नागालैण्ड विश्वविद्यालय

NAGALAND UNIVERSITY

(संसद द्वारा पारित अधिनियम 1989, क्रमांक 35 के अंतर्गत स्थापित केंद्रीय विश्वविद्यालय)
(A Central University established by an Act of Parliament No.35 of 1989)

SCHOOL OF ENGINEERING & TECHNOLOGY
DC COURT JUNCTION, DIMAPUR-797112

PROSPECTUS
FOR ACADEMIC SESSION 2022-23

B. Tech and Ph.D

CONTENTS

Nagaland University is a Central University established on 6th September 1994 by an Act of the Parliament No. 35 of 1989. The University has its Headquaters at Lumami in Zunheboto district, Nagaland while its campuses are situated at Meriema, Medziphema and Dimapur. The School of Engineering & Technology (SET), Nagaland University is currently located at Dimapur, the commercial hub of Nagaland. The School offers B.Tech. degree programme in five steams of Engineering & Technology, viz. Information Technology, Computer Science & Engineering, Biotechnology and Agricultural Engineering Technology.

B.Tech. degree programmes are usually application and skill-oriented courses. Their prime focus is on making the students understand the technology behind the working of gadgets and modify or enhance their working quality with emphasis on practical side of the curriculum. The University recognizes that with the evolution of technological advancement, new skills will be required in order to compete in the market. Our key priority is to make the students industry-ready by assessing their competencies and aligning them to what is needed by the industry. This can be achieved by bringing research and innovation in the core of education and making it affordable. Industrial visits and internships are also integral part of the course at SET.

SET, Dimapur has a qualified team of faculty dedicated to train and sharpen the innovative skills of its students in meeting the requirements of the modern world which is immensely dependent on technology. The University, through the Dean of the School assisted by his administrative team, provides all necessary support to the students in pursuing their academic development. The School has adequate infrastructure including modern classrooms, library, computer lab, practical and research laboratories with modern equipment, separate hostels for girls and boys, canteen, etc. It is gratifying to see many students passing out from the School of Engineering & Technology getting suitable placements within and outside India.

I am happy to welcome all aspiring students seeking a bright academic career in Engineering & Technology under Nagaland University.

(PROF. PARDESHI LAL)
VICE CHANCELLOR
NAGALAND UNIVERSITY

MESSAGE FROM THE DESK OF DEAN

It is my great privilege to introduce the School of Engineering and Technology, a constituent school of the Nagaland University which is one of the Central Universities of the Country. The school was established in 2007 with a mission to bridge the gap between education, research and industries. The school attracts students from various parts of the country. The school has a strong team of young and dynamic faculties who are committed and dedicated for cause of students for their excellence in the field of Engineering and Technology. Many of our students qualified GATE, ICAR, CSIR-UGC etc. examination and pursued higher studies in many reputed institutions like IISc, IITs, NITs, AIIMS etc.. Some of the students are holding reputed jobs in government and non-government sectors too.

Out of five departments of the school three departments, namely Agricultural Engineering and Technology, Biotechnology, and Information Technology offer both B.Tech and Ph.D degree. Other two departments, Electronics and Communications Engineering, and Computer Science and Engineering offer only B.Tech degree. The school has a central library where student can explore different books and journals. The school also has conference hall for organizing and conducting various workshop and conferences especially for the students. The Academic environment is well connected with internet facility both LAN and Wi-fi. Besides, for the development of personality of students, various co-curriculum activities like sports, cultural and Technical Festivals are practiced throughout the year. There are three boy hostels and three girl hostels and are being provided with bus service for transportation.

I welcome all the aspiring students and wish a meaningful stay for shaping a bright future through School of Engineering and Technology.

(Prof. V.K. Vidyarthi)
Dean, SET
Nagaland University

SET OFFICIALS AND IN-CHARGES

Vice Chancellor:

PROF. PARDESHI LAL

Dean:

PROF. V. K. VIDYARTHI

Assistant Registrar:

MRS. LULENPOKLA

I/C Academic & Examinations:

MR. SHANCHAMO YANTHAN

I/C Student Welfare:

DR. IMLITOSHI JAMIR

I/C Dept. of Agricultural Engineering and Technology

DR.CHITRASEN LAIRENJAM

I/C Dept. of Biotechnology

DR. RAJKRISHNA MONDAL

I/C Dept. of Computer Science and Engineering

MR.CHENLEP YAKHA KONYAK

I/C Dept. of Electronics and Communication Engineering

MRS. AYANGLA JAMIR

I/C Dept. of Information Technology

MR. SUDIPTA PATOWARY

I/C Common Pool

DR.HANUMANT SINGH RATHORE

I/C Training & Placement

MR. RAMESH SINGH

Warden, Girl's Hostel

MRS. IMESANGLA AO

Warden Boys's Hostel

MR. AKANGJUNGSHI LONGKUMER

System Administrator

MR. ANTHONY VISA

Library Professional Assistant

MR. JEVITO SHOHE

I/C Sports & Game

DR. H. ROHEN SINGH

1. THE UNIVERSITY

The Nagaland University is a Central University established by an act of parliament in 1989. It came into being on 6th September, 1994. The objective of the University is to disseminate knowledge by providing infrastructural and research facilities in such branches of learning as in Humanities, Natural & Physical Science, Social Science, Agricultural Science, Engineering & Technology and Management. The University has departments located in its campuses in Lumami, Kohima, Medziphema and Dimapur.

2. THE SCHOOL

School of Engineering & Technology was inaugurated on 29th October, 2007 by the then Governor of Nagaland (Chief Guest) His Excellency Shri K. Sankaranarayanan and the then Hon'ble Chief Minister of Nagaland (Guest of Honor) Shri Neiphiu Rio. It is the first institution of Engineering in the State of Nagaland with state-of-the-art infrastructure. The academic building is located at D.C. Court Junction, Dimapur. The School is housed in a single four storied building with a carpet area of 35500 sq.ft. The Administrative Block is situated at Landmark Colony, Dimapur which is a walking distance from the Academic Complex.

The school offers B.Tech and Ph.D degree programme in following departments.

Department	Offered Degree	Intake/Vacancy
Agricultural Engineering & Technology	B.Tech	30
	Ph.D	5
Biotechnology	B.Tech	30
	Ph.D	4
Computer Science & Engineering	B.Tech	30
Electronics & Communication Engineering	B.Tech	30
Information Technology	B.Tech	30
	Ph.D	4

The Campus is well connected by train, air service as well as road transportation. The Campus is networked with all the other campuses of Nagaland University. The School (University) has a Residential Complex which houses staffs and students, has sports and recreational facility and a furnished Guest House. Hostel facility is provided for both boys and girls with regular bus service.

3. INFRASTRUCTURE AND FACILITIES

3.1 STUDENTS AMENTIES AND ACTIVITIES
3.1.1 HOSTEL
The School provides limited Hostel facilities for the students. There are three boys and three girl's hostels accommodating them on a twin-sharing basis. All hostellers have to abide by the rules and regulations of the hostel.

3.1.2 SCHOOL MAGAZINE
The School publishes School magazine annually to encourage creativity of the students.

3.1.3 CAREER COUNSELLING AND PLACEMENT
The career counselling and placement cell guide the students regarding their future academic and employment career. Training and Placement in-charge updates the students regarding any placement activities from time to time.

3.1.4 GAMES AND SPORTS
Facilities like Table Tennis, Carom, Cricket, Chess games and Gym are available to the students residing in the Hostel..

3.1.5 STUDENT'S ACTIVITIES
The student organizes various activities from time to time in the campus.

3.1.6 INTERNET FACILITY
TThe Academic Complex is connected to the internet with 100 mbps broadband connection from NKN (National

Knowledge Network).

3.1.7 LIBRARY
The Library has collection of latest Textbooks, Reference books, Journals on different streams of Science, Engineering and Technology. The Library has a study room where the students can interact with each other. In addition to this, the University has e-library (INFLIBNET programme already accessible) which provides access to numerous books, National and International Journals on-line.

4. ACADEMIC PROGRAMMES

The School offers 4 years (Eight semesters) academic programmes approved by AICTE/University leading to B.Tech. degrees on successful completion of the course. The School adopts a teaching pattern of course credit system in semesters. One academic year is divided into two semesters comprising approximately 20 -weeks per semester. Major emphasis is laid on practical & industrial training. Three departments, namely Agricultural Engineering and Technology, Biotechnology, and Information Technology also offer Ph.D degree.

5. ELIGIBILITY CRITERIA FOR ADMISSION

5.1 FRESH ENTRY (AFTER 10+2)
The candidates seeking admission to any Discipline of Technology should secure in aggregate the minimum of 50% marks for General Category and 45% marks in case of SC/ST Category. Students should have passed Physics, Chemistry and Mathematics in their 10+2 Examination. Students opting for Biotechnology programme should have passed Physics, Chemistry Mathematics and Biology in their 10+2 Examination.

5.2 LATERAL ENTRY (AFTER DIPLOMA/B.SC)
The candidates seeking admission through lateral entry to any Discipline of Technology should secure in aggregate the minimum of 50% marks for General Category and 45% marks in case of SC/ST Category along with the criteria give below.

1. *Passed Diploma examination from an AICTE approved institution; with at least 50% marks (45% in case of candidates belonging to reserved category) in appropriate branch of Engineering/ Technology.*

2. *Passed B.Sc. degree from a recognized University as defined by UGC, with at least 50% marks (45% in case of candidates belonging to reserved category) and passed XII standard with mathematics as a subject.*

3. *Provided that in case of students belonging to B.Sc. stream shall clear the subjects of Engineering graphics/ Engineering Drawing and Engineering Mechanics of the first year engineering program along with the second year subjects.*

4. *Provided further that, the students belonging to B.Sc. stream shall be considered only after filling the supernumerary seats in this category with students belonging to the diploma stream.*

5. *Provided further that students, who have passed Diploma in Engineering & Technology from a university approved institution or B.Sc. degree from a recognized University defined by UGC, shall also be eligible for admission to the first year engineering degree courses subject to vacancies in the first year class in as the vacancies at lateral entry are exhausted. However, the admission shall be based strictly on the eligibility criteria as mentioned in 1, 2, 3 and 4 above*

5.3 PH.D
1. *Masters in Engineering/ Technology/ Science in relevant discipline with minimum 55% marks in aggregate or equivalent CGPA recognized by AICTE/UGC. A relaxation of 5% marks or an equivalent relaxation of grade may be allowed for those belonging to SC/ST/OBC(non-creamylayer)/ differently-abled and other categories of candidates.*

6. ALLOCATION OF SEATS

6.1 B.TECH FRESH ENTRY 10 + 2
The total number of seats in each discipline is 30. Seat allocation for each discipline for different states and other quota is given below.

