



# BHAGWANT UNIVERSITY

Ajmer, Rajasthan

Established By Govt. of Rajasthan and Recognized by UGC, ISO Certified,  
Approved by BCI, PCI, NCTE, Member of AIU, IAP, AIMA and FICCI

Awarded as  
"Best Group of Institutions"  
by AAJ TAK & Royal Brand Pvt. Ltd.

Awarded as  
"Best Self Financing University in Rajasthan"  
by Prime Time Research Media Ltd.



ADDRESS

## DEPARTMENT OF AERONAUTICAL ENGINEERING

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# BHAGWANT GROUP OF INSTITUTIONS

## ABOUT THE UNIVERSITY

*Bhagwant Group of Institutions has been started by a Group of NRIs, Engineers and Academicians in 1999, who have done a pioneering work in the field of education. It's a matter of pride and honour that under the aegis of Bhagwant Group of Institution, Bhagwant University, Ajmer, Rajasthan has been established in 2008 by Act No. 18 uls 2f of the UGC Act 1956. Bhagwant University has well established center for Engineering, Management, Science, Pharmacy, Education, Hotel Management, Physiotherapy and Mass Communication with state of the art facilities for training and research. It is providing quality education for rural and urban citizens through different modes at par with global standards.*

“ Our University has developed relationship with reputed Foreign Universities and colleges around the globe for student and faculty exchange, development programme and International Internship. The Universities with whom we have Tie-ups are  
Sheffield Hallam University (UK),  
Gannon University (Pennsylvania, USA),  
University of Western Australia (Perth, Australia),  
Norwegian University Of Life Sciences, NMBU (Norway) ”

## MESSAGE FROM CHANCELLOR



**Dr. Anil Singh**

Bhagwant Group of Institutions, a renowned name in the realm of education has taken giant strides for its progress. Bhagwant University Ajmer, Rajasthan has been established with an object of imbuing academic excellence, upholding and maintaining ethical values. It is enriching knowledge, skills, attitude and self belief, so as to enable students to be successful in their future endeavor.

It is providing comprehensive, multifaceted, inter disciplinary, world class education, with its dedicated, involved and committed staff. Bhagwant University plays a vital role in the socio-economic growth of the nation.

I welcome student fraternity to experience the amiable educational environment at Bhagwant University and discover new horizons.

## MILESTONES OF BGI

Bhagwant Group of Institutions has been imparting Education in Technical, Management and Pharmaceutical disciplines since the year 2000 and has earned great distinction. The following Institutes of the Group have been approved by All India Council for Technical Education (AICTE) / National Council for Teachers Education (NCTE) / UGC respectively.

- Bhagwant University (BU), Ajmer, Rajasthan
- Ajmer Institute of Technology (AIT), Ajmer, Rajasthan
- Bhagwant Institute of Technology (BIT), Muzaffarnagar, U.P.
- Bhagwant Institute of Technology (BIT), Ghaziabad, U.P.
- Bhagwant Institute of Pharmacy (BIP), Muzaffarnagar, U.P.
- Bhagwant College of Education (BCE), Muzaffarnagar, U.P.
- Shakuntla Girls Degree College (SGDC), Chandpur, Bijnor, U.P.
- Bhagwant Public School (BPS), Chandpur, Bijnor, U.P.
- Bhagwant Institute of Medical Science, Muzaffarnagar, U.P.
- Bhagwant Institute of Technology & Management, Muzaffarnagar, U.P.

Our meritorious and outstanding students are placed at various Companies and MNCs of National and International repute like Wipro, Infosys, HCL, ICS, ICICI etc.



## INFRASTRUCTURE

### Campus & Environment

The campus of Bhagwant University Ajmer is spread over more than 100 acres of land. The University building has been designed and constructed under the supervision of highly qualified architects and consists of lecture theaters, tutorial rooms, computer labs, conference hall, laboratories, workshops, library and administrative offices with lush green lawns and a pollution free environment.

### Library

The University has spacious, updated and rich Library which houses different books on Engineering, Pharmacy, Physiotherapy, Education, Hotel Management, Sciences, Management, Computers and general subject books. Many national & international journals and periodicals are subscribed on regular basis.

### Hostel Facilities

The Institute has fully furnished separate hostel facilities for boys and girls. These are supported by an excellent mess, common room, STD-PCO, Internet Access (fully Wi-Fi), Canteen, Provision Store, Medical Assistance.

### Internet Facilities

24 hours Internet facilities are being provided through BROADBAND @ 1 Gbps for Students. Free internet facility is also provided round the clock to Students.

# AERONAUTICAL ENGINEERING

## INTRODUCTION

The Department of Aeronautical Engineering was started in the academic year 2008-09. This is an undergraduate course of 4-year duration. It is a top ranking department of the region. Industrial placements ensure that students get hands-on experience in an actual workplace. The Aeronautical Engineering Programme envisaged will have its accent on the Experimental, Research and Development aspects of aeronautical and aerospace activities. Equal stress is laid on aircraft structures, aerodynamics and aircraft propulsion. Students are taught the importance of airplane design and minor projects are related to maintenance of these machines. Field visits are organized in aeronautical and space establishments. Training is given in special areas such as CFD and FLM. An aero club has been formed to create awareness about the practical aspects of design and flying. Based on the student's academic performance, airplane flight laboratory training in gliders and powered aircraft is arranged in the pre-final year.

