ENGINEERING & APPLIED SCIENCES

B.Tech in Robotics Engineering (4 years)

B.Tech in Mechanical Engineering (4 years) with specialization in Mechatronics / Automobile Manufacturing

B.Tech in Electrical Engineering (4 years) with specialization in Renewable Energy / Power System

B.Tech in Computer Science & Engineering (4 years) with specialization in Cyber Security / Data Analytics

M.Tech in Computer Science & Engineering (2 years) with specialization in Cyber Security / Data Analytics

ACADEMIC COLLABORATIONS

Phi Robotics
ADANI Power Limited
THE NEO gia UNIVERSITY
-A GREAT LEGACY
The family of our founder and chancellor Mr. Harshavardhan Neotia were copromoters of the cement giant, Ambuja Cement Ltd. The Neotia family started its journey in education with Neotia Institute of Technology, Management and Science (NITMAS), previously known as Institute of Technology and Marine Engineering (ITME), a college established in 2002.

The Neotia University (TNU) and NITMAS are the two dynamic endeavours of the Ambuja Neotia Group in the field of education. While NITMAS continues to offer long-established conventional courses to the students in West Bengal, TNU is primarily reaching out pan India, offering highly advanced futuristic courses in various fields of Engineering & Technology, Maritime Studies, Agriculture & Allied Sciences, Legal Studies, Hospitality and Humanities, Management & Social Sciences.

Harshavardhan Neotia
Chancellor
The Neotia University

WHY TNU?

• 50 acres lush green Campus with full security & CCTV for 24 X 7
• Recognized & Enlisted by the University Grants Commission (UGC), Govt. of India and other requisite Govt. Approval Bodies
• Smart Classrooms, Language Lab, Mechanical Workshop, Ship-in-Campus, Bridge Simulator, Freefall boat, State of the Art Laboratories and many more
• Pro-active Training & Placement Cell with 100% focus on employability
• Academic & Placement tie-ups with industry for almost every course
• Choice Based Credit Systems (CBCS) wherein, students are empowered to
  - Choose various Elective Subjects along with Core Subjects
  - Continuous evaluation system
  - Easy transfer of Credits to Foreign Universities
• 25% - 100% Scholarships on various categories on Tuition Fee
• Tie up with National & Other Banks for hassle free Education Loans
• Received a number of Government funded research projects with a grant of approx. INR 80 lakhs and many are in the pipeline
• Free Wi-Fi facility for all Faculty and Students for 24 hrs.

• Curriculum designed by Expert Committees consisting of Industry Experts and Academic Stalwarts
• 8000 sq.ft of reading area, 31000+ National and International books & Journals, 3 million e-books and research journals available in the Library. Study materials and books are issued from library without any extra cost
• Medical Insurance of Rs. 50,000 for all individual students till the end of their courses
• Doctors on Campus with fully equipped Dispensary and Ambulance at all the time
• Various Students' Club to enhance talent in the areas of Technology, Sports, Music etc.
• Separate Residential Accommodation for Boys (1000+) and Girls (350+)
• More than 100 staff quarter inside the campus
• Gymnasium, Swimming Pool, Indoor & Outdoor Game facilities with Coach and Instructors available. Sports and Grooming facilities for Girl Students including mandatory Karate learning
• A.C Coach bus facility for Day Scholars from Kolkata and around
What are Robots?
Robots are those machines which are able to execute the duties that humans are either unable or prefer not to complete. Some robots are manufactured to do jobs which are hazardous to people like exploring mines, defusing bombs, flying fighter planes, spreading of insecticide & pesticides on fields etc.
In a fastest growing country like India, Robotics as a field holds immense potential. It is a very vital, unique, and innovative branch of learning and if the youth of the country show a greater interest in this area of study, it can create a paradigm shift in the way our country develops digitally, technologically and economically.
Today, Robotics is a rapidly growing field. As technological advances continue, research, design, and building new robots serve various practical purposes, whether domestically, commercially or militarily.

Are you fascinated by Robots and want to know how they work?
What are the mechanisms behind Robots?
If the answer is “Yes” then you can explore your career in the “Robotics Engineering”.
"Robotics Engineering" is a field of engineering which deals with the construction, design, application and operation of robots. Robotics Engineering is an interdisciplinary branch of Electrical Engineering & Mechanical Engineering. A professional designer who is responsible for creating robots and robotic systems is called a “Robotics Engineer”.

