# **NAGALAND UNIVERSITY**

(A Central University established by the Act of Parliament no. 35 of 1989)



# ADMISSION BROCHURE 2024-2025

SCHOOL OF ENGINEERING & TECHNOLOGY https://nagalanduniversity.ac.in

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#### MESSAGE FROM THE VICE-CHANCELLOR'S DESK



Nagaland University is a Central University established on 6<sup>th</sup> September 1994 by an Act of Parliament No. 35 of 1989. The University has its headquarters at Lumami in Zunheboto District, Nagaland, while its campuses are situated at Meriema, Medziphema and Dimapur (temporary). The School of Engineering & Technology (SET), Nagaland University, is currently located at Dimapur, the commercial hub of Nagaland. Three departments of the School, namely Agricultural Engineering and Technology, Biotechnology, and Information Technology offer both B.Tech. and Ph.D. degree. The other two departments, Electronics and Communications Engineering and Computer Science and Engineering, offer only B.Tech. degree. 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 modifying or enhancing their working quality with emphasis on the practical side of the curriculum. The University recognizes that, with the evolution of technological advancement, new skills will be required 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 to the core of education and making it affordable. Industrial visits and internships are also an integral part of the course at SET. SET, Dimapur has a qualified team of faculty dedicated to training and sharpening the innovative skills of its students in meeting the requirements of the modern world, which is immensely dependent on technology. The University provides all necessary support to the students in pursuing their academic development. The School has adequate infrastructure, including modern classrooms, a library, computer lab, practical and research laboratories with modern equipment, separate hostels for girls and boys, a canteen, etc. Seeing many students passing out from the School of Engineering & Technology getting suitable placements within and outside India is gratifying.

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

(PROF. J.K. PATNAIK) 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. J. K. PATNAIK

**Dean:** PROF. V. K. VIDYARTHI

**Deputy Registrar** DR. ANTHONY V RICHA

I/C Academic & Examinations MR. SHANCHAMO YANTHAN

Associate Dean Student Welfare: DR. IMLITOSHI JAMIR

Head of Dept. Agricultural Engineering & Technology PROF. PRABHAKAR SHARMA

> I/C Dept. of Biotechnology DR. HANUMAN SINGH RATHORE

I/C Dept. of Computer Science & Engineering MR. AKANGJUNGSHI LONGKUMER

I/C Dept. of Electronics & Communication Engineering MRS. BENDANGCHILA LONGKUMER

> Head of Dept. Information Technology PROF. SUJATA DASH

I/C Common Pool DR. HEISNAM ROHEN SINGH

> I/C Placement MR. RAMESH SINGH

Warden, Girl's Hostel MRS. BENDANGCHILA LONGKUMER

> Warden Boys's Hostel MR. WUNGSHIM ZIMIK

System Administrator MR. ANTHONY VISA

Library Professional Assistant MR. JEVITO SHOHE

I/C Sports & Game DR. HEISNAM 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 6<sup>th</sup> 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 29<sup>th</sup> 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.

Department	Offered Degree	Intake/Vac ancy
Agricultural Engineering & Technology	B.Tech	30
	Ph.D	5
Biotechnology	B.Tech	30
	Ph.D	0
	M.Sc	10
Computer Science & Engineering	B.Tech	30
Electronics & Communication Engineering	B.Tech	30
Information Technology	B.Tech	30
	Ph.D	8

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

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 AMENITIES 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**

The 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. Department of Biotechnology also offer M.Sc.

#### 5. CRITERIA FOR ADMISSION

#### 5.1 B.TECH FRESH ENTRY (AFTER 10+2)

Passed 10+2 examination with Physics/ Mathematics / Chemistry/Computer Science/ Electronics/ Information Technology/ Biology/Informatics Practices/ Biotechnology/ Technical Vocational subject/ Agriculture/ Engineering Graphics/ Business Studies/Entrepreneurship

**Agriculture stream (for Agriculture Engineering)** 

Obtained at least 45% marks (40% marks in case of candidates belonging to reserved category) in the above subjects taken together.