2.	*Nagaland*	*6*
3.	*Arunachal Pradesh*	*1*
4.	*Meghalaya*	*1*
5.	*Mizoram*	*1*
6.	*Tripura*	*1*
7.	*Sikkim*	*1*
8.	*Assam*	*1*
9.	*Manipur*	*1*
10.	*Physically Challenged**	*1*
11.	*University Quota*	*1*
12.	*Jammu & Kashmir*	*1*
13.	*All India Open Category*	*14*

6.2 B.TECH LATERAL ENTRY
Diploma holders and BSc degree holders shall be eligible for admission to second year Engineering course(s) upto a maximum of 10% of approved intake which shall be over above supernumerary to the "Approved intake" plus the unfilled vacancies of 1st year.
* Unfilled seats will be added to All India Open Category.

6.3 PH.D

Sl. No.	Department	Vacancy
1	Agricultural Engineering & Technology	5
2	Biotechnology	4
3	Information Technology	4

7. SELECTION AND ADMISSION

SELECTION FOR ADMISSION INTO BTECH PROGRAM UNDER VARIOUS QUOTAS IS DONE AS MENTIONED BELOW:

7.1 ALL INDIA OPEN CATEGORY
- *Aggregate of compulsory subjects along with Physics, Chemistry, Mathematics, Biology for Biotechnology.*
- *Aggregate of compulsory subjects along with Physics, Chemistry, Mathematics for other departments.*
- *The merit list shall be prepared by considering 70% of 12th standard and 30% of JEE main/advanced score for fresh entry.*
- *Selection will be based on marks obtained in diploma examination for Lateral entry.*

7.2 UNIVERSITY QUOTA
The University quota shall be taken care as per rules.

7.3 STATE QUOTA
Selection for admission under State quota is done by respective State Governments. On receipt of the list of nominated Candidates from respective Government, admission formalities are completed by the School as per eligibility criteria.

7.4 LATERAL ENTRY
Selected for admission under lateral entry will be as per marks obtained in Diploma/B.Sc.

SELECTION FOR ADMISSION INTO PH.D PROGRAM IS DONE AS MENTIONED BELOW:

7.5 PH.D

1. An Entrance Test of 70 Marks shall be conducted by the Department. A candidate must obtain 50% marks in the entrance test to qualify for interview.
2. A personal interview of 30 Marks shall be conducted for final Selection.
3. A student having UGC-NET (including JRF)/ UGC-CSIR NET (including JRF)/ICAR-NET/ GATE/ other relevant exams will be exempted from the entrance test and will be eligible for direct interview. The marks obtained in the personal interview will be extrapolated to 100 for preparing merit list for such candidates.

7.6 FEES STRUCTURE FOR B.TECH PROGRAMME UNDER SET

Fees to be paid at the time of admission/renewal of admission

SL. No	FEES	AMOUNT (₹)(1st Semester)	AMOUNT (₹) (Subsequent Semester)
1	Admission fee	1160/-	-
2	Registration fee	440/-	-
3	Tuition fee	7700/-	7700/-
4	Laboratory fee (as applicable)	1160/-	1160/-
5	Library fee	360/-	360/-
6	Library caution Money (Refundable)	550/-	-
7	Sports fee	70/-	70/-
8	Medical fee	130/-	130/-
9	Examination fee	900/-	900/-
10	Students' activity fee	360/-	360/-
11	Annual Magazine fee	130/-	130/-
12	Students' Aid fund	240/-	-
13	Workshop/Seminar/Conference fee	930/-	-
14	Industrial interface & Technical Fest	550/-	550/-
15	Placement Activities	1650/-	
16	Internet fee	130/-	130/-
17	Department Caution Money (Refundable)	1740/-	-
18	University Development Fund	110/-	-
	Sub Total	18,310/-	11,490/-
FOR HOSTELLERS			
19	Hostel Admission	220/-	
20	Hostel fee	3300/-	3300/-
21	Hostel Caution Money (Refundable)	1740/-	-
	Sub Total	5260/-	3300/-

OTHERS		
1	Identity Card/Duplicate ID Card	110 per Card
2	Repeat of examination	300 per Paper
3	**Late fine** Beyond 7 days of starting of course (For 2nd Semester and Subsequent Semester)	110 per Day

FEES STRUCTURE FOR Ph.D PROGRAMME UNDER SET
Fees to be paid at the time of admission/renewal of admission

SL. No	FEES	AMOUNT (₹)(1st Semester)	AMOUNT (₹) (Subsequent Semester)
1	Admission fee	1160/-	-
2	Registration fee	440/-	-
3	Tuition fee	2900/-	2900/-
4	Laboratory fee	2310/-	2310/-
5	Library fee	410/-	410/-
6	Library caution Money (Refundable)	1390/-	-
7	Sports fee	70/-	70/-
8	Medical fee	130/-	130/-
9	Examination fee	2080/-	-
10	Coursework Fee	1160/-	-
11	Dissertation/Thesis Evaluation Fee	13200-	-
12	Students Aid fund	240/-	240/-
13	Department Caution Money (Refundable)	1740/-	-
14	University development fund	110/-	-
	Sub Total	27340/-	6060/-
FOR HOSTELLERS			
15	Hostel Admission	220/-	
16	Hostel fee	3300/-	3300/-
17	Hostel Caution Money (Refundable)	1740/-	-
	Sub Total	5260/-	3300/-

TRANSPORTATION CHARGES
Transportation (those availing University bus facility) - ₹660/- per Semester.

OTHERS		
1	Identity Card/Duplicate ID Card	110 per Card
2	Repeat of examination	300 per Paper
3	**Late fine** *Beyond 7 days of starting of course* *(For 2nd Semester and Subsequent Semester)*	110 per Day

- *Students who desire to withdraw his/her name from the roll of the University and claim any refund then the fees shall be dealt with as per the University /UGC/MHRD/AICTE/ICAR/NCTE guidelines.*
- *Hostel Fee does not include Mess Fee.*
- *The fee structures are subject to change from time to time.*
- *Fees should be deposited using Online State Bank I-Collect using Debit/Credit Card/Net-banking/SBI Power Jyoti. The receipt can be generated from the same portal.*

7.6 REGISTRATION IN VARIOUS COURSES
Candidate has to take admission by payment of prescribed fees immediately after selection. In case of failure to pay fees at the time of admission, the seat allotted to the candidate(s) will stand forfeited.
Physical presence of the candidates is mandatory for registration. Every student has to fill up prescribed course registration forms (3 copies).

7.7 EXAMINATION AND EVALUATION FOR B.TECH

Semester system with internal evaluation comprises of continuous assessments, Mid-term exam, internal assessment and End - Term Theory & Practical Examinations. The performance of a student in a particular course is evaluated and expressed in a10 points grading scale which are converted to letter grade as stated below:

Marks obtain	Equivalent Letter Grade	Credit Points
91 to 100	*O*	*10*
81 to 90	*A*	*9*
71 to 80	*B*	*8*
61 to 70	*C*	*7*
51 to 60	*D*	*6*
45 to 50	*E*	*5*
Below 45	*F*	*0*

CGPA	CLASS
8.0 and Above	*First Class with Distinction*
6.5 to 7.9	*First Class*
5.5 to 6.4	*Second Class*
5.0 to 5.4	*Pass*
Below 5.0	*Failed*

The final performance of a Student on completion of the B. Tech. Course will depend on the Cumulative Grade Point Average (CGPA).

* To be Eligible for appearing in the End term Examination, 75% attendance is mandatory in all Course .

8. ACADEMIC REGULATION

8.1 CHANGE OF BRANCH/ DISCIPLINE

Normally, a student admitted to a particular branch/ discipline of the undergraduate programme shall continue studying in that discipline till completion.However, in special cases the School may permit a student to change from one discipline of studies to another after the first two semesters.Such changes shall be permitted, in accordance with the provisions laid down hereinafter, from a B. Tech. programme in any discipline to a B. Tech programme in any other discipline.Only those students shall be eligible for consideration of a change of discipline after the second semester, who have completed all the common credits required in the first two semesters of their studies, in their first attempt.

Applications for a change of discipline must be made by intending eligible students in the prescribed form. The Academic Section shall call for applications in the beginning of the odd semester of each academic year and the completed forms must be submitted by the last date specified in the notification. Students may enlist up to three choices of discipline, in order of preference, to which they wish to change over. It shall not be permissible to alter the choice after the application had been submitted.

Change of discipline shall be made strictly in order of merit of the applicants. For this purpose, the student must have a CGPA of atleast 7.5 obtained at the end of the second semester. In case of a tie the JEE (MAIN) Score of the applicants shall be considered. In the absence of JEE (MAINS) score, the department may devise its own strategy to select the candidates. The applicants may be allowed a change in discipline, strictly in order of merit, subject to the limitation that the strength of a branch should not fall below the existing strength by more than ten percent and should not go above the sanctioned strength by more than ten percent.

All changes of discipline made in accordance with the above rules shall be effective from the third semester of the applications concerned. No change of discipline shall be permitted after this.Allchanges of discipline shall be final

and binding on the applicants. No student shall be permitted, under any circumstances, to refuse the change of discipline offered

8.2 ATTENDANCE OF STUDENTS

Attendance in all classes (lectures, tutorials, laboratories, practical, studio, workshops etc) must be at least 75 percent of the total classes. A student shall be debarred from appearing in the End-Term Examination if Her/His attendance falls below 75 percent and shall be awarded an F Grade in that course.