How to become a Robotics Engineer?
To take admission in 4 years degree course:
A student should have passed 12th standard with Physics, Maths, Chemistry / Computer Science with average minimum 60% marks in Board Exam. Students need to appear and clear ‘online’ / ‘offline’ admission tests (Aptitude & Technical) that conducted by The Neotia University. Also, students can take admission through WBJEE / JEE(Main) raking and online counseling process if having requisite eligibility marks.
Lateral Entry in the 2nd year also possible for the students those have completed 3 years Engineering Diploma from an AICTE approved college / UGC approved University from the Electrical (EE) / Mechanical (ME) / Electronics & Electrical Engineering (EEE) / Electronics & Communication Engineering (ECE) / Computer Science & Engineering (CSE) stream.

Infrastructure at Campus:
Updated course structure & syllabus:
• Course structure & syllabus are updated with the recent development.
• Advanced AI, heavily loaded Machine Learning, hands-on IOT, Computer Visions and even Cyber Security included in the syllabus.
• Hardware development and mini projects for each course.
• Learn how to develop Robots, Solve Real life Industry problem.
• Gain knowledge on how to work as a team.
Industry Collaboration:
- Collaboration with Phi Robotics Research Pvt. Ltd., Thane, Maharashtra, to develop and deliver the course curriculum and laboratory facilities.
- Phi Robotics Research Pvt. Ltd. at its discretion will hire the students of TNU who meet the company’s recruiting criteria. They already offered conditional employment to the first batch of Robotics Engineering students.
- Phi Robotics work to develop the most efficient, innovative and cost-effective products for the robotics needs of the world, ensuring customer satisfaction and safety. They share a dream of creating a better world and improving lives through innovative technologies.

Training & Projects:
- Mini projects in each Semester 2nd year onwards.
- Minor projects in 3rd year, Major Project in 4th year.
- Summer Training in 3rd year (in company like KUKA, Siemens etc.)
- Internship in 4th year.

Well Equipped Lab Facility:
- Well-equipped Robotics lab with advance equipments like 6 Axis pick and place Robot, SCARA, Plotter, Mobile robots, IOT etc.
- Humanoids
- Intelligent automated Robotics Lab
- Advanced RTOS Lab
- 3D printer facility

Gamified the Education:
- Hands-on work facility at lab during free time.
- Gamified the learning through in house contest like: Sankalp, Parikalpura etc.

Futuristic Innovation and Incubation Center:
- Assigned student projects are international level innovative projects.
- Developed MARIA-a service cum security robot.
- Development of a smart Drone under progress.

Organize Seminar/Workshop:
- Organize Seminars regularly with industry persons from Robotics company like MTAB, Siemens, WABCO, MieRobot etc. on advance topics.
- Organize hands-on Workshops on advance topic like Blockchain, UX Design etc. regularly with industry persons from Robotics Company like MTAB, Siemens, WABCO, MieRobot etc.

Participation in National level Competition:
- Participated by the students at:
  - NSCC organized by IIT, KGP
  - ICDC organized by TI & DST, Govt. of India
  - IIC by organized Intel

Research Facility:
Advanced Artificial Intelligence and Machine Learning lab:
- Smart AI automation system in Robotics lab.
- Research grade RTOS instruments for higher education & research
- IOT Lab and 3D printer facility for research work.
- B.Tech. students are getting research facility and published international research paper.
Career Prospects of Robotics Engineering:

Internship for Students
- University provided internship to the 4th year students at WABCO, Chennai for 5 months in two phases on which students got stipend of Rs. 15000/- per month.

Industry Project:
- Received project- Development of “Yantra”-I from MieRobot
- Received project- to develop ‘Smart Automation System’ from WABCO.