OR

Passed min. 3 years Diploma examination with at least 45% marks (40% marks in case of candidates belonging to reserved category) subject to vacancies in the First Year, in case the vacancies at lateral entry are exhausted.

**Discipline specific requirement of subject combinations in 10+2 level:** 

Sl. No	Major Disciplines	Mandatory courses at 10+2 Level	Other relevant course(s) for this discipline	Required Bridge course (Will be offered in First Year of B.Tech)
1	Agriculture Engineering and Technology	Physics, Chemistry OR Agriculture stream	Maths/Biology/Biotechn ology/Agriculture/ Agriculture stream	Mathematics for non- Math/Chemistry for non-Chem
2	Biotechnology	Physics, Chemistry	Biology/Biotechnology	Mathematics for non- Math
3	Computer Science & Engineering	Physics, Mathematics	For remaining single course select any courses out of 14#	Chemistry for non- Chem
4	Electronics & Communication Engineering	Physics, Mathematics	For remaining single course select any courses out of 14#	Chemistry for non- Chem
5	Information Technology	Physics, Mathematics	For remaining single course select any courses out of 14#	Chemistry for non- Chem

#Physics/ Mathematics / Chemistry/ Computer Science/Electronics/Information Technology/ Biology/Informatics Practices/ Biotechnology/ Technical Vocational subject/ Agriculture/ Engineering Graphics/Business Studies/Entrepreneurship

#### 5.2 B.TECH 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

# As per University Grants Commission (Minimum Standards and Procedures for Award of Ph.D. Degree) Regulations, 2022)

https://www.ugc.gov.in/pdfnews/0909572\_Minimum-Standards-and-Procedure-for-Award-of-PhD-Degree.pdf

#### 5.4 M.Sc for department of Biotechnology

An applicant must have passed three-year Degree Course with Honours/Major in Biotechnology/ Botany/Zoology/Chemistry/ any other allied disciplines with 50% marks and for General stream students with 55% in the concerned subject in which admission\ is sought. 5% marks relaxation for reserved category will be considered. Eligible students for Major streams (internally or externally) will be given preference over General stream.

#### 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.

1.	Nagaland	6
2.	Arunachal Pradesh	1
3.	Meghalaya	1
4.	Mizoram	1
5.	Tripura	1
6.	Sikkim	1
7.	Assam	1
8.	Manipur	1
9.	Physically Challenged*	1
10.	University Quota	1
11.	Jammu & Kashmir	1
12.	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 1<sup>st</sup> 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	0
3	Information Technology	8

6.4 M.Sc

Sl. No.	Department	Vacancy
1	Biotechnology	10

#### 7. SELECTION AND ADMISSION

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

#### 7.1 B.Tech (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 12<sup>th</sup> 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 B.Tech (UNIVERSITY QUOTA)

The University quota shall be taken care as per rules.

#### 7.3 B.Tech (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 B.Tech (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 SELECTION FOR ADMISSION INTO M.Sc PROGRAM IS DONE AS MENTIONED BELOW:

1. Selection will be based on their performance in Graduation

#### 7.7 FEES STRUCTURE

FOR B.TECH:

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

#### FEES STRUCTURE TABLE

Sl. No.	FEES	PERIODICITY	AMOUNT (₹) (1st Semester)	AMOUNT (₹) (All Semester)
1	Admission fee	Once	1050/-	-
2	Registration fee	Once	400/-	-
3	Tuition fee	Every Semester	7000/-	7000/-
4	Laboratory fee (as applicable)	Every Semester	1050/-	1050/-
5	Library fee	Every Semester	320/-	320/-
6	Library caution Money (Refundable)	Once	500/-	-
7	Sports fee	Every Semester	60/-	60/-
8	Medical fee	Every Semester	110/-	110/-
9	Examination fee	Every Semester	810/-	810/-
10	Students' activity fee	Every Semester	320/-	320/-
11	Annual Magazine fee	Every Semester	110/-	110/-
12	Students' Aid fund	Once	210/-	-
13	Workshop/Seminar/Conference fee	Once	840/-	-
14	Industrial interface & Technical Fest	Every Semester	500/-	500/-
15	Placement Activities	Once	1500/-	
16	Internet fee	Every Semester	110/-	110/-
17	Department Caution Money (Refundable)	Once	1580/-	-

