

MTE

DOUBLE DEGREE PROGRAMS :

Now you can make the difference
with Jiliang University and
World University of Bangladesh.

Certificate will be
Issued from **WUB & CJLU**

**THE UNIVERSITY
IMPACT
RANKINGS**
2nd Top Ranked University in Bangladesh

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WURI

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WITH REAL IMPACT

B. Sc. in MECHATRONICS ENGINEERING



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ESTABLISHED IN 2003

Brief Profile of WUB : The University is approved and recognized by the Ministry of Education, Government of the People's Republic of Bangladesh and the University Grants Commission (UGC) of Bangladesh. It is a leading university for utilitarian education. The University has so far produced as many as 12000 graduates in its eleven departments covering twenty five programs. None of its degree holders are unemployed implying its commitment to offer up to-date and quality education.

The vision of the University is to create leaders who will make their brain the tiniest laboratory capable of making enormous contributions to economic emancipation and social well-being.

B.Sc. in Mechatronics Engineering (MTE):

To prosper and to speed up the cycle of development in order to eliminate poverty, the most useful and advanced technological branch today is Mechatronics Engineering (MTE). With this perspective World University of Bangladesh has started running B.Sc. in Mechatronics Engineering (MTE) since 2006.

It is the first University that offers B.Sc. in Mechatronics Engineering program in this part of the world. This program is also known as Electro-Mechanical Engineering with a synergistic combination of mechanical, manufacturing, electrical & electronics engineering, computer technology, system control, robotics, automation, industrial management etc. and as such is much wider than Electro-Mechanical Engineering.

This course is designed and maintained with assistance of various famous educational institutes of Germany, Thailand, Japan, North America and BUET of

Mechatronic Engineering careers

- * Educational institutes
- * Pharmaceuticals industries
- * Textile sector
- * Chemical
- * Manufacturing industries
- * Power oil, gas, mineral industries, SMEs
- * Refrigeration & air-conditioning
- * Automobile, R&D
- * Communication sector
- * Microcontroller
- * PLC based system design
- * Robotics
- * Software engineering
- * Aerospace Technology
- * Biomedical
- * Automotive Systems
- * Motion Control Technology
- * Intelligent Control
- * Actuators and Sensors
- * Modeling and Design
- * System Integration
- * Vibrations and Noise Control
- * Micro Devices and Optoelectronics



What does a Mechatronics Engineer do?



Some tasks mechatronics engineers undertake:

- *Develop solutions to industrial problems by using mechanical/electronic/computer technology.
- *Design and build new products - for example, developing robotic vehicles for underwater exploration.
- *Introduce automation to factory production lines to improve existing processes.
- *Improve previous industrial/manufacturing processes - for example, robotic floor cleaners.
- *Design and develop engineering systems for the automation of industrial tasks.
- *Apply complex engineering problem solutions to the transfer of material, components or finished goods

MTE Laboratories

- Refrigeration and Air Conditioning
- Thermo fluid Engineering
- Automobile Engineering
- Electrical Circuit
- Power electronics
- Digital Signal Processing
- Digital Logic Circuit and Microprocessor
- Measurement & Instrumentation
- CNC programming
- Electronics
- Computer

Credit hours & duration : Minimum 161 Credit hours.

(Duration 4 years for 12 Semesters) for HSC or equivalent passed students.

Admission Requirements :

2nd Division or GPA of 2.50 in S.S.C & H S.C separately or total GPA of 6.00 with minimum GPA of 2.00 either in S.S.C or in H.S.C or total GPA of 5.00 in S.S.C & H.S.C for wards of the freedom fighters or minimum 5' 0 Level, 2' A Level courses or Equivalent. Diploma holders are also admitted with waiver of courses.

Admission Requirements for Diploma Engineers:

Diploma in Mechanical, Power, Electrical & Electronics Chemical, Computer, Refrigeration & A/C, Automobile, Electro-medical, Marine-diesel artificer and other related fields.

