faculty of Postgraduate Studies for Applied Sciences

Faculty of Postgraduate Studies for Applied Sciences is divided into 4 main departments offering Diplomas, M.Sc. and Ph.D. degrees on international basis. The four departments are Biotechnology & Life Science, Environmental Science & Industrial Development, Renewable Energy Engineering Sciences and Material Science & Nanotechnology.



The faculty serves as transdisciplinary (Nanotechnology is an example)



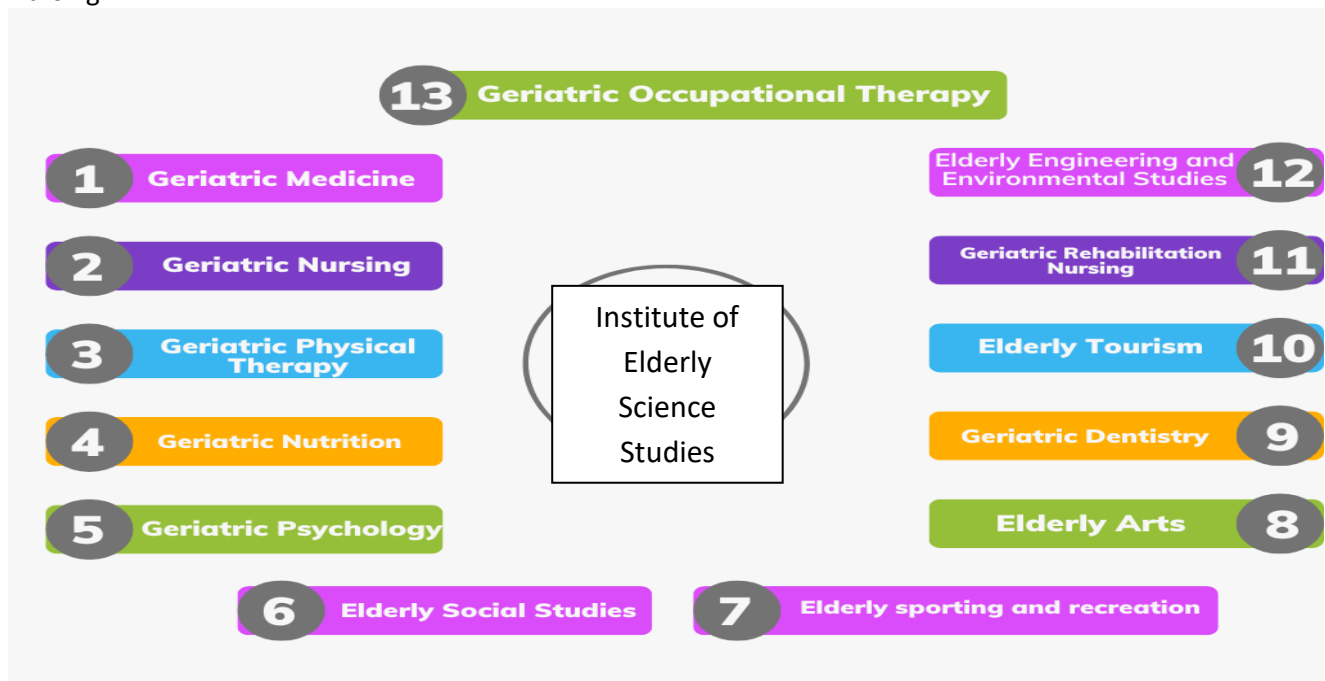
## 2.2 Faculty of Special Needs Science

Faculty of Special Needs Science includes five department which are Autism, Impaired hearing, Visual impairment, Mental retardation and Communication