18	University Development Fund	Once	100/-	-		
	Sub Total		16,570/-	10,390/-		
	FOR HOSTELLERS					
19	Hostel Admission	Once	200/-			
20	Hostel fee	Every Semester	3000/-	3000/-		
21	Hostel Caution Money (Refundable)	Once	1580/-	-		
	Sub Total		4780/-	3000/-		

#### FOR PH.D

Sl. No. Particulars	Particulars	SET		
51. 190.	Farticulars	1st Sem.	Sub. Sem.	
1	Admission fee	1050		
2	Registration fee	400		
3	Tuition fee	2630	2630	
4	Laboratory fee (asapplicable) *	2100	2100	
5	Library fee	370	370	
6	Library Caution Money (Refundable)	1260	-	
7	Sport fee	60	60	
8	Medical fee	110	110	
9	Examination fee	1890	-	
10	Coursework fee	1050	-	
11	Dissertation/ThesisEvaluation fee	12000	-	
12	Students' aid fund	210	210	
13	Department CautionMoney (Refundable)	1580	-	
14	University Development Fund	100	-	
	TOTAL	24810	5480	

## FOR HOSTELLERS

Sl. No.	Particulars	SET	
51. 180.	Particulars	1st Sem.	Sub. Sem.
15	Hostel admission	200	-
16	Hostel fee	3000	3000
17	Hostel Caution Money (Refundable)	1580	-
TOTAL		29590	8480

#### TRANSPORTATION CHARGES

TRANSPORTATION (THOSE AVAILING UNIVERSITY BUS FACILITY) -  $\mathbf{E}_{600/-}$  PER SEMESTER.

- 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.

OTHERS			
1	Identity Card/Duplicate ID Card	100 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)	100 per Day	

#### FOR M.Sc.

**Fees:** Fee structure for M.Sc. Programmes will be at per approved fee structure for other MSc courses offered by NU

Sl. No.	Particulars	1st S	Semester		Subsequent	
1	Admission fee	820	-			
2	Registration fee	440		-		
3	Tuition fee	116	)	1160		
4	Laboratory fee	116	)	1160		
5	Library fee	360		360		
6	Library Caution Money (Refundable)	550		-		
7	Sport fee	70		70		
8	Medical fee	130		130		
9	Examination fee a. Courses with practical	930		930		
10	St dents' activity fee	180		180		
11	Annual magazine fee	70		70		
12	St dents' aid fund	240		240	240	
13	Department Caution Money (Refundable) a. Courses with practical	930	930			
14	University Development Fund	110		_		
	TOTAL	715	0 4300			
	FOR HOSTELLERS					
15	Hostel admission		220		-	
16	Hostel fee		2750		2750	
17	Hostel Caution Money (Refundable)		1740		-	
	TOTAL		4708		2750	
	OTHERS					
1	Identity Card/Duplicate ID Card		110 per card			
2	Repeat of Exams		330 per paper			
3	Late fine - Beyond 7 days of starting the course (For 2nd Semester and subsequent semesters)		110 per day			

#### 7.8 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).

#### 7.9 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 OBTAINED	EQUIVALENT LETTER GRADE	CREDIT POINTS
91 to 100	0	10
81 to 90	А	9
71 to 80	В	8
61 to 70	С	7
51 to 60	D	6
45 to 50	Е	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 (only for B.Tech)

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 at least 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

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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. All changes 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.

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- 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.
- 1. 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

- 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.
- 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.

#### 8.5 Policies for Placement Hiring

- 1. Each admitted student in the final year has to register to appear in placement by filling up the registration form (online: google form) provided by the placement cell. If any student is not registered, it will be considered that the student is not interested in placement and will not be allowed to sit in any placement drive. Registration part will be done towards the end of the 6<sup>th</sup> semester.
- 2. The placement cell will update (placement statistics/recruiters details) on the placement page from time to time on the university website

(<u>https://dimapur.nagalanduniversity.ac.in/placement</u>) to make sure interested recruiters can easily approach the placement cell.