The Dean may, on the recommendation of the Advisor/ Course In-charge, condone any attendance up to 5 per cent in a course(s) in exceptional circumstances as given below (in a and b) and shall allow the student with an attendance of 75 per cent or more to appear at the end term examination. No condonation under any circumstances shall be granted to those having below 75 per cent of attendance in a course(s).

a. Authorized absence under official directives

The Dean of the School, on the recommendation of the concerned Head/ In-charge, may permit a student to represent the University/ School in the inter-University or at the National level/ Regional level curricular and co-curricular activities. The period for which the student is deputed for the above shall be treated as leave. The Head/ In-charge of the Department, Academic cell/In-charge Student Welfare as well as the student concerned shall, however, ensure that Her/His attendance does not fall short of the minimum fixed vide section 7.1. The Dean shall notify the name(s) of such student (s) to the Head/ In-charge of the Department for conveying the information to the teacher(s)/Instructor(s) concerned for the record. The Head/ In-charge of the Department, Academic Cell, shall convey the same to the Advisor of the student(s).

b. Serious illness

If a student is unable to attend classes owing to serious illness, the student concerned/guardian shall submit an application along with a medical certificate from the University Medical Officer stating clearly the period for which the student was advised for treatment and rest along with recommendation of the hostel warden within 3 days from the date of reporting to the Dean. Such application shall be addressed to the Dean, who may grant leave for the days of absence.

It shall be the responsibility of the student to intimate the Warden of the hostel in which She/He is residing, and the concerned instructors regarding Her/His absence before availing the leave.

8.3 CONDUCT AND DISCIPLINE

Students shall conduct themselves within and outside the precincts of the School in a manner befitting the students of an institution of national importance. Ragging in any form is banned: acts of ragging shall be considered as gross indiscipline and shall be severely dealt with.The following acts of omission and/or commission shall constitute gross violation of the code of conduct and are liable to invoke disciplinary measures by the Student Disciplinary Action Committee.

a. Ragging

b. Lack of courtesy and decorum; indecent behavior anywhere within or outside the campus.

c. Willful damage or stealthy removal of any property/belongings of the School/Hostel or of fellow students.

d. Stealing, Gambling, Possession, consumption or distribution of alcoholic drinks or any kind of hallucinogenic drugs.

e. Immoral activities.

f. Mutilation or unauthorized possession of library books.

g. Noisy and unseemly behavior, disturbing studies of fellow students.

h. Hacking in computer systems (such as entering other person's area without prior permission, manipulation and/ or damage of computer hardware and software etc.)

i. Use of University/School premises for any purposes other than that for which it meant without the permission of the authority concerned.

j. Breach of the University rules and regulations.

k. Any other cause/act which may lower the prestige of the University/School.

l. Organizing meeting by students inside the campus or calling the outsider to organize meeting inside the hostel campus without permission.

m. *Violation of hostel discipline.*

n. *Any other act of gross indiscipline.*

Commensurate with the gravity of the offence, the punishment may be reprimand, fine, expulsion from the hostel, debarment from and examination, rustication for a specified period or even outright expulsion from the school.

8.4 HOSTEL RULES AND REGULATIONS

These Rules applies to all the students who are staying in the hostel of the School of Engineering &Technology, Nagaland University.

Rooms

a) **Admission and Allotment:** *Students who seek admission to the hostel have to apply separately in the Hostel Registration/ admission Form which can be obtained from the Administrative office. Room allocations shall be done during the Hostel admission.*

b) **Room Changes**

   i) *Room allotments are normally valid for the entire academic year.*

   ii) *Students must occupy only those rooms specifically allotted to them.*

   iii) *Students must not shift/ move to another room without the permission of the warden. If a room change is desired, a written request may be given to the Warden with proper justification. Approval of room change is the sole discretion of the Warden.*

c) **Taking care of own room**

   i) *Hostel rooms are equipped with furniture and fittings of appliances. Student occupying the room shall sign for the receipt of items in Register. Students shall be responsible to hand over the items in their original serviceable condition to hostel authorities while leaving the rooms on closure of the academic session.*

   ii) *No furniture must be removed from respective rooms. Removal of furniture or furnishings shall invite disciplinary action. All university furniture must be in the room and in proper condition when a student move out of the room.*

   iii) *Any damage to hostel property shall be replaced by recovering the cost of repair from the individual concerned. If the damaged item is irreparable, the actual cost of the property shall be realized from the individual concerned. In cases where responsibility for such acts cannot be determined, a common fine shall be imposed on all the occupants of the room/ hostel.*

d) **Repairing works:** *The hostel warden shall assist the students for repairs in the respective rooms. The Warden should be informed if there is any repair to be carried out in written form through the prefect.*

Personal Property

a) *Each student shall safeguard their belongings and shall be responsible for their personal property.*

b) *Wardens may ask the students to shift their belongings/ vacate the room for maintenance work/ during an emergency/ during vacation.*

c) *Use of equipment such as electric heaters, video systems, loud speakers, etc. is strictly prohibited inside the hostel rooms. Any defaulters, if found, shall be levied a fine of Rs. 200.00/- (Rupees Two Hundred Only) for first time offender and expulsion beyond that.*

Energy Conservation

Conservation of energy and resources is a major concern of the University.

a) *Lights and fans must be switched off at all times when no one is in the room.*

b) *Electrical problems in the room should be reported immediately to the Warden.*

c) *Water taps must be turned off when they are not in use.*

Cleanliness

a) *Hostellers shall be responsible for the cleanliness of their respective room and the premises. Rooms must be kept clean and tidy for health and safety reasons.*

b) *Students are advised not to leave any items like paper, covers of toilet soap, sanitary napkins etc. in the bathrooms. Any form of waste should not be flushed down the toilet and should be disposed properly.*

c) *Students should participate in mass social work from time to time as per the instruction laid down by the prefect or warden as initiative of Swaach Bharat. Hostellers not participating shall be levied a fine of Rs.100.00/- (Rupees One Hundred Only) per person.*

General Discipline

a) *Ragging is strictly Prohibited and anyone found guilty shall be punished as per rules and regulations laid down by the Supreme Court of India.*

b) *Students are not allowed to stay in the hostel during the class hours unless it is unavoidable due to illness or any other valid reason.*

c) *Students who wish to stay back in the hostel during semester break with proper justification should take prior permission from the warden.*

d) *If the student decides to leave the hostel they should inform the warden.*

e) *The hostellers are not permitted to stay out of the hostel beyond the closing time. A student requiring staying beyond the closing time must obtain proper authorization from Hostel Warden.*

f) *Prefects along with assistant prefect of the respective hostels shall take attendance at 8:00 PM everyday and submit the weekly attendance report to the warden every Monday.*

g) *Any Hostellers wishing to stay out for the night/ weekend should submit an application to the Warden for permission. For girls, consent of the Guardian/ Parents must be communicated to the concerned Warden. Such permission shall be given once in a month for a maximum period of two nights only, preferably during weekends. No student shall leave the hostel without prior permission of the hostel warden.*

h) *Any Hosteller staying out of Hostel without obtaining prior permission from the Warden shall be liable to disciplinary action and expulsion. The first offence of this nature, if supported by satisfactory explanation verified from the Parent/ Local guardian, may be considered after imposing a fine of Rs 200.00/- (Rupees Two Hundred Only). However, a repetition of the same offence shall result in expulsion.*

i) *In case a student requires hospitalization, His/ her parents/ guardian must be informed. Parents / guardian are required to communicate to the concerned Warden in this regard.*

j) *Students shall inform the warden for any extension of leave though verbal or written communication.*

k) *Students should refrain from any activity that is likely to infringe on the privacy of others or interfere with their studies.*

l) *The Warden/ Institute/ Hostel authorities shall conduct surprise checks periodically and if anyone is found violating the above rules, disciplinary action shall be taken against the defaulter. The hostel rooms are subject to inspection by the Institute/ Hostel authorities to make sure that they are kept neat and tidy. Unauthorized items like liquor, drugs, lethal weapons etc., are prohibited within the hostel premises.*

m) *Students are prohibited from consuming alcoholic drinks, drugs, cigarettes, tobacco products or any other intoxicants inside the hostel and are strictly prohibited from entering the hostel after consuming such items. Consumption of prohibited items shall be liable for strict disciplinary action, including expulsion/rustication from Hostel/ Institute.*

n) *No Parent/ Guardian/ Visitor of a student shall be allowed to stay in their room without permission from the warden. Visitors are allowed to visit students in their common rooms, except in the girl's hostel. No hosteller is allowed to permit any visitor of the opposite sex in their room. If any visitor of the opposite sex is found, they shall be expelled from the institution without any warning.*

o) *No party/ social gathering shall be allowed within the premises of the hostel unless prior permission is taken from the Warden/ Campus in charge.*

p) *Study hour shall be strictly maintained for the welfare of all the students in the hostel. Students shall not visit rooms of other students after 8:00 PM.*

q) *Students who are detained from the college are not entitled to stay in the hostel and hence shall not be granted Hostel admission. However, depending on the availability of seats, the warden may admit the detained students based on their performance after full payment of hostel admission fee.*

r) *A detained scholar under special circumstances may be permitted to stay in the hostel for a maximum period of 1 month during examination time based on the availability of seat. Permission shall be granted based on the recommendation from the department HOD and with the knowledge of the parents. Students can write an application for such stay to the Warden. They have to pay Mess Fee to the Mess in-charge on the basis of daily rate prevailing at the time of applying. During the stay in the hostel the student should strictly adhere to the rules and regulations of the hostel.*

Mess Rules

a) *The term of Prefect and assistant prefect shall be 1 year only.*

b) *The term for Mess manager and assistant mess manager shall be 3 months only.*

c) *The Prefect and Mess manager shall be entitled to 100% concession in mess fee for the extra responsibility they perform during their tenure.*

d) Every hosteller shall join the hostel mess. Meals/ food should not be cooked in the individual room. The timing of the mess shall be
  i) Morning: 7:00-8:30 A.M
  ii) Evening: 5:00-7:00 P.M.
e) All hostellers must pay the mess fees before 10th of every month. Defaulters shall be charged fine of Rs.50.00/- (Rupees Fifty Only) per day till 15th of the month. After the 15th day it shall be Rs.100.00/- (Rupees One Hundred Only) per day. Habitual offender shall be expelled from the hostel after recovering the due amount.
f) Audit of the mess account should be carried out at the end of every month. The audit committee shall consist of Prefect (convener), mess manager (Secretary) and one representative from every batch of students, the warden shall be part of the committee from time to time. The batch representative shall be rotated every month. The audit report should be submitted to the warden every month.
g) If a student is on leave from the hostel for continuously more than 10 days he/ she can apply for deduction in the mess fee. This rule shall apply only to those who take leave as per the procedure.