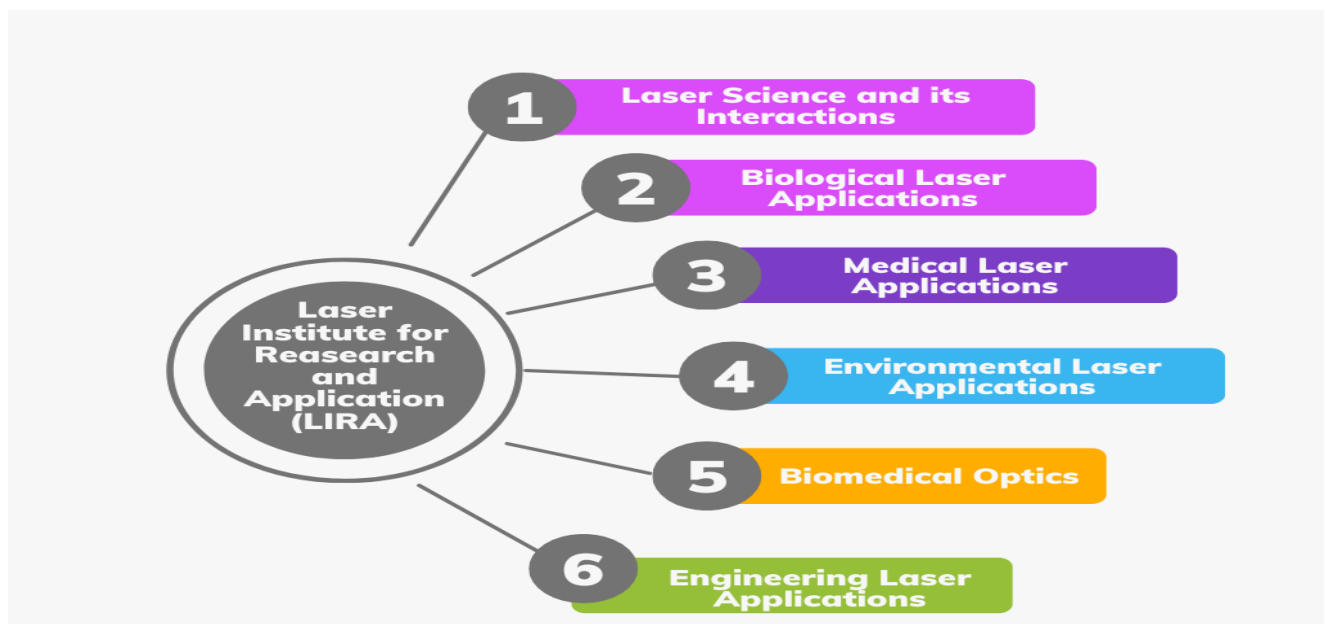
## 2.3 Institute of Elderly Science Studies

The Institute contributes in the development of the national strategy for scientific research and its integrated disciplines in the field of aging to help prepare scientific cadres (scientifically and applied) and innovation of models of Integrated Services for the Elderly, which helps to promote social peace. The institute includes thirteen departments: Department of Geriatric Medicine, Department of Geriatric Nursing, Department of Geriatric Physical Therapy, Department of Geriatric Occupational Therapy, Department of Geriatric Nutrition, Department of Geriatric Psychology, Department of Elderly Engineering and Environmental Studies, Department of Elderly Social Studies, Department of Elderly sporting and recreation, Department of Elderly Arts, Department of Geriatric Dentistry, Department of Elderly Tourism, Department of Geriatric Rehabilitation Nursing.