- 3. Eligibility criteria will vary from company to company. The placement cell will inform the students through email/notice regarding eligibility criteria. Each student has to check the email regarding the same actively.
- 4. The placement cell will select two PR (placement representative) every year to communicate easily with students. These PRs must be registered candidates (as mentioned in s.no.1). Each PR must have 60% through (10, 12/diploma, B.Tech.). Each PR is nominated by dept. I/C.If more than two candidates are interested in PR for any department, then the placement coordinator will select the two based on academic performance.
- 5. The placement cell will follow the placement.set@nagalanduniversity.ac.in email id for any communication related to placement activities. Every year placement cell will form a google group with the following pattern, for example, 2023 passing out students <u>btech2023@nagalanduniversity.ac.in</u> Group email id will not be helpful for only placement cell, it will also be easy for dept. in-charges for communicating with passed-out students. In this regard System Admin service may be utilized.
- 6. A student who has registered with the placement cell and is eligible for a particular company must appear in all such placement drives organized by the placement cell. If a student is absent in two placement drives, they will not be eligible to sit in any placement drive organized by the placement cell. For each absence, a student must submit the reason for absence in writing. Further, a student having two consecutives absent, He/She will not be allowed to sit for next two placement drive. If a student is already placed in any placement drive organized by the placement cell may opt not to appear. In addition to this, final decision will be taken by placement committee setup by the Dean.
- 7. During a placement drive, students must attend interviews with all companies they are shortlisted for.
- 8. If a student gets selected by some company/organization, they can also sit in another company's placement drive provided that company provides more package. In addition to this, final decision will be taken by placement committee setup by the Dean.
- 9. In cases where the student wishes to reject/accept an on-campus/off-campus placement offers, they must inform the placement cell in writing.
- 10.Students caught indulging in fraudulent actions, vulgarity, or malpractice of any kind shall be debarred from the entire process. Serious disciplinary actions by appropriate authorities will be taken against such students.
- 11. The students are advised to act professionally and responsibly in all presentations, tests, group discussions, etc., that they attend. Students are expected to dress appropriately for online/offline interviews, discussions, presentations, etc.
- 12.A regular student having foreign nationality, who wishes to sit for campus placements, must inform the company about their nationality. Their application is subject to acceptance by the company /organization. Moreover, the student and the company will do the process of getting a work permit and other formalities.
- 13. If a student is selected by any company, then the student may join or not join the company.

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- 14. When students are sent for off campus, the placement cell will decide the list of students either based on academic performance or test.
- 15. Arrangement of fooding /lodging will be provided for recruiters in the campus guest house.
- 16. When students are sent for off-campus with proper approval of placement cell, TA/DA will be arranged as per university norms.

#### 9. DEPARTMENTS

#### 9.1. DEPARTMENT OF AGRICULTURAL ENGINEERING AND TECHNOLOGY

#### Department HOD: Prof. Prabhakar Sharma

#### E-mail: agrienggtech@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

#### 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	Prof Prabhakar Sharma	Professor & Head
2	Dr Pramod Ch. Dihingia	Assistant Professor
3	Er Wungshim Zimik	Assistant Professor
4	Dr Ningthoujam Manda Devi	Guest Faculty
5	Dr Grace Nengzouzam	Guest Faculty
6	Er Visuto Khatso	Guest Faculty
7	Er Mulukhoto Khamo	Guest Faculty

#### 9.2. DEPARTMENT OF BIOTECHNOLOGY

#### Department In-charge: Dr. Hanumant Singh Rathore

#### E-mail: biotech@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 also offer Ph.D and M.Sc programme.



#### 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	Mr. Thrilong A Sangtam	Guest Faculty
5	Dr. Limasunep Longkumer	Guest Faculty
6	Ms. Temjennnula Longkumer	Guest Faculty

#### 9.3. DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Department In-charge: **Mr. Akangjungshi Longkumer** E-mail: **cse@nagalanduniversity.ac.in** 

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

Recorded video lectures from eminent professors for various subjects are also available to the students. These video lectures were provided under the program NPTEL (National Programme on Technology Enhanced Learning) an initiative started by the seven IIT and IISc. This programme not only helps the student in getting additional learning resources from eminent professors but also helps the faculty to impart quality education to the

students. SWAYAM (Study Webs of Active-Learning for Young Aspiring- Minds) courses are also introduced to enhance the learning process for students.