9. DEPARTMENTS

9.1. DEPARTMENT OF AGRICULTURAL ENGINEERING AND TECHNOLOGY.
  Department In-charge: Dr. Pramod Ch Dihingia
  E-mail: pramod@nagalanduniversity.ac.in
  The Department of Agricultural Engineering and Technology focuses and deals with the use of engineering tools and practices to solve the real world problem of crop production, handling and processing problems for food and fiber industry. "Everything else can wait but not Agriculture" with this famous motto, the department envisages to solve the problem with the application of scientific knowledge in diverse and multi-disciplinary activities for overall development of farming community and better livelihood.
  The Agricultural Engineering Department of the school came into existence in 2008. The department follows four years degree course as adopted by the school.

Core field of Agricultural Engineering and Technology
* *Soil and Water Engineering,*
* *Farm Power and Machinery Engineering*
* *Processing and Food Engineering*
* *Other interdisciplinary field.*

AIMS AND OBJECTIVES:
* *To provide scientific knowledge to increase agricultural production and productivity through better management of land and water resources*
* *To encourage the design and use of appropriate and more efficient agricultural machinery,*
* *To provide better techniques of post-harvest technology*
* *To design improved methods of processing and preservation of foods.*

LABORATORIES OF AGRICULTURAL ENGINEERING AND TECHNOLOGY
* *Agricultural Engineering Computing Lab*
* *Land and Water Engineering and Management Lab*
* *Farm Power and Machinery Engineering Lab*
* *Processing and Food Engineering Lab*
* *Engineering Workshop Lab (Common for all the branches)*

TO DEVELOP THEIR SELF-CONFIDENCE TO HANDLE TECHNICAL MATTERS (MANDATORY FOR THE AWARD OF DEGREE):
- *Industrial training for 30 days during pre-final year.*
- *Opportunity to do research through final year project.*
- *Poster Presentation*
- *Class presentation (PPT)*
- *Industrial Workshop Visit (FMP, SWE, PFE related)*

TEACHING FACULTY

SL. NO	NAME OF THE FACULTY	DESIGNATION
1	Dr. Chitrasen Lairenjam	Assistant Professor
2	Mr. WungshimZimik	Assistant Professor
3	Dr. Pramod Ch Dihingia	Assistant Professor
4	Dr. Grace Nengzouzam	Guest Faculty
5	Dr. Ningthoujam Manda Devi	Guest Faculty
6	Er. Mulukhoto Khamo	Guest Faculty
7	Er. Visuto Khatso	Guest Faculty

9.2. DEPARTMENT OF BIOTECHNOLOGY
Department Incharge: Dr.Imlitoshi Jamir
E-mail: imlitoshi@nagalanduniversity.ac.in
The Department is presently offering B.Tech. Biotechnology course, a four years degree programme under which the students will. be taught on broad range of subjects related to Genetics, Microbiology, Molecular Biology, Bioenergetics, Tissue culture, Recombinant DNA Technology, Bioinformatics, Chemical engineering and Bioprocess engineering etc. The Department already has a Biotechnology lab which is equipped with modern biotechnological tools like PCR Thermal Cycle, Horizontal Electrophoresis Systems, Vertical Slab Gel Systems (Mini model), Vertical Slab Gel Systems (Slab Gel Regular Model), Transilluminator, Horizontal air flow cabinet, cold centrifuge, Distillation unit, Milipore water system, UV-visible spectrophotometer, Malvern zetasizer S90, etc. The Department has completed three projects sponsored by Department of Biotechnology, Government of India.

LABORATORY
- *Watson Molecular Biology Lab*
- *JC Bose Plant Tissue Culture Lab*
- *Dayhoff Bioinformatics Lab*
- *Pasteur Microbiology Lab*
- *Mendel Genetics Lab*
- *Biochemical Engineering Lab (Under construction)*

THRUST AREA OF RESEARCH:
- *Molecular characterization of Vibrio cholerae transcription factors and also on the gene regulation of Vibriocholerae.*
- *Characterization and application of Mithun (Bosfrontalis) Milk protein.*
- *Development of advance drug delivery system.*

TEACHING FACULTY

SL. NO.	NAME OF THE FACULTY	DESIGNATION
1	Dr.Imlitoshi Jamir	Assistant Professor
2	Dr.Rajkrishna Mondal	Assistant Professor
3	Dr.Hanumant Singh Rathore	Assistant Professor
4	Miss. Vineichuno Kuotsu	Guest Faculty
5	Mr. Thrilongse A. Sangtam	Guest Faculty

9.3. DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Department Incharge :Mr. AkangjungshiLongkumer

Department of Computer Science & Engineering emphasizes on the all-round development of the student, both in the theoretical and practical knowledge. The Department also takes special care in developing problem solving attitude in students and prepare them to be mentally equipped to join any organization.

VISION:
- *To be a front runner in Technology.*
- *The Department not only aims to produce industry ready graduates but also entrepreneurs.*

THRUST AREAS:
- *Multimedia*
- *Web Technology*
- *System Software*
- *Wireless Technology*
- *Networking*
- *Software Engineering*
- *Distributed Systems*
- *Operating System*

TEACHING FACULTY

SL. NO.	NAME OF THE FACULTY	DESIGNATION
1	Mr. ChenlepYakha Konyak	Assistant Professor
2	Mr. AkangjungshiLongkumer	Assistant Professor
3	Mr. Ramesh Singh	Assistant Professor
4	Mrs. YanthungbeniHumtsoe	Guest Faculty
5	Mr. Imlitoshi Jamir	Guest Faculty
6	Mr. Aosungkum	Guest Faculty

9.4. DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Department In-charge: Mrs. Ayangla Jamir
E-mail:ayanglajamir@nagalanduniversity.ac.in

Electronics & Communication Engineering is about electronic components, integrated circuits, microprocessors and consists of designing, fabrication, testing, maintaining and supervising the manufacture of electronic equipments. The Department of Electronics and Communication Engineering focuses to impart education and training at the Under-graduate levels with special emphasis on design aspects of electronic systems. The training imparted to the students would be such that it will make them competent enough to be the fountain head of new ideas and innovations in Science and Technology and who shall contribute its growth in partnership with industries and develop and harness it for the welfare of the Nagas and the nation.
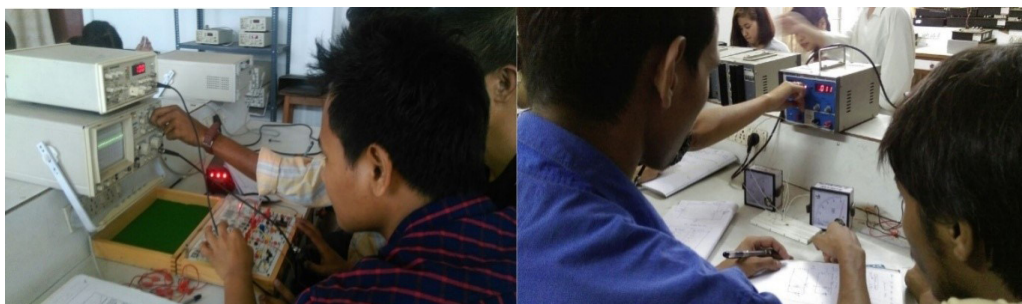
VISION:
To bring about a cultural revolution through digital technology and demonstrate the spirit of sharing, and caring by people who will create, collaborate and make Nagaland a better knowledgeable State.
THRUST AREA OF RESEARCH
- *Integrated electronics and circuits*
- *Tele-communication*
- *Computer technology*
- *Power electronics*
- *GPS systems*
- *Communication Systems*
- *Antennas*
- *Satellite transponders*
- *Signal processing based biomedical instruments*
- *VLSI chips*

TEACHING FACULTY

SL. NO.	NAME OF THE FACULTY	DESIGNATION
1	Mrs. Ayangla Jamir	Assistant Professor
2	Mrs. BendangchilaLongkumer	Assistant Professor
3	Ms. ImesanglaAo	Assistant Professor
4	Dr. Monalisa Hazarika	Guest Faculty
5	Ms. Ngasepam Monica Devi	Guest Faculty
6	Ms. Merensongla Aier	Guest Faculty

9.5. DEPARTMENT OF INFORMATION TECHNOLOGY

Department In-charge: Mr. Sourav Hazarika
E-mail: sourav@nagalanduniversity.ac.in

The Department of Information Technology focuses in training students in the creation of Computer Based Information Systems for efficient storage, processing, analyzing and dissemination of information to cater to the needs of the people in making decision making process more effective.

VISION:

TInformation Technology has been the driving force for economic growth which has uplifted many all around the world. For reasons best known, Nagaland as such has not benefited by this economic growth. The Department of Information Technology, Nagaland University endeavors to bridge this gap which hopes to reduce the digital divide and hopefully bring about economic growth to the people of Nagaland in the near future. It is hoped that a new way of work culture will emerged in the state through IT. Our students will play an effective role as Technologists and make notable contribution to the development of our society.

THRUST AREAS OF RESEARCH:

• Information Systems Development
• Computer Networks
• Distributed Systems
• Web Technology
• Programming
• Image Processing
• Knowledge Representation
• Artificial Neural Networks
• Ontology Dynamic

OBJECTIVES: JECTIVES:

• To foster innovative thinking among the students in the field of IT
• To orient students with the skills required in IT industry
• To motivate students in the field of research
• To equip the students with cutting edge IT Technologies

POSITION OF TEACHING FACULTY

SL. NO.	NAME OF THE FACULTY	DESIGNATION
1	Mr. ShanchamoYanthan	Assistant Professor
2	Mr. TeisoviAngami	Assistant Professor
3	Mr. SudiptaPatowary	Assistant Professor
4	Mr. Sourav Hazarika	Assistant Professor
5	Dr. Heisnam Rohen Singh	Assistant Professor
6	Ms. NoktienlaAier	Guest Faculty

9.6 COMMON POOL
In-charge: Mr. Ramesh Singh
E-mail: ramesh@nagalanduniversity.ac.in

The School of Engineering & Technology has a Common Pool section which teaches the common Engineering courses like Engineering Mathematics, Physics, Chemistry, Basic Electronics, Basic Electricals, Engineering Mechanics etc. The Common Pool section has a computer lab with a capacity of 30 computers to conduct practical courses for the First Year students. The Central Workshop offers practical courses like welding, fitting, carpentry, sheet metal etc. in the First Year Engineering as well as for other semesters in the Agricultural Engineering & Technology Department

VISION:
- *Physics Lab*
- *Chemistry Lab*
- *Engineering Drawing Lab*
- *Workshop*
- *Computer Lab for programming and Internet*