#### 2.4 Laser Institute for Research and Application (LIRA)

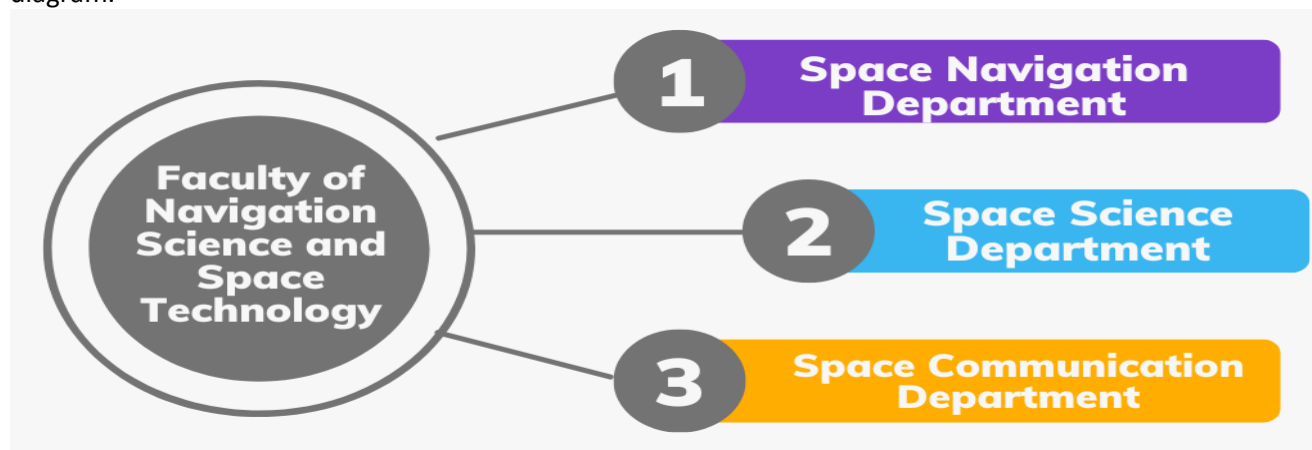
The aim of this institute is to create specialized and highly skilled laser personnel. The Institute is unique in the Middle East and is very different from other institutes in the region due to the great difference in objectives,



objectives and field of study. Regional and international levels in the field of post-university education, and seeks to qualify specialized researchers through academic programs in the high diplomas, master's and doctoral degrees in order to contribute to the prosperity of society, and gives the Institute Diploma of laser and master's and doctoral degrees. It aims to serve the society of the Upper Egypt in general and Beni-Suef in particular in laser science and its applications in all medical, engineering, environmental, biological and scientific fields through the provision of research and advisory services that help in solving problems and developing the society and seeking to strengthen international cooperation with a number of centers and institutes Which will lead to the provision of a distinguished graduate of the knowledge, professional and skilled qualified to the local and global labor market, noting that the laser is the basis of many scientific measurements and research programs and safe applications of laser. The following figure represents the institute departments

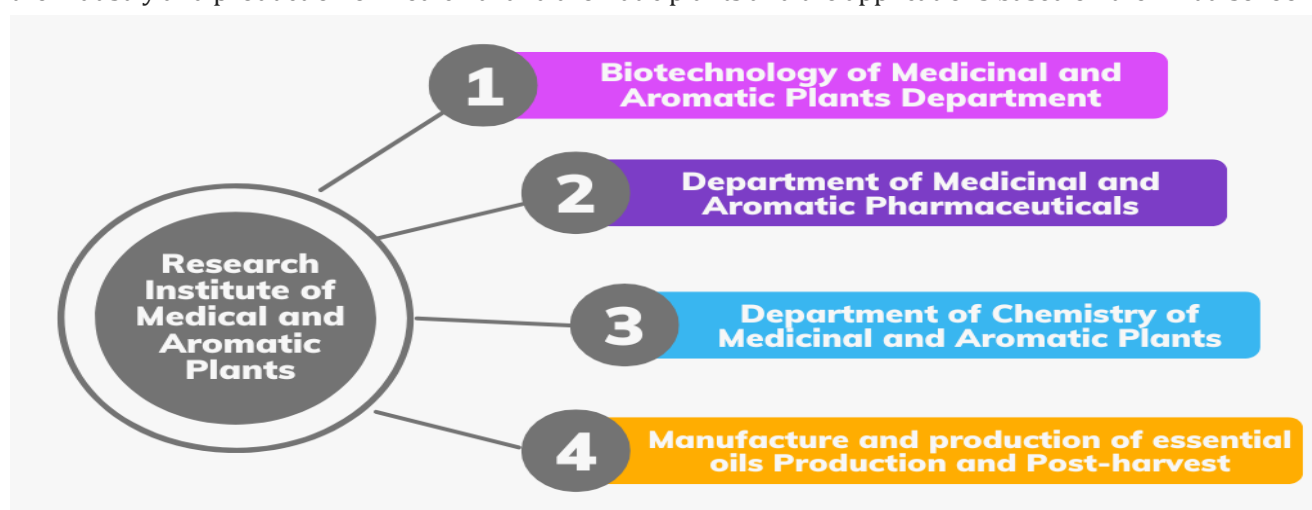
### 2.5 Faculty of Navigation Science and Space Technology