Job Opportunities:
Plenty of job opportunities are available for robotics engineers both in India as well as in abroad countries. It guarantees you a career that is fulfilling and replete with opportunities that are only likely to boom in the next couple of years & decades. A high net worth salary, a thrilling area of work that is always sprouting with new avenues and immense demand in the job market make Robotics an ideal career choice now and for the future. After completing the degree course in this field, you can take jobs in manufacturing, maintenance, research of Robot manufacturing company and many other areas. Due to the advancement of technology, this robotics technology is used in space exploration, power plant maintenance, automobile industry, Petroleum exploring places, etc.

Candidates with B.Tech. degree in Robotics can seek job opportunities in space research organizations such as ISRO and DRDO. You may also start a venture as entrepreneur. Some Top Recruiters are:
- Indian Space Research Organisation (ISRO)
- Defence Research and Development Organization (DRDO)
- Bharat Heavy Electricals Limited (BHEL)
- Bhbha Atomic Research Centre (BARC)
- Indian Navy
- Indian Railway
- Private companies like, BOSCH, TCS, Adani, KUKA, PARI, Grey Orange, Sastra Robotics, Phi robotics etc.

Salary
Robotics Engineering is one of the highly rewarding fields. Robotic engineers’ salary typically depends upon their qualifications, experience, location and organization for which they are working. Robotics engineers working in abroad gets lucrative salary package. In India, as a Robotics Engineer you can easily get an attractive salary package. More experience will help you to earn more in this field. Working location, experience and education factors have also impact on the salary packages.

Award and Recognition:
- Several projects selected in: INTEL Higher education Challenge, 2017 (http://www.icce.in/result.php) and received instruments worth of $400 from INTEL for developing prototypes.
- Several projects selected in last two consecutive years in ‘India Innovation Challenge Design Contest’ (IICDC-2017 & 18), organized by DST, Govt. Of India, TI and IIM, Bangalore. Selected under top 1106 project ideas from 965 engineering colleges across the nation and participation from 15,380 students.
- Received instruments worth of $800 from Texas Instruments (TI) for developing prototypes.
Why Career in Mechanical Engineering is Stable & Inevitable?

It was the Bronze Age, the revolutionary invention was the WHEEL. Through the passage of time wheel instituted the Industrial Age that began around 1760. The socio-economic structure was changed dramatically around the world. Handmade production was replaced by Machine that raised the Factory System. In the next consecutive ages, the civilization has been changed rapidly with the advancement of technology. The knowledge of electronics is being implemented in traditional machines or many fields. No doubt we are now at Electronics Age. Industry is the production of goods or related services within an economy. One of the fastest growing industries in India is Automotive Industry. After China, United States, Japan, and Germany, India is the 5th largest vehicle manufacturer in the world and likely to contribute over 12% to the country's GDP over the next decade.

The demand of automotive has increased because of rise in middle class income and young population. India is expected to become a leader in shared mobility by 2030, providing opportunities for electric and autonomous vehicle. Shifting focus towards electric cars can also provide opportunities in the sector. FDI inflow in the automobile sector stood 19.25 billion between April 2000 – June 2018. India also has a significant cost advantage that attracts investment in the sector. The government aims to develop India as a global manufacturer centre and to come up with reforms like GST to boost the growth in the sector.

The above scenarios predict a huge demand of graduate engineers in automotive sectors. Therefore, the new generation should be specialized in Automobile Manufacturing.

The blending of Electronics with the machines is called Mechatronics. Mechatronics are all around us. Not only the automotive systems, but from computer hard drives and robotic assembly systems to washing machines, coffee makers, and medical devices are the examples of Mechatronics.

How to become a Mechanical Engineer?

To take admission in 4 years degree course -
A student should have passed 12th standard with Physics, Maths, Chemistry / Computer Science with average minimum 60% marks in Board Exam. Students need to appear and clear 'online' / 'offline' admission tests (Aptitude & Technical) that conducted by The Neetia University. Also, students can take admission through WBJEE / JEE(Main) ranking and online counseling process if having requisite eligibility marks.

