
Deanship of Graduate Studies and Research

Does BAU Provide Specific Physical Facilities for Interdisciplinary Research Teams Amongst Science Disciplines?

At BAU, the importance of interdisciplinary research is recognized and supported by the establishment of research centers and institutes that bring together scholars and researchers from different academic disciplines. These centers and institutes are equipped with the necessary infrastructure, including physical facilities, to support their work in promoting interdisciplinary research and addressing regional and global challenges.

Providing physical facilities for research teams is a top priority at BAU, as these facilities play a crucial role in promoting collaboration, knowledge sharing, and innovation among researchers from different disciplines. By working in the same space, researchers can easily share ideas, knowledge, and resources, leading to a more productive and efficient research process.

Furthermore, physical facilities provide access to specialized equipment and resources that may not be available in individual labs or departments. This can reduce costs and increase efficiency, allowing interdisciplinary research teams to work more effectively on complex problems that require a diverse range of skills and knowledge.

Overall, the commitment of BAU to providing physical facilities for research teams demonstrates the university's dedication to supporting interdisciplinary research and addressing regional and global challenges through collaboration and innovation.

Faculty of Human Sciences

- **Psychology Laboratory:** This lab is used by academic staff as well as undergraduate and graduate students.

Equipment Available:

- Motor Coordination Apparatus
- Transfer of Learning through Drawing by Mirror
- Holes Apparatus
- Mazes Apparatus
- Personality Scales
- Mental Ability Tests
- Cognitive Scales

Faculty of Business Administration

- “Rifaat Nimer” Trading Room

Equipment Available:

- Computers: These computers guide anyone wishing to have trading skills in the financial market and to train employees from all banks and students from all universities in Lebanon.
- 3x3 display screens: The screens allow better visualization of stocks and the development of the skills and capabilities of the concerned staff in the Lebanese banking system.

Faculty of Architecture Design and Built Environment

- Environmental Laboratory:

Equipment Available:

- Weather Station
- HOBO U12 Temp/RH/Light/Ext
- HOBO MX CO2 Logger
- EL-USB-CO Carbon Monoxide
- UX90-006 Room Occupancy
- EL-USB-2 Humidity & Temperature
- Luxmeter- Chauvin Arnoux
- RAYCAM 9Hz - Chauvin Arnoux
- Thermo-Hygrometer - Chauvin Arnoux
- Meteonorm V. 7 Software
- Fujitsu Celsius W 510 PC
- Extech VFM200: VOC/ Formaldehyde Meter

- Digital Modeling Laboratory

Equipment Available:

- Fujitsu CELSIUS W510 PC

- Digital Fabrication Laboratory

Equipment Available:

- Robotic Arm KUKA Kr 210 - 2700mm reach
- CNC Machine SD 4180
- Laser Cutting Machine SD 1480

- Model Making Laboratory

Equipment Available:

- Cube Pro 3D Printer
- Cube X 3D Printer

- Laser Cutting Machine Universal

- Virtual Reality Laboratory
 - Equipment Available:
 - 3D Laser Scanner (FARO Focus150)
 - MSI GT73VR Titan Laptop “Intel Core I7 3.8Ghz, 64GB. DDR4 Ram, GeForce GTX 1080 BGB. DDR5, 512 GB. SSD + 2000 GB H.D.D., 17.3” LED Display”
 - MSI GS73VR Laptop “Intel Core I7 3.8Ghz, 16GB. DDR4 Ram, GeForce GTX 1060 6GBG DDR5, 256 GB. SSD + 2000 GB H.D.D., 17.3” LED Display”
 - Styros (Oculus) HTC Vive virtual Reality system
 - Microsoft Kinect
 - Data Glove
 - Sony Xperia Touch Projector
 - 3D Glasses 3D Discussion Corner

- Urban Laboratory
 - Equipment Available:
 - 5 Workstations Fujitsu CELSIUS M740 “Xeon E5-1650 V4 3.6Ghz, 64GB. Ram, Nvidia Quadro P4000 8GB VGA,1000 GB. SSD, 24” LED Display”
 - Beirut Municipal Base Map
 - Urban Data Base

- GIS Laboratory
 - Equipment Available:
 - GIS Software License for 50 Users installed on Fujitsu CELSIUS M740 Workstations

- Photography Laboratory
 - Equipment Available:
 - Photography studio set of: DSLR camera with narrow snoot Umbrella Umbrella Flood Reflector 7” reflectors 11m Rolls Colorama The set also contains a range of equipment for photo editing and production.