Highlights of Research activities and Thrust areas

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- Computer System (Operating System, Distributed System and Database Management System)
- Software Engineering and Software Testing
- Applicable & System software
- Wireless Technology
- Networking and Security
- Data Structure, Algorithms and Programming
- Internet and Web technology
- Computer Architecture and Organization
- Artificial Intelligence and Machine Learning
- Internet of Things

#### TEACHING FACULTY

SL.		
NO	NAME OF THE FACULTY	DESIGNATION
1	Mr. Akangjungshi Longkumer	Assistant Professor
2	Mr. Chenlep Yakha Konyak	Assistant Professor
3	Mr. Ramesh Singh	Assistant Professor
4	Ms. Yanthungbeni Humtsoe	Guest Faculty
5	Mr. Imlitoshi Jamir	Guest Faculty
6	Mr. Aosungkum	Guest Faculty

#### 9.4. DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Department In-charge: **Mrs. Bendangchila Longkumer** E-mail: **ec@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

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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	Ms. Ayangla Jamir	Assistant Professor
2	Ms. Bendangchila Jamir	Assistant Professor
3	Ms. Imesangla Ao	Assistant Professor
4	Mr. Thungchanthung Kikon	Guest Faculty
5	Dr. Mokala Tzukdir	Guest Faculty
6	Dr. Salam Jimkeli Singh	Guest Faculty

#### 9.5. DEPARTMENT OF INFORMATION TECHNOLOGY

#### Department HOD: Prof. Sujata Dash E-mail: **it@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. 26



#### VISION:

Information 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	Prof. Sujata Dash	Professor & Head
2	Mr. Shanchamo Yanthan	Assistant Professor
3	Mr. Teisovi Angami	Assistant Professor
4	Mr. Sudipta Patowary	Assistant Professor
5	Mr. Sourav Hazarika	Assistant Professor
6	Dr. Heisnam Rohen Singh	Assistant Professor

#### 9.6 COMMON POOL

#### In-charge: **Dr. Heisnam Rohen Singh** E-mail: **cp\_set@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.



#### LABORATORY:

- 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. Sanjay Sarkar	Mathematics
3	Ms. Magdalene K Zhimo	Mathematics
4	Mr. MaongtemsuPongener	Mechanical Engineering
5	Mr. Binay Kumar Yadav	Electrical engineering
6	Ms. Watisangla T Aier	English
7	Mr. Imsumanen S Jamir	Yoga and sports
8	Mr. Lanuakum A Longchar	Physics

# **10. COURSE STRUCTURE**

### 10.1. B.TECH. FIRST YEAR (COMMON TO ALL DISCIPLINE)

#### 1<sup>st</sup> SEMESTER

SL/	Subject	a N	Contac	Contact hours per week			
No	Code	Course Name		Т	Р	Credits	
The	ory						
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	
Prac	tical						
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	

#### 2<sup>nd</sup> SEMESTER

SL/	Subject		Contact I			
No	Code	Course Name	L	Τ	P	Credits
Theo	ory		-			
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
Prac	tical					
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
Total Practical						5
Total of Semester						21

G2T07 (L -2, T-0, P-0) Yoga and sports will be offered for two department in 1<sup>st</sup> semester and remaining in 2<sup>nd</sup> semester

# 10.2 AGRICULTURAL ENGINEERING & TECHNOLOGY (THIRD SEMESTER ONWARDS] <u>SECOND YEAR</u>

		3 <sup>rd</sup> SEMESTER	R					
SL/	Subject	Contact hours per week						
No	Code	Course Name	L	Т	Р	Total	Credits	
Theo	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 Material & Food Quality	2	-	-	2	2	
7	AE3T06	Machine drawings & Computer graphics	2	-	-	2	2	
				Total	Theory	18	18	
Pract	tical							
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	
				Гotal Pr	actical	8	4	
			Total o	of Seme	ster	26	22	