Lateral Entry in the 2nd year also possible for the students those have completed 3 years Engineering Diploma from an AICTE approved college / UGC approved University from the Mechanical Engineering (ME) / Automobile Engineering (AUE) stream.
Infrastructure at Campus:

- Material testing Lab
- Theoretical interpretation
- CAD Lab
- Dynamics of Machine Lab
- Fluid Mechanics Lab
- Refrigeration & Air Cond. Lab
- Heat & Mass Transfer Lab
- IC Engine Lab
- Workshop and Machine Tools
- Advanced Mfg. Lab
- Automobile lab
- Metrology & Measurement Lab
Industrial Training:
Industrial training is mandatory as per course curriculum in 3rd year. Some of the well-known organizations where the students are trained are given below:
- Mukesh Hyundai Training Academy
- Indian Oil Corporation Ltd., Haldia
- Tata Steel Co., Jamshedpur
- Diesel Loco Shed, Kharagpur
- O.N.G.C., Agartala
- Texmaco Rail Engineering Ltd., Kolkata
- Jayshree Toyota
- Tata Motors, Jamshedpur
- Gun and Shell Factory, Kolkata
- Eastern Railway Locomotive Works
- Bakreshwar Thermal Power Plants
- Calcutta Tramways Co. Ltd.

Career Prospects of Mechanical Engineering:
B.Tech. in Mechanical Engineering (Automobile Manufacturing)
- Automobile Manufacturing Sectors
- Construction and Materials Handling Equipment and Fabrication
- Design and Manufacture of Auto Parts, Hybrid engines, Electric Vehicle
- Steel Plants/Mining Sectors
- Design, Manufacture and Maintenance in Power Plants
- Refrigeration and Air-conditioning Industry

B.Tech. in Mechanical Engineering (Mechatronics)
- Industrial Automation
- Construction and Materials Handling Equipment and Fabrication
- Robotics
- Aerospace Industry
- Bio-medical System
- Oil and Gas Industry
- Computer Industry
- Electronics Industry

Project Works:
The project is the solution to a specific engineering problem and can be accompanied by computational and graphic materials, software products, working models, research materials, and other materials developed by the student over a period of two semesters (7th and 8th). Some of the project works are displayed below.

- Electro Discharge Machine
- 4-axes hydraulic excavator
- Pressure Vessel (Sheet metal work)
- Energy recovery from treadmill
- Energy recovery from Car braking
- Energy reservoir from cycling
Career as an Electrical Engineer:
Since last century, the progress of Electrical Engineering has been continuing unbounded till date of 21st Century and as a result of which various emerging fields of engineering have taken birth from Electrical Engineering – Energy. More precisely renewable energy is the outcome of the present century when environment pollution is concerned to whole world. The course structure of the Electrical Engineering is so inclusive that any student with electrical engineering degree feels comfortable to work in any field whether it is R & D of leading organizations, like BARC, ISRO, BHEL or Marketing of consumer / industrial products or Production / Marketing / installation / Maintenance of Industrial / Consumer Products. The Field is wide and challenging.

About Electrical Engineering:
Electrical engineering is a professional engineering discipline that generally deals with the study and application of electricity, electronics, electromagnetism and mathematics. The electrical engineering deals with devices or systems having intimate link with electricity. The voltage at which these devices/systems work, has reached at a level of ultra high voltage. The state-of-the-art technologies in the generation, transmission and distribution fields have made reliable, quality and economical power available at remote part of the country. Solar photovoltaic and wind energy generation units, as a big plant or as a small unit, like rooftop unit, have been possible to connect with the conventional grid for energy exchange. Digital technology is the backbone behind the unbelievable development of the 21st century in almost all fields. In the course curriculum of electrical engineering digital technology has been incorporated with high importance to open up students' job and research opportunities.

Electrical Engineering & The Neotia University:
The Neotia University has started B.Tech/M.Tech in Electrical Engineering in the year 2018. Adani Power Ltd, Ahmedabad, India, as a MoU partner for the course, will help develop and deliver the industry-oriented course curriculum and laboratory facilities. The company will hire the students who fulfill the company’s recruiting criteria. The Management of the Ambuja Neotia group has a mission to uplift the standard of the curriculum at par with any leading institute of India – formation of a strong and well-placed Alumni. The management is eager to groom the students through best available facilities of laboratories, library, updating syllabi, and dedicated faculties. The campus is green having different extra-curricular facilities. Furnished Hostel accommodation is available for intended students. The program of B.Tech in Electrical Engineering incorporates considerable components of science and many branches of engineering. The course curriculum matches with the requirements of modern industry/research areas and includes newly developed aspects of electrical engineering such as smart grid, computer based analysis, distributed energy resources (e.g. solar, wind, fuel cell, electric vehicle, hydrogen energy, storages), digital technology, reliability studies and artificial intelligence applications in control, protection etc.