Faculty of Engineering

- Aerodynamics Laboratory
 - Equipment Available:
 - Wind Tunnel
 - Hot-Wire Anemometers
 - Hot-wire Anemometer Calibration Kit



- Microphone Sensors
- Data Acquisition and Measurement Cards
- Pitot - Static tube
- Basic Hydrology System Apparatus/1731-1
- Permeability Tank

- Communication & Acoustic Laboratory
Equipment Available:
 - Technodril/U900100

- Measurement & Electronics Laboratory
Equipment Available:
 - Frequency Meter/2038

- Mechanical Laboratory
Equipment Available:
 - Centrifugal Pump Test/Lowara 4HM9/A

- Soil Laboratory
Equipment Available:
 - Advanced Digital Triaxial System/TRI-SCAN 50
 - Cone Penetrometer Apparatus

- Surveying Laboratory
Equipment Available:
 - GPS Rover/RADIAN-IS

- Drilling Simulation Laboratory
Equipment Available:
 - DrillSim20 (two consoles, a touchscreen station and a laptop)

- Drilling Engineering Laboratory
Equipment Available:
 - Six Speed Rotational Viscometer
 - HTHP Dynamic Filter Press
 - Pressurized Mud Balance
 - Marsh Funnel Viscometer



- Reservoir Engineering Laboratory

Equipment Available:

- Helium Porosimeter
- Gas Permeameter

- Asphalt Lab

Equipment Available:

- Superpave™ Gyrotory Compactor
- Asphalt Mixture Performance Tester (AMPT)
- Heavy Duty Asphalt Conditioning Ovens
- Aggregate Sieving Machines
- Marshall Compaction Hammer
- Marshall Stability Machine
- Asphalt Mixers
- Softening Point Ring and Ball Apparatus
- Volumetric Analysis Equipment

Faculty of Science

- Biochemistry & Molecular Biology Specialized Laboratory

Equipment Available:

- Rotor-Gene® Q (Qiagen) Real Time PCR Detection System
- C1000™ Thermal Cycler PCR BioRAD
- PCR Thermocycler Quanta Biotech Ltd (Q-Cycler)
- Thermo- Px2 Thermal Cycler (Thermo Electron Corporation)
- Thermo Lbsystems Multiskan® EX - ELISA Microplate Reader
- Thermo Scientific™ Multiskan™ FC - ELISA Microplate Reader
- Thermo Lbsystems Wellwash® - ELISA Washer
- GelDoc-It®2 & ChemiDoc-It®2 Imagers
- HL-2000 HybriLinker Hybridization Oven
- Ultracentrifuge (Beckman Coulter; OptimaL-100xP)
- Cold Centrifuge-Centurion Model K2015R – Bench Top
- Cold Centrifuge Hero Lab GmbH (UniCen 15DR)
- Thermo Scientific Heraeus Pico 17 Microcentrifuge
- Spectro UV-2505 UV-Vis Spectrophotometer (LABOMED Inc)
- UV Spectrophotometer- UV/ VIS (Evolution™ 60, Thermo Scientific)
- WiseTis – Homogenizer Wise Tis HG-15D
- BANDELIN SONOPULS ULTRASONIC HD 2070 Homogeniser
- SONIC RUPTUR 250 (OMNI INTERNATIONAL; The Homogenizer Compound)
- MUPID-exU Horizontal Electrophoresis System
- Western Blotters (Vertical Gel Electrophoresis Unit) OmniPAGE TETRAD Mini-Protein Electrophoresis