The Faculty of Navigation Sciences and Space Technology is the first Egyptian and Arab faculty specialized in the field of space navigation and the applications and uses of space technology. It aims at graduating scientific cadres capable of working in the Arab, African and international space system. It aims to transfer space technology to students, graduates and researchers in this field. Which is based on Egyptian, Arab and African space programs and its various agencies. The faculty consists of three departments according to the following diagram.



### 2.6 Research Institute of Medical and Aromatic Plants

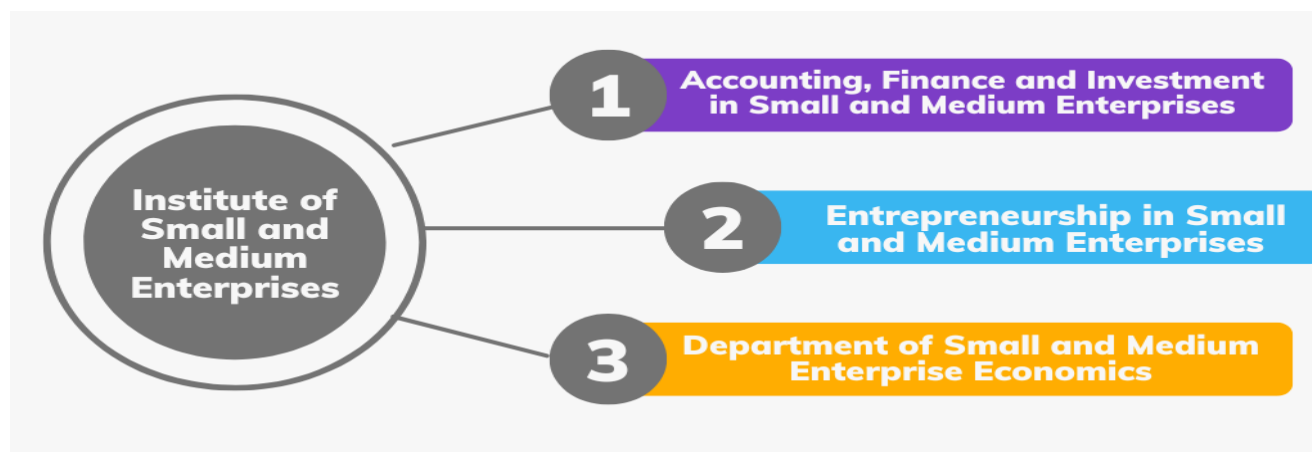
The Medicinal and Aromatic Plants Research Institute aims to become a distinguished and leading academic research institute in the research of medicinal and aromatic plants at the local and international levels, in order to keep pace with scientific progress at the world level and to meet the local and external demand in developing the industry and production of medicinal and aromatic plants and the applications based on them. It also looks



forward to providing various services to meet the needs of the community and reach the highest level of local and international standards. The production and dissemination of knowledge, providing innovative solutions in the field of medicinal and aromatic plants research, preparing qualified scientific cadres to meet the needs and requirements of the labor market, able to compete locally and regionally, and conducting scientific research, studies and consultations in this field that keep pace with scientific developments and technology, and support services for consulting and training for the community. The institute consists of four academic departments described in the following diagram.