To join in Electrical Engineering Curriculum:
To take admission in 4 years degree course -
A student should have passed 12th standard with Physics, Mathematics, Chemistry / Computer Science with average minimum 60% marks in Board Exam. Students need to appear and clear ‘online’ / ‘offline’ admission tests (Aptitude & Technical) that conducted by The Neotia University. Also, students can take admission through WBJEE / JEE (Main) raking and online counseling process if having requisite eligibility marks.
There is possibility for the students, who have completed 3 years Engineering Diploma from an AICTE approved college / UGC approved University in the Electrical Engineering (EE) / Electrical & Electronics Engineering (EEE) stream, to join in the 2nd year as Lateral Entry.
Academic Infrastructure:

A well-groomed engineering student must pass out from the institute with all exposures that make him / her ready to join industry or to pursue advanced study. Keeping these in mind the management of the TNU has catered the following academic infrastructure:

- Modern Classrooms (dust-free & digital facilities)
- Advanced Software Programmes
- Wide collection of Text & Reference Books (of reputed publishers), and National / International Journals

Conference Organized:

The Neotia University (TNU) has organized International Conference on "Energy Options for Tomorrow: Technology to Sustainability", from 17-19th April, 2017 at Eco Vista, New Town. Shri M. K. Narayanan, Former Governor of West Bengal, has inaugurated the conference. The conference was attended by more than 90 scholars, scientists and technocrats from Edinburgh, Dublin and almost all states of India. Nearly 20 academic institutes and 8 different industry representatives participated in the conference. During the conference, 20 lectures, panel discussions, 29 posters and 12 young researchers’ gave oral presentations. Springer Publishers gave four best Poster awards and one best overall paper presentation award, each award being 250 Euro in e-books published by Springer. The conference was supported by CSIR, Government of India, India Power Corporation Limited (as Gold Sponsors), Vikram Solar Private Limited, and Springer among others. During the conference large numbers of talks were delivered by scientists from Trinity College Dublin, The University of Edinburgh, IISc Bangalore, IITs, etc. In addition to this, top industry persons from India Power Corporation Limited, Adani Power Limited, Vikram Solar Private Limited, Emami Power, as well as, CSIR, MNRE and young scientists discussed relevant issues and most recent research work in this area.

Placement Facility:

TNU has a pro-active Training and Placement Cell with main focus on employability and the cell has a proven-track record.

Internship Details:

In the formative period, students need industrial exposure. In this context, Internship is an important opportunity to the students. It improves the credential of a student as a job applicant. Keeping this fact in mind, Industrial training is mandatory at TNU from 3rd year onwards. Name of a few well-known organizations, where the students are trained:

- Adani Power Ltd.
- Vikram Solar Pvt. Ltd.
- NHPC Ltd.
- Exide Industries Ltd.
Memorandum of Understanding (MoU) Signed:
- Savoie Mont Blanc University, France to promote academic exchange and cooperation
- Edinburgh Napier University, United Kingdom to promote collaborative projects
- Adani Power Limited, Ahmedabad, Gujarat to enable students in gaining the necessary practical knowledge of the field in being industry-ready and gain higher prospects for employability

Career Prospects:

It is already mentioned that The Electrical Engineering has wide career opportunities. Both UN Convention on Climate Change (COP 23 in Bonn, Germany in the year 2017) and India’s solar energy mission indicate that glorious opportunities of renewable energy as a career is at the door step. Now we all are to work hard to embrace these possibilities. The curriculum has been framed in such a way that it encompasses the whole gamut of Electrical Engineering along with specialized Power and Renewable energy fields. A few opportunities in Electrical Industry sectors in India are mentioned below:
- Traditional Electric Utilities: GENGCO, TRANSCO, DISCO, CESC, TATA Power, WBPDCIL, NTPC, Adani Power, Exide Industries etc
- Renewable Energy field: Vikram Solar, Suzlon Energy etc
- Steel Plants: TATA steel, SAIL etc; Cement plants: Petrochemical plants
- Electrical Equipment manufacturing companies: ABB, Schneider, Philips, BHEL etc

Graduates of the programme can choose to work as commissioning engineers, distribution engineers, QA/QC engineers, maintenance engineers, wind farm designers, solar energy systems engineers and innumerable other specialty engineers in the power industry.