- Tissue Processor - HistoMaster 2052//2L/Z/A analog, MDS
 - Manual Rotary Microtome - microTec (Cut 4050)
 - Digital Cryo console Cold Plate Model ES 500–2
 - Paraffin Wax Dispenser
 - Thermostatic Baths: Paraffin wax floating out bath for histology samples “Termofin”
 - Forma (-86 °C)- Ultra-Low Temperature Upright Freezers
 - Leica DM500 Binocular Brightfield Microscope with Leica ICC50 E Camera Module
 - Steam Sterilizer (Autoclave) – Raypa
 - Hot Drying Oven (CONTHERM)
 - BioDrop TOUCH /Nanodrop UV Spectrophotometer
- **Tissue Culture Specialized Laboratory**
Equipment Available:
 - OPTIKA Model IM-2 Trinocular Inverted Microscope with OPTIKAM Pro. Digital Camera
 - Cold Centrifuge-Centurion model K2015R – Bench top
 - GILSON Safe Aspiration Station and Kit
 - FALC Digital Waterbath WBMD24
 - Leica/DMIL Fluo Microscope/ Fluorescence Microscope
 - OmniPAGE TETRAD MiniProtein Electrophoresis/ Western Blotters
 - Horizontal Electrophoresis System
 - Invitrogen Countess / Automated Cell Counter
 - Leica/DMIL Fluo Microscope/ Fluorescence Microscope
- **Specialized Microbiology Laboratory**
Equipment Available:
 - Steam Sterilizer
 - Incubator (Mettler & Wtc binder)
 - Shaking Incubator
 - Cooling Incubator (STIK)
 - Centrifuge
 - Nitrogen Distiller (RAYPA, DNP2000)
 - Fermenter (BIOTRON, GR1002F-06)
 - Vacuum Freeze Dryer
 - Computerized Spectrophotometer
 - Natural Convection Oven (SHINSAENG SDON-301)
 - Colony counter
- **Biology Research Laboratory**
Equipment Available:

- Western Blotters (Vertical Gel Electrophoresis Unit) OmniPAGE TETRAD MiniProtein Electrophoresis
- MUPID-exU Horizontal Electrophoresis System

- Water and Soil Analysis Laboratory
Equipment Available:
 - Calorimeter Visible Merck Spectroquant (Multy)
 - Ultraviolet-Visible (UV-VIS) Spectrophotometer Jasco V630
 - Spectrophotometer (UV-Visible) Aqua Quest (CECIL)
 - Spectra Analyzer (Near-IR) Zeutec opto-Elektronik GmbH 190-00100
 - Shaker Incubator ZHWY Series
 - Kjeldahl Nitrogen R Espinar, S.LDNP-2000
 - Multi-probe Parameter 556MPS
 - Dissolved oxygen meter EUTECH - DO 100
 - Flame Photometer Sherwood Model 360
 - Atomic Absorption Spectrometers AAS

- Specialized Center for Chemical Analysis Laboratory
Equipment Available:
 - Fourier Transform Infrared (FTIR) Spectroscopy - Nicolet is5
 - Nuclear Magnetic Resonance (NMR) Spectroscopy
 - Thermal Analyzer (Labsys-TGDTA/DSC)
 - GC-MS-QP5050A
 - Jasco FP-8300 Spectrofluorometer

- Computational Research Laboratory
Equipment Available:
 - HP EliteDesk 800 G2 Tower Business PCs
 - HP Z640 Workstation
 - HP Z840 workstation

- Specialized Laboratory of Materials Science
Equipment Available:
 - LTF - Tube Furnace - 1200°C - Lenton Furnace
 - HIOKI "3532-50 LCR HiTESTER"
 - Vickers Hardness Tester MHVD1000IS
 - Scintillation Detectors
 - XR 4.0 Expert Unit, X-Ray Unit, 35 kV
 - Manual Hydraulic Press
 - Spin Coater-Laurell WS-650MZ23NPPB

- Gallenkamp Box Furnace FSL340-110w
- Planetary Ball Mill PM 100-RETSCH
- Heated Ultrasonic Bath-H (9 L)
- Motorized Tension / Compression Test Stand ESM303
- KJ-1200G Laboratory Tube Furnace
- Thermoelectric Power Measurements (Home-Made)
- Muffle Furnaces with Brick Insulation (Nabertherm)
- HIOKI “IM7581 Impedance Analyzer”
- Isolator Glove Box