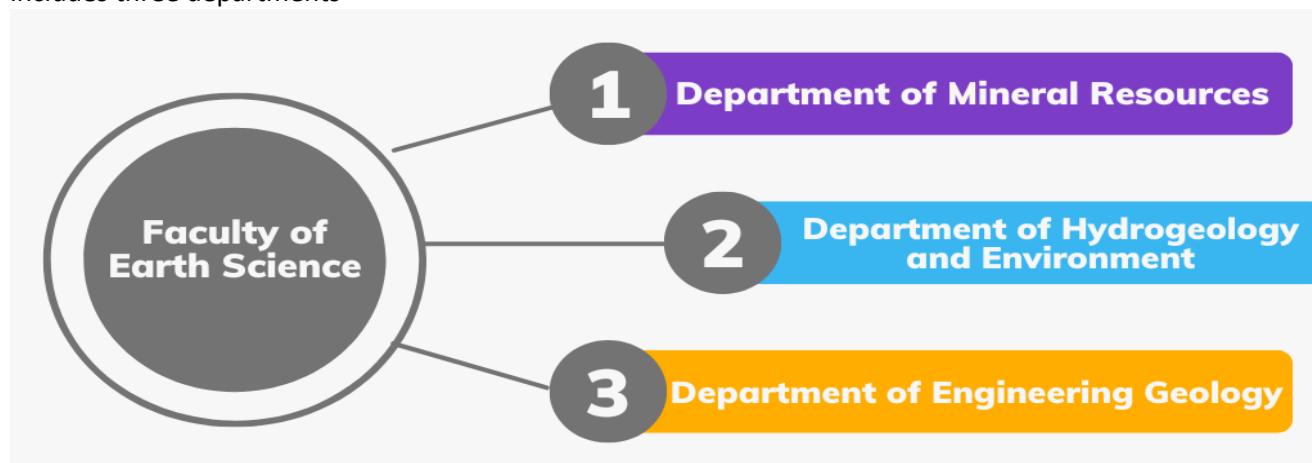
### 2.7 Institute of Small and Medium Enterprises

The institute aims at providing academic plans and programs that are unparalleled in all institutes, colleges and universities that deal with project management and moving towards covering the following areas: Small and medium enterprises management, Entrepreneurship and community partnership, Achieving oversight of contracting work and short-term contracts, Managing investment risks in small and medium-sized projects. The institute includes three main departments: Department of Accounting, Finance and Investment in Small and Medium Enterprises Department of Entrepreneurship in Small and Medium Enterprises Department of Small and Medium Enterprise Economics.



### 2.8 Faculty of Earth Science

The faculty prepares qualified scientific cadres in the fields of exploration and management of water resources, petroleum, mineral resources and environmental effects to meet the requirements of the labor market and provide them with practical skills conforming to the standards of the National Authority for Quality Assurance of Education and Accreditation for the Advancement of Scientific Research and Community Services. The faculty includes three departments





### [3] Settings and Laboratories in the interdisciplinary fields

The university has wide range laboratories along with its interdisciplinary faculties. For example, faculty of postgraduate studies for applied science has multiple laboratories including Central laboratory, Environmental Sciences and Industrial Development Laboratory, Materials Science and nanotechnology, Renewable Energy Science and Engineering Laboratory and Biotechnology, Life Sciences Laboratory, Laboratory of the Department of Materials Science and Nanotechnology and Cement chemistry and technology.

All laboratories are highly equipped by novel devices and machines. In addition, faculty of navigation science and space technology has several laboratories specialized in the effect of the space environment on satellites, Collection of small satellites, Design of spacecraft structures and materials, Imaging and tracking of satellite sites, Design of electronic devices and sensors and Analysis, design and programming of space missions.