		4 <sup>th</sup> SEMESTER						
SL/	Subject		Cont	act hou	rs per w	eek		
No	Code	Course Name	L	Т	Р	Total	Credits	
Theo	ory							
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	
Prac	tical							
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							
			Total	l of Sen	nester	24	21	

#### THIRD YEAR 5<sup>th</sup> SEMESTER

SL/	Subject		С	onta	act hou	rs per w	veek	
No	Code	Course Name	L		Т	Р	Total	Credits
The	ory							
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
Prac	ctical							
1	AE5L01	Farm Machinery & Equipment Lab	-			2	2	1
2	AE5L02	Ground Water, Wells & Pumps Lab	-			2	2	1
3	AE5L03	Drying & storage engineering Lab	-			2	2	1
4	AE5L04	Soil & Water conservation Engineering	-			2	2	1
		Lab						
			Total Practical			8	4	
			То	Total of Semester			25	21

SL/	Subject		Cor	Contact hours per week					
		Course Name					Credits		
No	Code		L	Т	Р	Total			
The	ory								
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		
Pra	ctical								
1	AE6L01	Tractors systems & controls Lab	-	-	2	2	1		
2	AE6L02	Irrigation and Drainage Engineering I Lab	-	-	2	2	1		
			T	Total Practical		4	2		
			Total	Total of Semester			18		

#### 6<sup>th</sup> SEMESTER

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

#### FOURTH YEAR 7<sup>th</sup> SEMESTER

SL/	Subject		Con	tact ho	urs per	week	
		Course Name					Credits
No	Code		L	Т	Р	Total	
The	ory				-		
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	2	-	-	2	2
		Engineering					
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
Prac	ctical						
1	AE7L01	Mechanics of Tillage & Traction Lab	-	-	2	2	1
2	AE7L02	Unit Operation in Dairy and Food	-	-	2	2	1
		Engineering Lab					
	4	2					
			Total	of Sem	ester	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

#### 8<sup>th</sup> SEMESTER

SL/	Subject		Con	tact ho	urs per	week	
		Course Name					Credits
No	Code		L	Т	Р	Total	
Theo	ory						
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
Prac	ctical						
1	AE8L01	Tractor design & testing Lab	-		2	2	1
2	AE8L02	Food Process and packaging technol- ogy Lab	-		2	2	1
3	AE8L03	Seminar	-		2	2	1
	6	3					
	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 Semes	ter					
Theory							
SL/N	Subject	Course Name	C	lontac	t hou	rs per	Credits
0	Code			,	week		
			L	Т	P	Total	
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	<b>Engineering Economics</b>	2	-	-	2	2
			Total Theory 17				17
Practic	al						
1	BTB311	<b>Biochemistry Lab</b>	-	-	4	4	2
2	BTB312	Microbiology Lab	-	-	4	4	2
3	CSB312	Data Structures & algorithm Lab	-	-	3	3	1.5
		11	5.5				
		28	22.5				
	Ath Come og						

	<u>4<sup>th</sup> Semester</u>						
Theory	y						
SL/N	Subject	Course Name	(	Conta	ct hou	rs per	Credits
0	Code				week		
			L	Т	Р	Total	
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	<b>BTB404</b>	Genetics	3	-	-	3	3
5	BTB405	Green Biotechnology and Pollution Abatement	3	-	-	3	3
6	BTB406	Structural Biology	3	-	-	3	3
			То	tal Th	eory	18	18
Practic	cal						
1	BTB411	Molecular Biology Lab	-	-	4	4	2
2	BTB412	Plant Biotechnology Lab	-	-	4	4	2
		ctical	8	4			
		26	22				

5<sup>th</sup> Semester

Prospectus 2024-25

a E								
35	Theory	Y						
	SL/N	Subject	Course Name	Co	ntact l	nours p	per week	Credits
	0	Code		L	Т	Р	Total	
	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
			<u> </u>	Τc	otal Th	neory	17	17
	Practic	al						
	1	BTB511	Bioinformatics & Computational Biology Lab			4	4	2
	2	BTB512	Immunology & Immunotechnology Lab			3	3	1.5
	3	BTB513	Training	-	-	-	-	2
Total Practical								
				otal c	of Sem	ester	24	22.5