Faculty of Pharmacy

- [Pharmaceutical Technology Research Laboratory](#)

Equipment Available:

- Digital Viscometer Brookfield DV
- High Speed homogenizer
- Lab Plant Spray Dryer
- Mechanical Stirrer
- Sonicator
- Zetasizer, Nanoseries
- Shaking Water-Bath
- Centrifuge 3-30ks

- [Pharmacology Research Laboratory](#)

Equipment Available:

- PolyView ,Compact Transducer Amplifier with Pressure Transducer and Interface Cable
- Grass Stimulator
- Animal Balance
- Single Heated Tissue Bath
- MS Multi-peristaltic Pump
- Western Blot
- Tail Flick - Hot Plate
- Rota Rod Treadmill for Rats
- Plethysmometer

- [Microbiology Research Laboratory](#)

Equipment Available:

- Laminar Flow
- Autoclave
- Incubator



- Shaker Incubator
 - Electrophoresis
 - UV Illuminator
 - PCR Cycler
 - Microscope
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- Phytochemistry Research and Pharmaceutical Chemistry Research Laboratory
Equipment Available:
 - Rota Vapour
 - HPLC
 - Ultra Centrifuge
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- Drug Quality Control Laboratory
Equipment Available:
 - Moisture Balance
 - HPLC PU-2089 Spectrophotometer
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- DQC Laboratory
Equipment Available:
 - HPLC
 - Dissolution Apparatus
 - GC-MS
 - ELISA
 - UV-VIS
 - Spectrophotometer
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- Biochemistry Laboratory
Equipment Available:
 - Calorimeter
 - PCR
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- Pharmacology Laboratory
Equipment Available:
 - Single Tissue Bath
 - Kymograph Universal Model
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- Microbiology Laboratory
Equipment Available:
 - Test Tube Vortex



- Autoclave
- Incubator

- Pharmaceutical Technology Laboratory
 - Equipment Available:
 - Disintegrator
 - Dissolution
 - Friabilator
 - Moisture Balance
 - Suppository Hardness Tester
 - Tablet Hardness Tester
 - Coating Pan
 - Granulator Dry
 - Granulator Oscillator
 - Homogenizer
 - Kneader
 - Mixer Double Cone
 - Pelletizer
 - Polishing Drum
 - Suppository Machine
 - Suppository Melting Tester
 - Tablet Machine
 - Three Roller Mill

Faculty of Medicine

- Medical Research Laboratory
 - Equipment Available:
 - Balance
 - Analytic Balance
 - Dry Bath
 - Heat plate
 - Rocker
 - Bonchtop Centrifuge
 - Micro-Centrifuge
 - Inverted Microscope with Camera
 - Incubator/Oven
 - UV Reader
 - DNA Electrophoresis system
 - PCR Hood
 - Protein Electrophoresis and WB System
 - Cell Culture Hood



- CO2 Cell Incubator
- Fridge/Freezer
- Freezer Thermofisher-80

Faculty of Dentistry

- Speciality Clinics

Equipment Available:

- Surgical Operating Microscope
- DIAGNOdent Hand-held Caries Detection Pen
- Oral ID Cancer Screening
- Mectron Piezosurgery Device
- Biolase EPIC DIODE 940nm Dental Laser System
- AMD Picasso lite Soft Tissue Laser
- Sirolaser
- PRF Centrifuge Machine
- Osstell ISQ Device
- Periotest

Faculty of Health Sciences

- Physical Therapy Outpatient Clinics

Equipment Available:

- Biopac System
- Digital Hand Dynamometer
- Push-Pull Dynamometer
- Digital Pinch Gauge
- Cervical ROM Inclinator

- Biomedical Laboratory

Equipment Available:

- Nucleic Acid Analyzer AENano200; A&E Lab
- Thermal Cycler CF-G9677 – Coyote Bioscience Company
- DNA Electrophoresis Set – Enduro
- ELISA Reader Multiskan, ThermoFisher
- Fluorescent Microscope “Optika C-P6 FL”