POSITION OF TEACHING FACULTY

SL. NO.	NAME OF THE FACULTY	SPECIALIZATION
1	Dr.PelesakuoKehie	Chemistry
2	Dr. Piyali Banerjee	Physics
3	Dr. Sanjay Sarkar	Mathematics
4	Mr. MaongtemsuPongener	Mechanical Engineering
5	Mr. Binay Kumar Yadav	Electrical engineering
6	Ms. Watisangla T Aier	English

10. COURSE STRUCTURE
10.1. B.TECH. FIRST YEAR (COMMON TO ALL DISCIPLINE)

1st SEMESTER

No	Code		L	T	P	
Theory						
1	G1T01	Engineering Mathematics-I	3	1	-	4
2	G1T02	Engineering Physics-I	3	-	-	3
3	G1T03	Technical English	2	1	-	3
4	G1T04	Basic Electrical Engineering	3	-	-	3
5	G1T05	Engineering Chemistry	3	-	-	3
6	G1T06	Engineering Graphics	1	-	-	1
					Total Theory	17
Practical						
1	G1L01	Engineering Physics-I Lab	-	-	2	1
2	G1L02	Engineering Chemistry Lab	-	-	2	1

3	G1L03	Engineering Graphics Lab	-	-	4	1
			Total Practical			4
			Total of Semester			21

2nd SEMESTER

SL/No	Subject Code	Course Name	Contact hours per week			Credits
			L	T	P	
Theory						
1	G2T01	Engineering Mathematics-II	3	1	-	4
2	G2T02	Engineering Physics-II	3	-	-	3
3	G2T03	Fundamentals of Computing	3	-	-	3
4	G2T04	Basic Electronics	3	-	-	3
5	G2T05	Engineering Mechanics	2	1	-	3
6	G2T06	Environmental Science	3	-	-	0
			Total Theory			16
Practical						
1	G2L01	Workshop Practice	-	-	4	2
2	G2L02	Basic Electronics Lab	-	-	2	1
3	G2L03	Fundamentals of Computing Lab	-	-	2	1
4	G2L04	Engineering Physics-II Lab	-	-	2	1
5	G22L05	Sports and Yoga	-	1	1	0
			Total Practical			5
			Total of Semester			21

10.2 AGRICULTURAL ENGINEERING AND TECHNOLOGY (THIRD SEMESTER ONWARDS] SECOND YEAR

3rd SEMESTER

SL/No	Subject Code	Course Name	Contact hours per week				Credits
			L	T	P	Total	
Theory							
1	MAT3T1	Mathematics – III	3	-	-	3	3
2	AE3T01	Strength of Material	3	-	-	3	3
3	AE3T02	Soil Mechanics	3	-	-	3	3
4	AE3T03	Farm Power	3	-	-	3	3
5	AE3T04	Electrical Machine & Power utilization	2	-	-	2	2
6	AE3T05	Engineering properties of Biological	2	-	-	2	2
7	AE3T06	Material & Food Quality	2	-	-	2	2
			Total Theory			18	18
Practical							
1	AE3L01	Soil Mechanics Lab	-	-	2	2	1
2	AE3L02	Farm Power Lab	-	-	2	2	1
3	AE3L03	Engineering properties of Biological Material & Food Quality Lab	-	-	2	2	1
4	AE3L04	Machine drawing & Computer graphics lab	-	-	2	2	1
			Total Practical			8	4
			Total of Semester			26	22

4th SEMESTER

SL/No	Subject Code	Course Name	L	T	P	Total	Credits
Theory							
1	AE4T01	Surveying and Leveling	2	-	-	2	2
2	AE4T02	Theory of Machines	2	1	-	3	3
3	AE4T03	Design of structures	2	-	-	2	2
4	AE4T04	Watershed hydrology	2	1	-	3	3
5	AE4T05	Fluid Mechanics	2	1	-	3	3
6	AE4T06	Crop Process Engineering	3	-	-	3	3
7	AE4T07	Engineering Thermodynamics and Heat Engine	2	-	-	2	2
		Total Theory				18	18
Practical							
1	AE4L01	Watershed Hydrology -Lab	-	-	2	2	1
2	AE4L02	Crop Process Engineering Lab	-	-	2	2	1
3	AE4L03	Surveying and Leveling Lab	-	-	2	2	1
		Total Practical				6	3
		Total of Semester				24	21

5th SEMESTER

SL/No	Subject Code	Course Name	L	T	P	Total	Credits
Theory							
1	AE5T01	Workshop Technology	2	-	-	2	2
2	AE5T02	Machine Design	2	-	-	2	2
3	AE5T03	Heat & mass Transfer	2	-	-	2	2
4	AE5T04	Farm Machinery & Equipment	3	-	-	3	3
5	AE5T05	Ground Water, Wells & Pumps	2	-	-	2	2
6	AE5T06	Drying & Storage Engineering	3	-	-	3	3
7	AE5T07	Soil & water Conservation Engg.	3	-	-	3	3
		Total Theory				17	17
Practical							
1	AE5L01	Soil Mechanics Lab	-	-	2	2	1
2	AE5L02	Farm Power Lab	-	-	2	2	1
3	AE5L03	Engineering properties of Biological Material & Food Quality Lab	-	-	2	2	1
4	AE5L04	Soil & Water conservation Engineering lab	-	-	2	2	1
		Total Practical				8	4
		Total of Semester				25	21

6th SEMESTER

SL/No	Subject Code	Course Name	Contact hours per week				Credits
			L	T	P	Total	
Theory							
1	AE6T01	Agriculture for Engineers	3	-	-	3	3
2	AE6T02	Refrigeration & Air conditioning	2	1	-	3	3
3	AE6T03	Transfer Process in Food Engineering	3	0	-	3	3
4	AE6T04	Tractor systems & controls	2	-	-	2	2
5	AE6T06	Irrigation and Drainage Engineering -I	2	-	-	2	2
6	AE6EL	Elective-I*	3	-	-	3	3
				Total Theory		16	16
Practical							
1	AE6L01	Tractors systems & controls Lab	-	-	2	2	1
2	AE6L02	Irrigation and Drainage Engineering I Lab	-	-	2	2	1
				Total Practical		4	2
				Total of Semester		20	18

*Elective papers-I**
1. (AE6EL01) Agribusiness management and trade.
2. (AE6EL02) Entrepreneurship development and communication skills.
3. (AE6EL03) Design and maintenance of green house.
4. (AE6EL04) Soil and Water Conservation Structure
13.3. End Term Examination.

FOURTH YEAR
7th SEMESTER

SL/No	Subject Code	Course Name	Contact hours per week				Credits
			L	T	P	Total	
Theory							
1	AE7T01	Irrigation and Drainage Engineering -II	2	-	-	2	2
2	AE7T02	Mechanics of Tillage & Traction	2	-	-	2	2
3	AE7T03	Unit Operation in Dairy and Food Engineering	2	-	-	2	2
4	AE7T04	Statistical Hydrology	2	-	-	2	2
5	AE7T05	Industrial Training	-	-	-	-	2
6	AE7T06	Project - I	-	-	8	8	4
7	AE7EL	Elective-II*	3	-	-	3	3
				Total Theory		21	17
Practical							
1	AE7L01	Mechanics of Tillage & Traction Lab	-	-	2	2	1
2	AE7L02	Unit Operation in Dairy and Food Engineering Lab	-	-	2	2	1
				Total Practical		4	2
				Total of Semester		25	19

*Elective papers-II**
1. (AE7EL01) Remote sensing and GIS application.
2. (AE7EL02) Tea Technology.
3. (AE7EL03) Development of processed products and equipment.
4. (AE7EL04) Waste and by-product utilization.
5. (AE7EL05) Food Processing Plant Design & Layout

8th SEMESTER

SL/No	Subject Code	Course Name	Contact hours per week				Credits
			L	T	P	Total	
Theory							
1	AE8T01	Tractor Design & Testing	2	-	-	2	2
2	AE8T02	Food Process and Packaging Technology	3	-	-	3	3
3	AE8T03	Watershed planning & Management	2	-	-	2	2
4	AE8T04	Project - II	-	-	8	8	4
5	AE8EL	Elective – III*	3	-	-	3	3
6	G8T01	Indian Constitution	3	-	-	-	NC
					Total Theory	21	14
Practical							
1	AE8L01	Tractor design & testing Lab	-	-	2	2	1
2	AE8L02	Food Process and packaging technology Lab	-	-	2	2	1
3	AE8L03	Seminar	-	-	2	2	1
					Total Practical	6	3
					Total of Semester	27	17

*Elective papers-III**
1. (AE8EL01) Human Engineering and safety.
2. (AE8EL02) Biomass management for fodder and energy.
3. (AE8EL03) Production technology of agricultural machines.
4. (AE8EL04) Renewable Energy Source
5. (AE8EL05) Organic Farming for Sustainable Agricultural Production.

TOTAL CREDITS = 42+118=160

10.3 BIOTECHNOLOGY (THIRD SEMESTER ONWARDS)

3rd SEMESTER

SL/No	Subject Code	Course Name	Contact hours per week				Credits
			L	T	P	Total	
Theory							
1	BTB301	Biostatistics	3	-	-	3	3
2	BTB302	Biochemistry	3	-	-	3	3
3	BTB303	Microbiology	3	-	-	3	3
4	BTB304	Thermodynamics and Kinetics	3	-	-	3	3
5	CSB302	Data Structures & algorithm	3	-	-	3	3
6	BTB305	Engineering Economics	2	-	-	2	2
					Total Theory	17	17
Practical							
1	BTB311	Biochemistry Lab	-	-	4	4	2
2	BTB312	Microbiology Lab	-	-	4	4	2
3	CSB312	Data Structures & algorithm Lab	-	-	2	3	1.5
					Total Practical	11	5.5
					Total of Semester	28	22.5

4th SEMESTER

SL/No	Subject Code	Course Name	L	T	P	Total	Credits
			Contact hours per week				
Theory							
1	BTB401	Cellular Metabolism and Metabolic Engineering	3	-	-	3	3
2	BTB402	Plant Biotechnology	3	-	-	3	3
3	BTB403	Cell & Molecular Biology	3	-	-	3	3
4	BTB404	Genetics	3	-	-	3	3
5	BTB405	Green Biotechnology and Pollution Abatement	3	-	-	3	3
6	BTB406	Structural Biology	3	-	-	3	3
					Total Theory	18	18
Practical							
1	BTB411	Molecular Biology Lab	-	-	4	4	2
2	BTB412	Plant Biotechnology Lab	-	-	4	4	2
					Total Practical	8	4
					Total of Semester	26	22