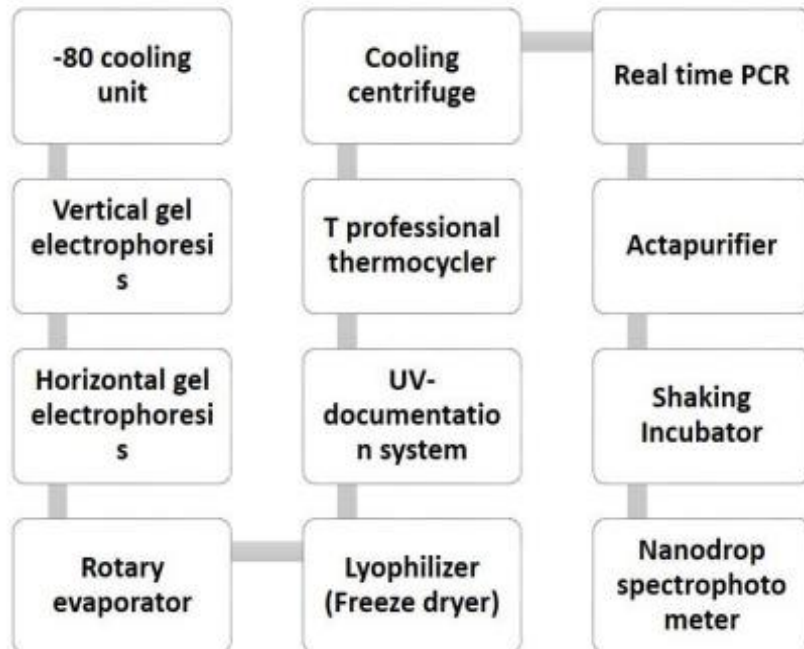
Research Institute of Medical and Aromatic Plants also have multiple unique labs including The Biotechnology research lab, Pharmaceutical Research Laboratory and Chemistry department research lab chemistry lab.

Laser Institute for Research and Application (LIRA) has advanced laboratories including 2.5 joule Nd-YAG Laser Laboratory, Quantum Optics Laboratory, Biological Laser Applications Laboratory, Laser Material Processing Laboratory, Optical Frequency Comb Laser Laboratory, Terawatt Laser Laboratory, Optical Communication Laboratory, Attosecond Laser Laboratory, Environmental Laser Applications Laboratory and Microbiological Laser Applications Laboratory.

Faculty of Earth Science also have variety of well-equipped laboratories. And below are a sample of laboratories and equipment serving interdisciplinary research.

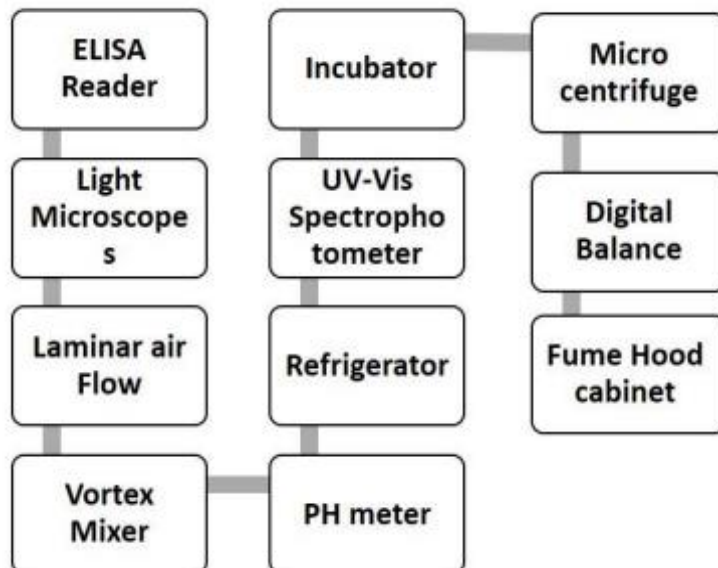
- Biotechnology and Life Sciences Department at Faculty of Postgraduate Studies for Applied Sciences

# Biotech Lab





# Biomedical Chemistry Lab



➤ Environmental Sciences and Industrial Development Department at Faculty of Postgraduate