Scope of Advanced Studies and Research:

Research in Electrical Engineering spans a diverse set of intellectual disciplines and applications. Since the scope is large, one may opt for higher studies and research work in this domain in India or abroad on:
- Physical Technology & Science: Integrated Circuits and Power Electronics; Biomedical Devices, Sensors and Systems; Energy Harvesting and Conversion.

Testimonials / Feedback of Students:

Avik Ghosh, 4th year student - I join at TNU as a school-leaving student and am, now, about to graduate as a professional. Here, I have not only developed my academic skills but also got a global exposure in various fields - be it cultural or others. During this brief study period, the university has helped me to complete industrial trainings in different companies i.e. Adani Power Ltd., Vikram Solar, NHPC etc. This nature friendly green campus helped me a lot in concentrating in my studies. At last I would like to thank all the faculty members for being supportive and helping me in taking off my career to a good start.

Sourik Pandey, 4th year student - I would describe the TNU (The Neota University) as exciting and dynamic. The best thing about being a student here is the number of additional opportunities that are available.

I realize that the TNU is certainly one of the best places to study Energy Engineering. To me, the campus gathers the optimal conditions to ensure students to succeed. The staff/students relationships are just amazing! From the first day, students are so close to the staffs (lecturers, researchers and administration) that it creates a familiar and friendly atmosphere, ideal to bring confidence, comfort and good working conditions to the students. The lecturers provide high-standard knowledge about every aspect of Renewables.

However, in spite of all these great studying aspects, for me, the greatest thing is the closeness with industries in the renewable sectors and the ease to get in touch with them. Thanks to that, I managed to do my project and industrial training in Adani power Ltd., Vikram Solar, NHPC, Chloride Power Systems and Solutions Ltd.
Why Career in Computer Science & Engineering (Cyber Security & Data Analytics) is so Popular & Demanding?

Cyber Security:
Once a specialty only associated with government agencies and defense contractors, cyber security has now entered the mainstream. Industries such as health care, finance, manufacturing and retail all hire cyber security professionals to protect valuable information from cyber breaches. The demand for specialists in the field is high. A report by job analytics firm Burning Glass Technologies found job postings for openings in cyber security have grown three times faster than those for IT job overall, and cyber security professionals are earning 9 percent more than their IT counterparts. Because of the frequency of cyber attacks, careers are varied and qualified professionals are in demand. But many cyber security professionals aren’t doing it for the paycheck alone. It’s a role that comes with an incredible amount of responsibility and brings immense value to an organization. Moreover, there are lots of opportunities in government agencies and defense/aerospace firms for cyber security professionals. Also financial services - think industries with classified or private data. However, all kinds of companies are looking for cyber security professionals nowadays.
In fact, according to Forbes.com, the cyber security industry will grow from $75 billion in 2015 to an estimated $170 billion by 2020.

Data Analytics:
The data analytics path will lead you to become an expert in data science. A data science expert is someone who can analyze huge amounts of unstructured and structured data using advanced tools and machine learning algorithms to solve real world business problems. Your aim should be to get an entry level data analytics job.
Here’s how you can beef up on basic data analyst skills:
- Learn Hypothesis generation and analysis through plots, graphs, and reasoning
- Get up to speed with statistical reasoning concepts such as causality and probability theory.
- Data science is also about products, learn how to leverage data to figure out product features, enhancements
- Data munging is the art of cleaning data. It is a time consuming job and entails dealing with missing data and changing schema. Before diving into large datasets, explore cleaning data

Understanding the business domain one wishes to work in. The data analysis problems are solved according to the business needs, hence domain understanding is a must.
How to become a Computer Science & Engineer (Cyber Security / Data Analytics)?