5th SEMESTER

SL/No	Subject Code	Course Name	L	T	P	Total	Credits
			Contact hours per week				
Theory							
1	BTB501	Bioinformatics & Computational Biology	3	-	-	3	3
2	BTB502	Enzyme Technology	3	-	-	3	3
3	BTB503	Immunology & Immunotechnology	3	-	-	3	3
4	BTB504	PROFESSIONAL ELECTIVE COURSE[PE]-I	3	-	-	3	3
5	BTB505	OPEN SUBJECT-I	3	-	-	3	3
6	BTB505	Entrepreneurship and Startups	2	-	-	2	2
					Total Theory	18	18
Practical							
1	BTB511	Bioinformatics & Computational Biology Lab	-	-	4	4	2
2	BTB512	Immunology & Immunotechnology Lab	-	-	3	3	1.5
3	BTB513	Training	-	-	-	-	2
					Total Practical	7	
					Total of Semester	24	22.5

6th SEMESTER

SL/No	Subject Code	Course Name	L	T	P	Total	Credits
			Contact hours per week				
Theory							
1	BTB601	Recombinant DNA Technology and Applications	3	-	-	3	3
2	BTB602	Bioseparation Engineering	3	-	-	3	3
3	BTB603	Synthetic & Systems Biology	3	-	-	3	3
4	BTB604	Animal Biotechnology	3	-	-	3	3
5	BTB605	PROFESSIONAL ELECTIVE COURSE[PE]-II	3	-	-	3	3
6	BTB606	OPEN SUBJECT-II	3	-	-	2	2
					Total Theory	18	18
Practical							

1	BTB611	Bioseparation Engineering Lab	-	-	4	4	2
2	BTB612	Recombinant DNA Technology Lab	-	-	4	4	2
		Total Practical				8	5
		Total of Semester				26	22

7ᵗʰ SEMESTER

SL/No	Subject Code	Course Name	Contact hours per week				Credits
			L	T	P	Total	
Theory							
1	BTB701	Intellectual Property Rights (IPR) & Regulatory	3	-	-	3	3
2	BTB702	Bioprocess Engineering	3	-	-	3	3
3	BTB703	PROFESSIONAL ELECTIVE COURSE[PE]-III	3	-	-	3	3
4	BTB704	OPEN SUBJECT-III	3	-	-	3	3
5	BTB705	Synthetic & Systems Biology	3	-	-	3	3
6	BTB706	Analytical Techniques	3	-	-	2	3
		Total Theory				18	18
Practical							
1	BTB711	Bioprocess Engineering Lab			4	4	2
2	BTB712	Project-I			4	4	2
3	BTB713	Colloquium			2	2	1
		Total Practical				10	5
		Total of Semester				28	23

8ᵗʰ SEMESTER

SL/No	Subject Code	Course Name	Contact hours per week				Credits
			L	T	P	Total	
Theory							
1	BTB801	Constitution of India*	2			2	0
2	BTB802	PROFESSIONAL ELECTIVE COURSE[PE]-IV	3	-	-	3	3
3	BTB803	OPEN SUBJECT-IV	3	-	-	3	3
Practical							
1	BTB811	Project-II (Biotech Industrial or Biotech Inhouse Project or Bio-Entrepreneurship)	-	-	18	18	9
		Total Practical				18	9
		Total of Semester				26	15

Constitution of India student may opt offline/online course*

PROFESSIONAL ELECTIVE COURSE*[PE]:

Group	Subjects	Remarks
I	• Big Data Analytics • Genome Editing • Biosimilars Technology	Any one from each group of subjects May be opted from MOOCs/ NPTEL/offered by concerned or other Dept. of the University
II	• Machine Learning • Waste Management & Upcycling • Stem-Cell Technology	
III	• Gene Expression and Transgenics • Rational Drug Discovery • State-of-the-art Imaging	
IV	• Precision Medicine & Wellness • Tissue Engineering • Nano Biotechnology	

OPEN SUBJECTS [OS]*

Group	Subjects	Remarks
I	• 3D Printing & Design • Internet of Things • Image Processing • Biomaterials	Any one from each group of subjects May be opted from MOOCs/ NPTEL/offered by concerned or other Dept. of the University
II	• Artificial Intelligence • Quantum Computing • Cyber Security • Design Thinking	
III	• Robotics • Virtual Reality • Data Sciences • Food and Nutrition Technology	
IV	• Block Chain • Bioterrorism and National Security	

Total Credit: 42+127=169

10.4 COMPUTER SCIENCE & ENGINEERING (THIRD SEMESTER ONWARDS)

SECOND YEAR
3rd SEMESTER

SL/No	Subject Code	Course Name	Contact hours per week			Credits
			L	T	P	
Theory						
1	CSB301	Object Oriented Programming	3	0	0	3
2	CSB302	Data Structures & Algorithm	3	0	0	3
3	CSB303	Computer Graphics & Virtual Reality	3	0	0	3
4	MAT3T2	Differential Calculus	3	1	0	4
5	EC3T03	Digital Electronics & Logic Design	2	1	0	3
Practical						
1	CSB311	Object Oriented Programming Lab	0	0	3	1.5
2	CSB312	Data Structures & Algorithm Lab	0	0	3	1.5
3	EC3L02	Digital Electronics & Logic Design Lab	0	0	3	1.5
Total Credits			14	2	9	20.5

4th SEMESTER

SL/No	Subject Code	Course Name	L	T	P	Credits
Theory						
1	CSB401	Design & Analysis of Algorithms	3	0	0	3
2	CSB402	Web & Internet	3	0	0	3
3	CSB403	Formal Language & Automata Theory	3	0	0	3
4	CSB404	Computer Organization & Architecture	4	0	0	4
5	MAT4T2	Discrete Mathematics	3	1	0	4
Practical						
1	CSB311	Object Oriented Programming Lab	0	0	3	1.5
2	CSB312	Data Structures & Algorithm Lab	0	0	3	1.5
3	EC3L02	Digital Electronics & Logic Design Lab	0	0	3	1.5
Total Credits			16	1	8	21

SECOND YEAR
5th SEMESTER

SL/No	Subject Code	Course Name	L	T	P	Credits
Theory						
1	CSB501	Graph Theory	3	0	0	3
2	CSB502	Operating System	3	0	0	3
3	CSB503	Database Management Systems	3	0	0	3
4	CSB504	Software Engineering	3	0	0	3
5	MAT5T1	Numerical Analysis & Probability	3	1	0	4
Practical						
1	CSB511	Software Engineering Lab	0	0	3	1.5
2	CSB512	Operating System Lab	0	0	3	1.5
3	CSB513	Database Management Systems Lab	0	0	3	1.5
Total Credits			15	1	9	20.5

6th SEMESTER

SL/No	Subject Code	Course Name	L	T	P	Credits
Theory						
1	CSB601	Compiler Design	4	0	0	4
2	CSB602	Computer Networks	3	0	0	3
3	CSB62X	Elective-I	3	0	0	3
4	CSB62X	Elective-II	3	0	0	3
5	HSB601	Project Management & Entrepreneurship	2	0	0	2
Practical						
1	CSB611	Computer Networks Lab	0	0	3	1.5
2	CSB612	Compiler Design Lab	0	0	3	1.5
3	CSB613	Application Programming Lab	0	1	3	2.5
Total Credits			15	1	9	20.5

FOURTH YEAR
7th SEMESTER

SL/No	Subject Code	Course Name	Contact hours per week			Credits
			L	T	P	
Theory						
1	CSB701	Distributed System	3	0	0	3
2	CSB702	Machine Learning	3	0	0	3
3	CSB72X	Elective-III	3	0	0	3
4	CSB72X	Elective-IV	3	0	0	3
Practical						
1	CSB711	Project-I #	0	0	12	6
2	CSB712	Machine Learning Lab	0	0	3	1.5
3	CSB713	Colloquium-I*	0	0	0	0 (No credit)
Total Credits			12	0	15	19.5

* The student will give presentation (Colloquium-I) on the summer/winter/industrial training (6 – 8 weeks) that She / He underwent during the vacation period after 5th or 6th semester. The credit(Pass or Fail) will be awarded in the 7th Semester under Colloquium-I. Presentation will be conducted in the beginning of 7th semester.

The student will submit a synopsis for their Project at the beginning of the semester in a specified format which should be approved by the departmental committee. The student will also have to present the progress of their project through seminars and progress reports

8th SEMESTER

SL/No	Subject Code	Course Name	Contact hours per week			Credits
			L	T	P	
Theory						
1	CSB82X	Elective-V	3	0	0	3
2	CSB83X	Open Elective-I	3	0	0	3
3	G8T01	Constitution of India	3	0	0	0 (No credit)
4	HSB801	Human Relations at work	2	0	0	2
Practical						
1	CSB811	Project-II	0	0	16	8
Total Credits			11	0	16	16

Total Credits = 42+118= 160

LIST OF ELECTIVE

SL/No	Course Code	Semester	Course Title	L	T	P	Total Credits
1	CSB621	6	Data Mining	3	0	0	3
2	CSB622	6	Data Analytics	3	0	0	3
3	CSB623	6	Information Retrieval	3	0	0	3
4	CSB624	6	Multimedia Technology	3	0	0	3
5	CSB625	6	Software Testing	3	0	0	3
6	EC6T06	6	Information Theory & Coding	3	0	0	3
7	EC8T01	6	Digital Image Processing	3	0	0	3
8	MAT6T1	6	Operations Research	3	0	0	3
1	CSB721	7	Design & Management of Computer Network	3	0	0	3

2	CSB722	7	Human Computer Interaction	3	0	0	3
3	CSB723	7	Cloud Computing	3	0	0	3
4	CSB724	7	Wireless Sensor Networks	3	0	0	3
5	CSB725	7	Internet-of- Things	3	0	0	3
6	CSB726	7	Real Time Systems	3	0	0	3
7	CSB727	7	Advanced Computer Architecture & parallel pro-gramming	3	0	0	3
8	EC7EL1	7	Embedded Systems & Design	3	0	0	3
1	CSB821	8	Distributed Database	3	0	0	3
2	CSB822	8	Artificial Intelligence	3	0	0	3
3	CSB823	8	Speech & Natural Language Processing	3	0	0	3
4	CSB824	8	Neural Networks & Deep Learning	3	0	0	3
			LIST OF OPEN ELECTIVE				
1	CSB831	8	Cryptography & Network Security	3	0	0	3
2	CSB832	8	Mobile Applications & Services	3	0	0	3
3	CSB833	8	Cyber Law & Ethics	3	0	0	3
4	CSB834	8	Linux Internal	3	0	0	3