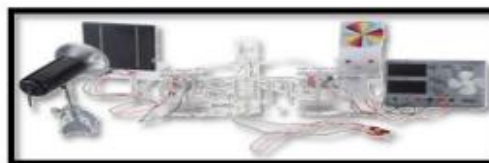
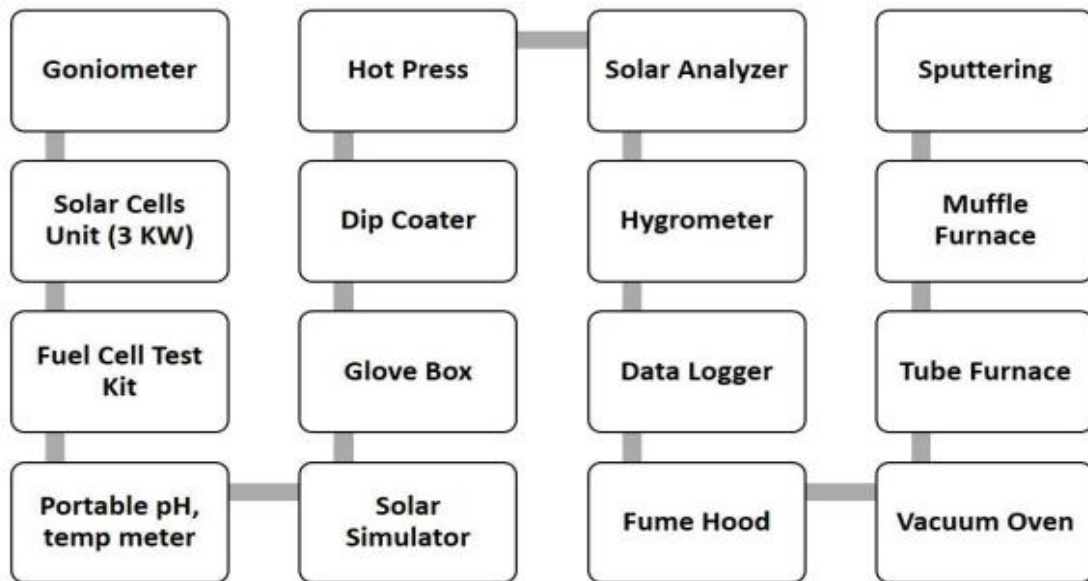
Studies for Applied Sciences

➤ Materials Science and Nanotechnology Department at Faculty of Postgraduate Studies for Applied Sciences

	
<p><b>Autolab/PGSTAT302N Potentiostat,</b></p>	<p><b>Plasma enhanced CVD</b></p>
	
<p><b>DC sputtering (PH100RPV), Photon. Egvot: <a href="#">Link</a></b></p>	<p><b>Zetasizer Nano ZS90, Malvern, UK- <a href="#">Link</a></b></p>
	
<p><b>Solar Simulation (94021A), Oriel inst., USA: <a href="#">Link</a></b></p>	<p><b>BET-Surfacearea analyzer Gemini VII 2390 Analyzers, Micromeritics, USA: <a href="#">Link</a></b></p>

- Renewable Energy Science and Engineering Department at Faculty of Postgraduate Studies for Applied Sciences

## Renewable energy lab



➤ **New equipment and machines for faculty of earth science laboratories**

The equipment includes Magnetic stirrer, Shaker, Electrical balance (4digits), Digital water bath, Ball mill, TOC analyzer, COD analyzer, BOD analyzer, DR 6000 UV-visible, Turbidity meter, Flue gases analyzer (high concentration), Flue gases ( analyzer low concentration), Smoke analyzer, PM 2.5 and PM10 analyzer, Noise analyzer, Luminance analyzer and Gravimeter.





Additional evidence link (i.e., for videos, more images, or other files that are not included in this file):

<http://www.psas.bsu.edu.eg/>

<http://www.earthsc.bsu.edu.eg/>

<http://www.specialneed.bsu.edu.eg/>

<https://www.olderinst.bsu.edu.eg/>

<http://www.laserinst.bsu.edu.eg/>

<https://www.spacescien.bsu.edu.eg/>

<https://www.medplants.bsu.edu.eg/>

<http://www.projectsinst.bsu.edu.eg/>

[faculty of PostGraduate Studies for Advanced Science \(bsu.edu.eg\)](http://www.bsu.edu.eg/faculty-of-PostGraduate-Studies-for-Advanced-Science)

[Research Plan2020-2024.pdf \(bsu.edu.eg\)](http://www.bsu.edu.eg/Research-Plan-2020-2024.pdf)

[الانجازات نهائي-محول \(bsu.edu.eg\)](http://www.bsu.edu.eg/الانجازات-نهائي-محول)