To take admission in 4 years degree course:
A student should have passed 12th standard with Physics, Maths, Chemistry / Computer Science with average minimum 60% marks in Board Exam. Students need to appear and clear ‘online’ / ‘offline’ admission tests (Aptitude & Technical) that conducted by The Neotia University. Also, students can take admission through WB-JEE / JEE(Main) raking and online counseling process if having requisite eligibility marks.
Lateral Entry in the 2nd year also possible for the students those have completed 3 years Engineering Diploma from an AICTE approved college / UGC approved University from the Computer Science (CS) / Information Technology (IT) stream.

Facility for the Cyber Security and Data Analytics

- To make the student industry ready, the courses syllabus have been designed with the help of leading companies, to accommodate the recent trend in the industry.
- These courses are being designed on the basis of not only the fulfillment of making the student industry ready, but also covering the syllabus of GATE exams.
- More than 5000 books in our library in the computer science categories.
- In our syllabus, there is an opportunity to do the internships for at least two times during their semester breaks that equip our students with industrial experience.
- They actually do two projects during their curriculum.
- Final semester is fully allocated for only doing the project. In that case, there is an opportunity to do the project in any research institute, ISRO, DRDO etc. or in companies based outside of West Bengal.
- It actually helps to build their future.
- Students have been encouraged to take the topics / paper from the NPTEL lecturer series. Their earned marks from there will be added in their marks sheet subject to the approval of the higher authority.

Initiatives have already taken from the department level

- Just completing his 4th semester, one of our students, named Afshan Abbar got internship in Hi-Q Solutions, Kolkata during last semester break.
- Encourage the student to do something new in practically hand on. One of our students, name Arindam Halder had already hacked the website of NITMAS, that was communicated to our Principal, NITMAS.
- Not only that, Arindam Halder had already hacked a website of Pakistan.
- We did an industrial visit to the ISRO, Kolkata with our students. Through it, one of our students had already done for sending the student to their campus for doing the final year major project, which is actually enrich CV of our students.
- We are also trying to put our student in the right track in research. After completion of their 2nd year, our two students have already published two research papers in peer-reviewed International journals.
  - Afsan Abbar, Pranam Paul; "Development of Application to Recognize Handwritten Digit at runtime": Accepted and Published in "International Journal of Innovative Research in Computer and Communication Engineering (IJIRCCE)"; Impact Factor: 7.194; ISSN No: 2320-9801 (Online), 2320-9798 (Print); Vol. 6, Issue: 11, November 2018; pp: 9001 – 9008.
  - Arindam Halder, Pranam Paul; "An Approach of Solutions for a Vulnerable Website through Penetration Testing": Paper ID: JETIR1812704; Registration ID: JETIR193699; Accepted and Publication in UGC Recognized Journal "International Journal of Innovative Research in Emerging Technologies and Innovative Research (JETIR)"; Impact Factor: 5.87; ISSN No.: 2349-5162; Volume 5, Issue 12; Published on Dec 2018; pp: 18 – 29.
- We are in the process of finalizing to build MoU with one more Delhi based company.
- We are continuing with very preliminary discussion with Cyber Cell of CID as well as Kolkata Police.
Some Important Note on Cyber Security

- 75% of organizations say that they believe their security risk increased significantly in 2018. (Ponemon Institute, USA)
- By 2020, the number of passwords used by humans and machines worldwide is estimated to grow to 300 billion. (SC Media)
- 43 percent of cyber attacks are aimed at small businesses. (Small Business Trends)
- 230,000 new malware samples are produced every day – and this is predicted to only keep growing. (Panda Security)
- 90% of hackers cover their tracks by using encryption. (Venson Bourne)
- It takes most companies over six months, or around 197 days to detect a data breach. (ZD Net)
- Windows is the most targeted platform by hackers; Android is number two. (Computer World)
- There were over 3 million crypto jacking hits between January and May 2018. (Quick Heal)
- The number of mobile crypto jacking malware variants grew from 8 variants in 2017 to 25 variants by May 2018 – making a 3x increase. (Quick Heal)

Some Important Note on Data Analytics

- IBM predicts demand for data scientists will soar 28% by 2020
- Machine learning engr, data scientist, Big Data engr. rank among the fastest growing jobs #LinkedIn.
- Now, virtually every industry, from retail to manufacturing, is collecting data on their customers. That’s causing a surge of demand for data scientists who can best interpret all that data
- 59% of all data science and analytics (DSA) job demand is in finance and insurance, professional services, and IT.
- By 2020, the number of jobs for all US data professionals will increase by 364,000 openings to 2,720,000 according to IBM.
- Data science and analytics (DSA) jobs remain open an average of 45 days, five days longer than the market average.
- The job trend graph for Big Data Analytics, from Indeed.com, proves that there is a growing trend for it and as a result there is a steady increase in the number of job opportunities.