The following courses will be offered through MOOCs/SWAYAM/NPTEL with in-house examination.
1. *Embedded Systems*
2. *Software Testing*
3. *Artificial Intelligence*
4. *Internet-of-Things*
5. *Cryptography & Network Security*

The following practical lab will be conducted under virtual lab.
1. *Computer Organization & Architecture Lab*
2. *Software Engineering Lab*

10.5. ELECTRONICS & COMMUNICATION ENGINEERING (THIRD SEMESTER ONWARDS)

SECOND YEAR
3rd SEMESTER

SL/ No	Subject Code	Type	Course Name	L	T	P	Credits	Contact Hrs/ Week
Theory								
1	EC3T01	PC	Network Theory	3	-	-	3	3
2	EC3T02	PC	Electronic Devices & Circuits	3	-	-	3	3
3	EC3T03	PC	Digital Electronics & Logic Design	3	-	-	3	3
4	EC3T04	ES	Electrical Engineering Material	2	-	-	2	2
5	ITB303	OE	Data Structures & Algorithm	3	-	-	3	3
6	MAT3T1	BS	Mathematics-III	3	-	-	3	3
Practical								
7	EC3L01	PC	Electronic Devices & Circuits Lab	-	-	2	1	2
8	EC3L02	PC	Digital Electronics & Logic Design Lab	-	-	3	1.5	3
9	ITB312	OE	Data Structures Lab	-	-	3	1.5	3
Total							21	25

<p align="center">4th SEMESTER</p>

SL/ No	Subject Code	Type	Course Name	L	T	P	Credits	Contact Hrs/ Week
Theory								
1	EC4T01	PC	Signals and Systems	3	-	-	3	3
2	EC4T02	PC	Electromagnetic Field Theory	3	-	-	3	3
3	EC4T03	PC	Microprocessor	3	-	-	3	3
4	EC4T04	PC	Linear Integrated Circuits	3	-	-	2	2
5	EC4T05	PC	Electronic Measurements & Instrumentation	3	-	-	3	3
6	MAT4T1	BS	Mathematics –IV	3	-	-	3	3
Practical								
7	EC4L01	PC	Microprocessor Lab	-	-	3	1.5	3
8	EC4L02	PC	Linear Integrated Circuits Lab	-	-	3	1.5	3
Total							21	24

<p align="center">THIRD YEAR
5th SEMESTER</p>

SL/ No	Subject Code	Type	Course Name	L	T	P	Credits	Contact Hrs/ Week
Theory								
1	EC5T01	PE	Antenna & Wave Propagation	3	-	-	3	3
2	EC5T02	PC	Introduction to VHDL	3	-	-	3	3
3	EC5T03	PC	Analog Communication	3	-	-	3	3
4	EC5T04	PC	Microcontroller	2	-	-	3	3
5	EC5T05	PC	Control Systems	3	-	-	3	3
6	EC5T06	OE	Management & Entrepreneurship	3	-	-	3	3
Practical								
7	EC5L01	PC	Microcontroller Lab	-	-	3	1.5	3
8	EC5L02	PC	VHDL Lab	-	-	3	1.5	3
Total							21	23

<p align="center">6th SEMESTER</p>

SL/ No	Subject Code	Type	Course Name	L	T	P	Credits	Contact Hrs/ Week
Theory								
1	EC6T01	OE	Digital Communication	3	-	-	3	3
2	EC6T02	PC	Digital Signal Processing	3	-	-	3	3
3	EC6T03	PC	VLSI Technology	3	-	-	3	3
4	EC6T04	PC	Computer Communication Networks	3	-	-	3	3
5	EC6T05	PE	Wireless Communication	3	-	-	3	3
6	EC6T06	PC	Information Theory Coding	3	-	-	3	3
Practical								
7	EC6L01	PC	Communication Systems Engineering Lab	-	-	2	1.5	3
8	EC6L02	OE	Digital Signal Processing Lab	-	-	2	1.5	3
Total							21	24

*Summer training/ Industrial Training**
*6-8 weeks training will be held after 6th semester. However, viva-voce will be conducted in the 7th semester and the credit will be added as a part of the colloquium.

FOURTH YEAR
7th SEMESTER

SL/No	Subject Code	Type	Course Name	L	T	P	Credits	Contact Hrs/Week
Theory								
1	EC7T01	PE	Microwave Engineering	3	-	-	3	3
2	EC7EL1/2/3	PE	Elective I	3	-	-	3	3
3	EC7EL4/5/6	PE	Elective II	3	-	-	3	3
Practical								
4	EC7SM	PC	Colloquium*	-	-	-	1	-
5	EC7L01	OE	Microwave Engineering Lab	-	-	2	1	2
6	EC7PJ	PC	Project**				6	6
Total							17	16

*   The student will submit a synopsis for their seminars on any technical topic at the beginning of the semester in a specified format which should be approved by the departmental committee. The student will also have to present the progress of their project through seminars and progress reports.

** The student will have to submit a synopsis and do the literature survey for their major project in this semester.

8th SEMESTER

SL/No	Subject Code	Type	Course Name	L	T	P	Credits
Theory							
1	EC8T01	OE	Digital Image Processing	3	-	-	3
2	EC8EL7/8/9	PE	Elective III	3	-	-	3
3	EC8EL10/11/12	PE	Elective IV	3	-	-	3
4	G8T01	MC	Constitution of India(MC)	-	-	-	(No Credit)
Practical							
5	EC8PJ	PC	Project	-	-	16	8
Total							17

Total Credits = 42+118= 160

Electives (I, II, III & IV)

Subject Code	Course Name	Credits	L:P:T	Preferred Semester
EC7EL1	Embedded System & Design	3	3:0:0	VII
CSB502	Operating Systems(SWAYAM)	3	3:0:0	VII
EC7EL3	Biomedical Instrumentation	3	3:0:0	VII
EC7EL4	Multimedia Communication	3	3:0:0	VII
EC7EL5	Optical Fiber Communication	3	3:0:0	VII
EC7EL6	Power Electronics	3	3:0:0	VII
EC8EL7	Body Area Network	3	3:0:0	VII
EC8EL8	Nano Technology	3	3:0:0	VII
EC8EL9	Speech Processing	3	3:0:0	VIII
EC8EL10	Wireless Cellular and LTE 4G Broadband	3	3:0:0	VIII
CSB831	Cryptography & Network Security	3	3:0:0	VIII
EC8EL12	Fundamentals of MEMS	3	3:0:0	VIII

Courses which can be offered in MOOCS

Students can opt up to 20% of credits offered in current semester. The institution shall give the equivalent credit weightage to the students for the credits earned through online learning courses through SWAYAM platform in the credit plan of the program

Subject Code	Type	Course Name	Credits	Preferred Semester
EC7EL6	OE	Fundamentals of Power Electronics	3	VII
EC6T01	OE	Fundamentals of Digital Communication	3	VI
EC3T03	PC	Digital Electronics Circuit	4	III
EC4T04	PC	Analog Circuits	3	IV
EC4T03	PC	Microprocessor and Microcontroller	3	IV/V
EC5T01	PE	Antennas	3	V
EC8HT02	PE	Biomedical Signal Processing	3	VIII
EC6T06	PC	Control Engineering	3	VI
EC7EL2	OE	Introduction to Operating Systems	3	VIII

10.6 INFORMATION TECHNOLOGY (THIRD SEMESTER ONWARDS)

SECOND YEAR
SEMESTER 3

SL/No	Subject Code	Course Name	Contact hours per week			Credits
			L	T	P	
Theory						
1	ECB303	Digital Electronics & Logic Design	2	1	-	3
2	EC7EL1/2/3	Object Oriented Programming	3	-	-	3
3	EC7EL4/5/6	Computer Organization & Architecture	3	-	-	3
4	ITB303	Data Structures	3	-	-	3
5	MAT3T2	Differential Calculus	3	1	-	4
				Total Credits (Theory)		16
Practical						
1	ITB311	Object Oriented Programming Lab	-	-	3	1.5
2	ITB312	Data Structures Lab	-	-	3	1.5
3	ECB313	Digital Electronics & Logic Design Lab	-	-	3	1.5
Total				Credits (Practical)		4.5
				Total Credits		20.5

SEMESTER 4

SL/No	Subject Code	Course Name	Contact hours per week			Credits
			L	T	P	
Theory						
1	MAT4T2	Discrete Mathematics	3	1	-	4
2	ITB401	Computer Graphics & Virtual Reality	3	-	-	3
3	ITB402	Operating System	3	-	-	3
4	ITB403	Algorithm Analysis and Design	3	-	-	3
5	ITB404	Formal Language & Automata Theory	3	-	-	3
				Total Credits (Theory)		16
Practical						
1	ITB311	Object Oriented Programming Lab	-	-	3	1.5
2	ITB312	Data Structures Lab	-	-	3	1.5

3	ECB313	Digital Electronics & Logic Design Lab	-	-	3	1.5
Total			Credits (Practical)			4.5
					Total Credits	20.5

THIRD YEAR
SEMESTER 5

SL/No	Subject Code	Course Name	Contact hours per week			Credits
			L	T	P	
Theory						
1	MAT5T1	Numerical Analysis & Probability	3	1	-	4
2	ITB501	Computer Networks	3	-	-	3
3	ITB502	Database Management Systems	3	-	-	3
4	ITB503	Compiler Design	3	-	-	3
5		Elective I	3	-		3
			Total Credits (Theory)			16
Practical						
1	ITB511	Database Management Systems Lab	-	-	3	1.5
2	ITB512	Compiler Design Lab	-	-	3	1.5
3	ITB513	Network Lab	-	-	3	1.5
Total			Credits (Practical)			4.5
					Total Credits	20.5

SEMESTER 6

SL/No	Subject Code	Course Name	Contact hours per week			Credits
			L	T	P	
Theory						
1	ITB601	Industrial Economics & Principles of Management	3	-	-	3
2	ITB602	Web Technology	3	-	-	3
3	ITB603	Software Engineering	3	-	-	3
4	ITB503	Elective II	3	-		3
			Total Credits (Theory)			12
Practical						
1	ITB611	System Programming Lab	-	1	3	2.5
2	ITB612	Web Technology Lab	-	-	3	1.5
3	ITBPJ1	Project (Minor)	-	-	6	3
Total			Credits (Practical)			7
					Total Credits	19