Course Structure of MTE

Semester 1:

Course Name	Credit Hours
English	3
Physics	3
Physics Lab	1
Bangladesh Studies	2
Fundamentals of Mechanical Engineering	3
Engineering Drawing	3

Semester 2:

Course Name	Credit Hours
Chemistry	3
Chemistry Lab	1
Bangla Literature	2
Engineering Mechanics	3
Differential and Integral Calculus	3

Semester 3:

Course Name	Credit Hours
Matrices and Vector Analysis	3
Principles of Accounting	3
Thermo-fluid Engineering	3
Thermo-fluid Engineering Lab	1
Electrical Circuits	3
Electrical Circuits Lab	1

Semester 4:

Course Name	Credit Hours
Economics	3
Digital electronics and Microprocessors	1
Digital electronics and Microprocessors Lab	3
Statistics	3
Introducing to Programming	3
Introducing to ProgrammingLab	1

Semester 5:

Course Name	Credit Hours
Electrical Machines	3
Electrical Machines Lab	1
Differential, Partial Differential Equations and Coordinate Geometry	3
Electronics	3
Electronics Lab	1
Engineering Materials	3

Semester 6:

Course Name	Credit Hours
Electrical circuit II	3
Electrical Circuit II Lab	1
Telecommunication Engineering	3
Fundamentals of Mechatronics Engineering	3
Business Communication	3

Semester 7:

Course Name	Credit Hours
Manufacturing Process with CNC Programming	3
Manufacturing Process with CNC Programming Lab	1
Power Electronics	3
Power Electronics Lab	1
VLSI Design	3
VLSI Design Lab	1
Industrial Law	3

Semester 8:

Course Name	Credit Hours
Complex Variables and Transform Methods	3
Control System Design	3
Refrigeration & Air-conditioning	3
Refrigeration & Air-conditioning Lab	1
Solid State Device and Semi-conductor Theory	3

Semester 9:

Course Name	Credit Hours
Automobile Engineering	3
Automobile Engineering Lab	1
Machine Tools	2
Power plant Engineering	3
Industrial Management	3

Semester 10:

Course Name	Credit Hours
Numerical Methods	3
Measurement and Instrumentation	3
Measurement and Instrumentation Lab	1
Automation and Robotics	3
Automation and Robotics Lab	1
Satellite Communication	3

Semester 11:

Course Name	Credit Hours
Electromechanical Design	3
Bio-electromechanical Engineering	3
Digital Signal Processing	3
Digital Signal Processing Lab	1

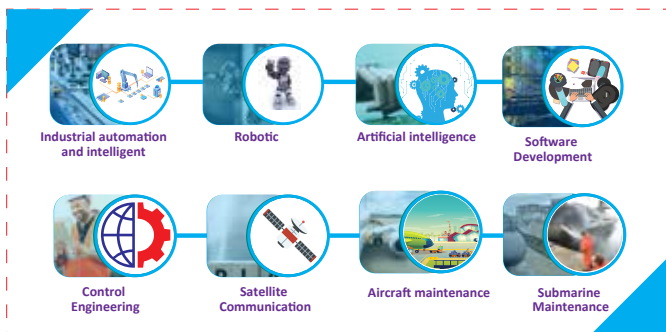
Semester 12:

Course Name	Credit Hours
Optional Course I	3
Optional Course II	3
Optional Course III	3
Dissertation	6





On earning a MTE degree students acquire the following skills



Double Degree Programs

World University of Bangladesh has entered into a new era of international exchange in the field of education through signing a MoU with China Jiliang University (CJLU). According to the Articulation Agreement between the two universities, students of the Mechatronics department of World University of Bangladesh will have the opportunity of Receiving a Double Degree programme.

Students, opting to study B.Sc in Mechatronics Engineering, will study-

- * 2 years in World University of Bangladesh and complete 83 credit hours
- * 2 years in the Mechatronics and Mechanical Engineering department of China Jiliang University (CJLU) to complete 60 credit hours.

Therefore, students will complete 143 credit hours altogether in 4 years. It is to mention that successful students will receive two separate certificates, one from World University of Bangladesh and another from China Jiliang University.

NB: Students must achieve CGPA 3.00 out of CGPA 4.00 grade scale to study successive 2 years in China. However, the students who will not go to China will complete 161 credit hours to complete the full course in World University of Bangladesh and obtain certificate of graduation.