**Internship Detail and Testimonial of Computer Science & Engineering Students is required.**
### Scholarships & Financial Aid

<table>
<thead>
<tr>
<th>SL. NO.</th>
<th>Types of Scholarship</th>
<th>H.S Marks or JEE Rank</th>
<th>Financial Condition</th>
<th>Sports Championship</th>
<th>Cultural Participation</th>
<th>% of Scholarship on Tuition Fee</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Tejasvi Scholarship</td>
<td>91 - 95% (JEE Main within 30000)</td>
<td>- do -</td>
<td>- do -</td>
<td>- do -</td>
<td>75%</td>
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<tr>
<td>2</td>
<td>Sports Scholarship</td>
<td>86 - 90% (JEE Main within 10000)</td>
<td>- do -</td>
<td>- do -</td>
<td>- do -</td>
<td>50%</td>
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<tr>
<td>3</td>
<td>Cultural Scholarship</td>
<td>81 - 85% (JEE Main within 75000)</td>
<td>- do -</td>
<td>- do -</td>
<td>- do -</td>
<td>25%</td>
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<tr>
<td>4</td>
<td>Sarvodaya Scholarship (in the memory of Late Suresh Kumar Neotia)</td>
<td>91% Any Board/University</td>
<td>Yearly Family Income below 2.5 Lakhs **</td>
<td>- do -</td>
<td>N.A.</td>
<td>100%</td>
</tr>
<tr>
<td>5</td>
<td>Mere Apne Scholarship (For Ambuja Neotia Group employees, in the memory of Late Vinod Kumar Neotia)</td>
<td>86 - 90%</td>
<td>Yearly Family Income below 2.5 Lakhs **</td>
<td>- do -</td>
<td>- do -</td>
<td>75%</td>
</tr>
<tr>
<td>6</td>
<td>Sahodarya Scholarship (Siblings of all students - present or passed out)</td>
<td>81 - 85%</td>
<td>Yearly Family Income more than 5 Lakhs **</td>
<td>- do -</td>
<td>- do -</td>
<td>25%</td>
</tr>
<tr>
<td>7</td>
<td>Gramothan Scholarship (Students from Gram Panchayat area of South 24 Parganas)</td>
<td>71%</td>
<td>- do -</td>
<td>- do -</td>
<td>50%</td>
<td></td>
</tr>
</tbody>
</table>

We believe that no student should be stopped from pursuing their passion or achieving their full potential because of financial difficulty. At TNU, we offer numerous merit-based as well as need-based scholarships to ensure that no student is left behind. In addition, the University has arrangement with SBI and Syndicate Bank to provide Educational Loans to the students.

**Notes**

*For more details visit [www.tnu.in](http://www.tnu.in)*

**Note:** Scholarship for International Students is Separate
Legend - Building

A. Utility & Services
   1. Main Gate/ Securityroom
   1a. ATM
   6. Panel Room
   16. Central Store
   19. Electrical Room

B. Administrative
   2. Administrative Block

C. Institutional
   3. Scholastic Building-I
   4. Scholastic Building-III
   5. Scholastic Building-II
   7. Workshop
   8. Ship Building
   9. BNS Scholastic Building

D. Residential
   10. Boys Hostel-II
   11. Girls Hostel-III
   12. Boys Hostel-IV
   13. Boys Hostel-VI
   15. Staff Quarter
   17. Canteen Block
   22. Director’s Residence
   23. Basketball Court
   24. Badminton Court
   25. Football Ground

E. Recreational
   20. Multipurpose Hall
   21. Swimming Pool

Campus: Jhinga, Sarisa, D.H. Road, 24 Pgs (South) West Bengal - 743 368
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