FOURTH YEAR
SEMESTER 7

SL/No	Subject Code	Course Name	Contact hours per week			Credits
			L	T	P	
Theory						
1	ITB701	Machine Learning	3	-	-	3
2	ITB602	Elective III	3	-	-	3
3	ITB603	Elective IV	3	-	-	3
4	ITB503	Open Elective I	3	-	-	3
			Total Credits (Theory)			12
Practical						

1	ITBCQ1	Colloquium*	–	-	-	-
2	ITBPJ2	Project (Major) #	–	-	12	6
Total			Credits (Practical)			6
				Total Credits		18

*   *The student will give presentation (Colloquium) on the summer/winter/industrial training/Internship (4 – 6 weeks) that She/ He underwent during the vacation period after 4th, 5th or 6th semester.*

\#   *The student will submit a synopsis for their Project at the beginning of the semester in a specified format which should be approved by the departmental committee. The student will also have to present the progress of their project through seminars and progress reports.*

SEMESTER 8

SL/ No	Subject Code	Course Name	Contact hours per week			Credits
			L	T	P	
Theory						
1		Elective V	3	-	-	3
2		Open Elective II	3	-	-	3
3	G8T01	Constitution of India (Mandatory Course)	-	-	-	-
			Total Credits (Theory)			6
Practical						
1	ITB811	Communication Skills Lab	–	-	3	1.5
2	ITBPJ3	Project (Major) **	–	-	20	10
Total			Credits (Practical)			11.5
				Total Credits		17.5

**   *The student will continue the project work carried over from the previous semester. The student will submit the final report/thesis of the project in the format specified by the School.*

Total Credits = 42+116= 158

LIST OF ELECTIVE COURSES

Subject Code	Course Name	Credits	Lectures	Tutorials	Practical
ITBEL1	Distributed Database	3	3	-	-
ITBEL2	Mobile Computing (SWAYAM)	3	3	-	-
ITBEL3	Cloud Computing (SWAYAM)				
ITBEL4	Advanced Computer Architecture	3	3	-	-
ITBEL5	Management Information System and Knowledge Management	3	3	-	-
ITBEL6	Statistical Modeling and Tools	3	3	-	-
ITBEL7	Mobile Application Development	3	3	-	-
ITBEL8	Network Protocols	3	3	-	-
ITBEL9	XML and Web Services	3	3	-	-
ITBEL10	Service Oriented Architecture	3	3	-	-
ITBEL11	System Analysis and Design	3	3	-	-
ITBEL12	Decision Support System	3	3	-	-
ITBEL13	Advanced Java Technology	3	3	-	-
ITBEL14	.Net Technology	3	3	-	-
ITBEL15	Natural Language Processing	3	3	-	-

ITBEL16	Distributed Computing	3	3	-	-
ITBEL17	Multimedia Technologies	3	3	-	-
ITBEL18	Mobile Communications	3	3	-	-
ITBEL19	Cryptography and Information Security				
ITBEL20	Software Quality Assurance	3	3	-	-
ITBEL21	Soft Computing	3	3	-	-
ITBEL22	Blockchain Architecture & Design	3	3	-	-
ITBEL23	Advanced Database Systems	3	3	-	-
EC8T01	Digital Image Processing	3	3	-	-

LIST OF OPEN ELECTIVE COURSES

Subject Code	Course Name	Credits	Lectures	Tutorials	Practical
ITBOE1	Artificial Intelligence	3	3	-	-
ITBOE2	Internet-of-Things	3	3	-	-
ITBOE3	Big Data Analytics	3	3	-	-
EC7EL1	Embedded Systems	3	3	-	-
ITBOE4	E-Business (SWAYAM)	3	3	-	-
ITBOE5	Data Mining & Data Warehousing	3	3	-	-

Note: The following courses will be offered through SWAYAM.

1. *E-Business*
2. *Mobile Computing*
3. *Cloud Computing*

COURSE STRUCTURE FOR PH.D COURSEWORK
AGRICULTURAL ENGINEERING AND TECHNOLOGY

Sl. No.	Course Code	Course Name	[L-T-P]Credit
1	SETP01	Research methodology	[4-0-0] =4
2	SETP02	Research and Publication Ethics	[1-0-1] =2
3	AEP EL 01	Elective I*	[3-0-0] =3
4	to AEP EL 13	Elective II*	[3-0-0] =3
5	AETP01	Seminar	[0-0-2]=2
6	AETP02	Thesis	[0-0-61]=61
		Total	75 Credits

Proposed curricula and course for Pre-Ph D (course work) to be introduced as Elective Subjects (any two):

Course Code	Course Title	L – T - P	Credits
AEP EL 01	Stochastic Hydrology	3 – 0 – 0	3
AEP EL 02	Simulation and Modeling of Soil and Water Systems	3 – 0 – 0	3
AEP EL 03	Application of Geoinformatics in Natural Resource Management	3 – 0 – 0	3
AEP EL 04	Climate Change and Impact on Water Resource	3 – 0 – 0	3
AEP EL 05	Advance Techniques in Watershed Management	3 – 0 – 0	3
AEP EL 06	Application of Computer in Agriculture	3 – 0 – 0	3
AEP EL 07	Advances in Farm Mechanization and Management	3 – 0 – 0	3
AEP EL 08	Ergonomics in Agriculture	3 – 0 – 0	3
AEP EL 09	Precision Agricultural Machinery	3 – 0 – 0	3
AEP EL 10	Instrumentation on Farm Agricultural Application	3 – 0 – 0	3
AEP EL 11	Advances in Farm Machinery and Power Engineering	3 – 0 – 0	3
AEP EL 12	Advances in Bio-Energy Resources	3 – 0 – 0	3
AEP EL 13	Energy Management and Planning in Farm Machinery	3 – 0 – 0	3

BIOTECHNOLOGY

Sl NO.	Course Code	Course Name	[L-T-P]Credit
1	BTP101	Research methodology	[4-0-0] =4
2	BTP102	Research And Publication Ethics	[1-0-1] =2
3	BTP103	Elective I*	[3-0-0] =3
4	BTP104	Elective II*	[3-0-0] =3
5	BTP111	Seminar	[0-0-2]=2
6	BTP112	Thesis	[0-0-61]=61
		Total	[11-0-64]

LIST OF ELECTIVE COURSES (ANY TWO):
1. Biostatistical Methods
2. Methods for determination and prediction of protein structure
3. Sequence similarity search methods
4. Genetic Engineering
5. Protein Stability and Folding
6. Molecular markers and non-coding DNA
7. Microscopic Imaging techniques
8. Waste Water Treatment

INFORMATION TECHNOLOGY

COURSE STRUCTURE

Sl. No	Course code	Course Title	Credit[L-T-P]
1	SETP01	Research methodology	[4-0-0] =4
2	SETP02	Research And Publication Ethics	[1-0-1] =2
3	ITPEL0*	Elective I	[3-0-0] =3
4	ITPEL0*	Elective II	[3-0-0] =3

Note: The Scholar may select any two Elective Courses in consultation with the Supervisor

List of Electives

S. No.	Course Code	Course Title	Credit [L-T-P]
1	ITPEL01	Big Data Analytics	[3-0-0] =3
2	ITPEL02	Foundations of Data Science	[3-0-0] =3
3	ITPEL03	Deep Learning for Computer Vision	[3-0-0] =3
4	ITPEL04	Neuro-fuzzy systems	[3-0-0] =3
5	ITPEL05	Intelligent systems	[3-0-0] =3
6	ITPEL06	Image Processing and Computer Vision	[3-0-0] =3
7	ITPEL07	Fundamentals of Internet of Things	[3-0-0] =3
8	ITPEL08	Computational Geometry	[3-0-0] =3
9	ITPEL09	Statistical methods	[3-0-0] =3
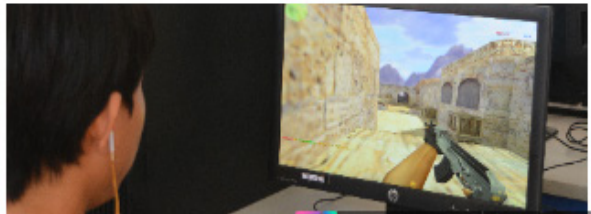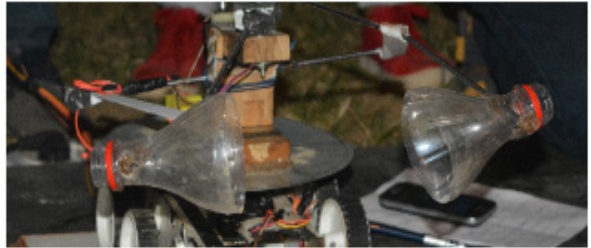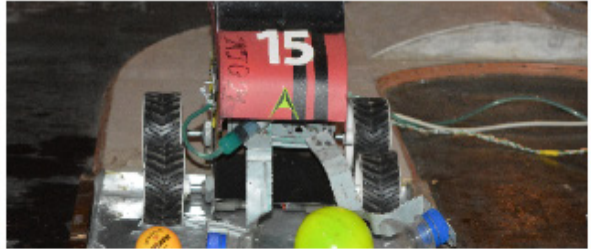
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Website:
www.nagalanduniversity.ac.in

Online Application Link:
http://www.admissions.nagalanduniversity.ac.in/

IMPORTANT DATES AND APPLICATION FEES

Starting of online Application(B.Tech and Ph.D)	*1st July, 2022*
Last date for online form submission (B.Tech and Ph.D)	*31st July,2022*
Uploading of JEE/CUET Score (B.Tech Fresh Entry) *Declaration of merit list(B.Tech)* *Date of Counselling and Admission(B.Tech)* *Declaration of shortlisted candidates for Entrance Exam and Interview (Ph.D)* *Entrance exam and Interview (Ph.D)*	*Will be notified later* *Will be notified later* *Will be notified later* *8th August,2022* *26th August,2022*
Date of admission (For B.Tech)	*Will be notified later*
Starting of Classes	*29th August, 2022*
Application Fees	FOR B.TECH: 250 (GEN/OBC) 200 (SC/ST) FOR PH.D 200 (GEN/OBC) 150 (SC/ST)