World University of Bangladesh (WUB) at a glance -

- * A magnificent new Campus
- * A supportive Learning Environment
- * A fully comprehensive University
- * 300 Teachers and staff
- * International Recognition
- * 10 Departments, 25 day & Evening programs
- * 5000 total students enrolled
- * More than 12,000 alumni
- * Active clubs - 15 * Lab 40
- * 4 Convocation Concluded

Academic Session :

The course are run by semester system, each year consist of 3 semesters. Spring (Jan-Apr), Summer (May-Aug) and Fall (Sep-Dec) Semester.

Admission Procedure :

Apply online or by physical presence; submit all relevant papers and documents; sir for admission test if your total of CGPA in SSC and HSC is below seven; alternatively you have to face viva-voce; obtain a positive instruction and make payments.

FINANCIAL AID

WUB provides a number of scholarships and financial grant to the deserving students to meet their tuition fees . To be considered for this Scholarship, a student must achieve for both SSC and HSC (or its equivalents): Golden GPA-5.00=100%, GPA-5 (1 Golden)= 80%, Normal GPA-5=70%, GPA 4.26-4.99=45%, GPA-3.5-4.25=35%, GPA 3.00-3.49=25% and GPA 2.50-2.99=20%. Special scholarship for female students, siblings, spouse, athletes, group and many other. Best performers of each semester will enjoy full free scholarship for that semester.

International Affairs Division

For information regarding the Section's activities, please refer to the following link:
http://www.wub.edu.bd/international_students/overview



Collaboration

Collaboration with Universities of USA, UK, Germany, China, Australia , Japan ,Italy, Russia, Latvia , Portugal, Malaysia, Phillippines, Vietnam, Malawi, Uganda, Iraq, Iran, Spain, Swizerland, Puerto Rico, Georgia, South Africa, Nigeria, Kazakhstan, Palestine and many more

List of Partner Universities at http://www.wub.edu.bd/international_students/partners_international_affa



SOME OF DISTINGUISHED FACULTY MEMBERS:

Full time & Adjunct

Advisor: M. A. Rashid Sarker, Ph.D	Professor
Advisor: Masanori Monde, Ph.D	Professor
Advisor: M. M. Rahman, Ph.D	Professor
Dr. S. M. Fazlul Karim, Ph.D (JU),	Professor
Dr. Md. Mizanur Rahman, B.Sc. Engg., M.Sc. (USA), Ph.D (Malaysia)	Associate Professor
Farhan Mahbub, B.Sc. Engg., M.Sc. Engg (UK), M.Phil	Asst. Professor
Enamul Hoq, B.Sc. Engg., M.Sc. Engg. (Malaysia)	Sr. Lecturer
Rumana Tasnim, B.Sc. Engg., M.Sc. Engg. (Malaysia)	Sr. Lecturer
Sajib Paul, B.Sc. Engg. (AIUB), M.Tech (India)	Lecturer
Mst. Anjuman Ara, B.Sc. Engg., M.Sc. Engg. (RU)	Lecturer
Najib Sobhan, B.Sc. Engg. (AUST), M.Sc. Engg. (Malaysia)	Lecturer
Abu Salman Shaikat, B.Sc. Engg. (AUST) M.Sc. Engg. (AIT)	Lecturer
S M Mahmud Mozammel, B.Sc. Engg., M.Sc. Engg.	Lecturer
Razwan-US- Saleheen, B.Sc. Engg. (AIUB), MS (DU)	Lecturer
Md. Tarek Ur Rahman Erin, B.Sc. Engg. (MIST), M.Sc. Engg. (BUET)	Lecturer



Parmanent Campus at Uttara



Vice-Chancellor

Professor Dr. Abdul Mannan Choudhury

B.Com (Hons), M.Com (Dhaka), MBA (Manchester-B.S), PhD (London)

Formerly Selection Grade Professor of D.U.

H.O.D. Dept. of Management

Academic Dean, Bayero University, Kano, Nigeria

Director, EMBA, & Chairman, Department of Management, D.U.

Proctor D.U. Provost, S.M. Hall (D.U.)

Founder Chairman, MIS Dept. D.U.



Honourable VC and Treasurer with Prof. Dr John Wood,
Secretary, General Association of Commonwealth Universities
at a Cultural program at the 4th Convocation



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