COURSE	BRANCH	DURATION	ELIGIBILITY CRITERIA
B.Tech	Aeronautical Engineering	4 Yrs.	Passed 10+2 examination with Physics, Chemistry and Mathematics with 45% marks (40% in case of candidate belonging to reserved category)
M.Tech (Regular)	Aeronautical Engineering	2 Yrs.	Bachelors degree or equivalent with at least 50% (45% in case of candidate belonging to reserved category)
M.Tech (Part Time)	Aeronautical Engineering	3 Yrs.	
Ph.D.	Aeronautical Engineering	3-5 Yrs.	Masters Degree With at least 55% Marks

## Aerodynamics Lab:

To predict different aerodynamic propulsion used in aero applications. The various flow field analysis of different aerodynamics objects can be done using subsonic wind tunnel. Also lift and drag can be calculated using the wind tunnel. Aerodynamics laboratory has subsonic wind tunnel to carry out experiments in the area of aerodynamics. Models Low speed Subsonic wind tunnel, Flow Visualization using water flow, Channel with different models - aerofoil, rough and smooth cylinder, flat plate, Symmetrical aerofoil, Cylinder aerofoil, Cambered aerofoil, Smoke generator unit, Aerofoil mounting set-up are also available for experimentation



## Propulsion Lab:

The Propulsion Lab provides the behavior of air flow of engine. The major apparatus are axial cascade compressor with manometer, bomb calorimeter, natural convection apparatus, forced convection apparatus. It offers study in the area of Combustion and Propulsion using lift and drag, convergent and divergent nozzle, piston engine, rocket engine, jet engine, heat transfer, compressors, and turbines.



## Aircraft Structures Lab:

To carry out experiments on asymmetric bending of beams, location of shear center, deflection of beams, non-destructive techniques (Ultrasonic testing, Magnetic particle inspection), buckling of columns, beams with combined loading, beams of uniform strength, strain measurement using digital strain indicator.



INDUSTRIAL AIRCRAFT STRUCTURE SETUP

## Avionics Lab:

This laboratory provides the general concepts of communication and data transmission of messages or information which are taking place in Air Traffic Control and Satellite control.



MODERN AIRCRAFT PANEL

## Aircraft Engine Repair and Maintenance Lab:

This laboratory provides the general procedure for inspection, maintenance, overhaul, servicing, trouble shooting, repair, modification, A to D check and service scheduling for an aircraft.



## Future Scope:

- Aeronautical Engineering is a niche field and job prospects are plenty considering the demand and the supply ratio of qualified engineers. With the entry of private airlines and the raging competition between them, the demand for Aeronautical engineers has only increased further. The field offers a wide range of roles in research, design, development, testing, manufacture and maintenance.
- Students have the option to work as a structural designer or gain expertise in navigational guidance and control systems or focus your work on a particular product such as a war plane or space missile etc. Students with flair in computers can work in drawing up project plans using the Computer Aided Design (CAD) software. There is always a lot of R&D happening in this field. You can make your valuable contributions to the never ending process of devising new fuel efficient parts like wings, engines etc.
- Aircraft maintenance is another challenging task. You can also get into the managerial domain of this industry. Another dream domain of any aeronautical engineer is the Air accidents Investigation Bureau which is responsible for finding out the cause of air mishaps. A high level of analytical ability and reasoning are required for this task and is a sought after job profile among the engineers.

Companies playing a major role in the aviation sector and contributing to the growth of aeronautical engineering are:-

Indian Space Research Organization (ISRO), Hindustan Aeronautics Ltd. (HAL), National Aerospace Laboratories (NAL), Defence Research and Development Organization (DRDO), Air India, Jet Airways, Spicejet, Indigo, Goair, BrahMos Aerospace, GE Aviation, Honeywell Aerospace, Taneja Aerospace & Aviation Ltd., IITC Aerospace Systems, Safran Aerospace India Pvt Ltd., Sonovision-Aeros. Bombardier Aerospace, CPI Aerostructures, GSE Dynamics, Monogram Aerospace Fasteners, Samuel Aerospace Metals etc.

## HOW TO APPLY

Registration Form can be procured by sending a DD of Rs. 1000/- in favour of "Bhagwant University", payable at Ajmer, at the following address Registrar-Bhagwant University, Sikar Road, Ajmer (Raj.) -305004 or Download it from our website and send it along with a DD of Rs 1000 as stated above. Applicant will have to fill up the Admission form for the desired course along with the requisite fee which can also be downloaded from our website : [www.bhagwantuniversity.ac.in](http://www.bhagwantuniversity.ac.in)

## FOR MORE INFORMATION

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