# 6<sup>th</sup> Semester

Theo	ry						
SL/	Subject	Course Name	C			rs per	Credit
No	Code				week		S
			L	Т	P	Total	
1	BTB601	Recombinant DNA	3	-	-	3	3
		Technology and					
		Applications					
2	BTB602	Bioseparation	3	-	-	3	3
		Engineering					
3	BTB603	Synthetic &	3	-	-	3	3
		Systems Biology					
4	BTB604	Animal Biotechnology	3	-	-	3	3
5	BTB605	PROFESSIONAL	3	-	-	3	3
		ELECTIVE					
		COURSE[PE]-II					
6	BTB606	OPEN SUBJECT-II	3	-		3	3
			То	tal Th	eory	18	18
Pract	tical						
1	BTB611	Bioseparation	-	-	4	4	2
		Engineering Lab					
2	BTB612	Recombinant DNA	-	-	4	4	2
		Technology Lab					
		ctical	8	5			
		То	tal o	f Sem	ester	26	22

7<sup>th</sup> Semester

The	ory							
SL /N	Subject Code	Course Name	C		et hou week	rs per	Credits	
0			L	Т	Р	Total		
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	-	-	3	3	
		1	To	otal Th	neory	18	18	
Prac	tical							
1	BTB711	Bioprocess Engineering Lab			4	4	2	
2	BTB712	Project-I			4	4	2	
3	BTB713	Colloquium			2	2	1	
		ctical	10	5				
		ester	28	23				

	8th Sem	<u>ester</u>					
Theorem	ry						
SL/	Subject	Course Name	C	ontac	t hou	rs per	Credits
No	Code				week		
			L	Т	P	Total	
1	BTB801	Constitution of India*	2			2	0
	BTB802	PROFESSIONAL	3	-	-	3	3
		ELECTIVE					
		COURSE[PE]-IV					
	BTB803	OPEN SUBJECT-IV	3	-	-	3	3
Pract	ical						
1	BTB811	Project-II (Biotech	-	-	18	18	9
		Industrial or Biotech In-					
		house Project or Bio-					
		Entrepreneurship)					
		18	9				
		To	tal o	f Sem	ester	26	15

Constitution of India\* student may opt offline/online course

## PROFESSIONAL ELECTIVE COURSE\*[PE]:

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

# **OPEN SUBJECTS [OS]\***

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

			Contact hours per			
SL/	Subject Code	Course Name		week		Credits
No			L	Г	Р	
Theo	ory			1	I	
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
Prac	tical					
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

# **10.4 COMPUTER SCIENCE & ENGINEERING (THIRD SEMESTER ONWARDS)**

## SECOND YEAR 3<sup>rd</sup> SEMESTER

		4 <sup>th</sup> SEMESTER				
SL/			Contact hours per			
	Subject Code	Course Name		week		Credits
No			L	Г	Р	
The	ory					
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
Prac	tical			•	•	
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

5<sup>th</sup> SEMESTER

SL/			Cont							
	Subject Code	Course Name		week		Credits				
No			L	Т	Р					
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				
Prac	tical									
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				

6 <sup>m</sup> SEMESTER								
SL/			Contact	hours pe	r			
	Subject Code	Course Name		week		Credits		
No			L	Т	Р			
Theo	ory							
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		
Prac	tical							
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		

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-th

#### FOURTH YEAR 7<sup>th</sup> SEMESTER

Contact	hours pe week		
	week		
			Credits
L	Т	Р	
3	0	0	3
3	0	0	3
3	0	0	3
3	0	0	3
0	0	12	6
0	0	3	1.5
0	0	0	0 (No credit)
12	0	15	19.5
	3 3 3 3 3 0 0 0 0	3     0       3     0       3     0       3     0       3     0       0     0       0     0       0     0       0     0       0     0	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$

\* 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

		8 <sup></sup> SENIESTER							
SL/			Contact	hours p	er				
SL/	Subject Code	Course Name	week Credits						
No			L	Т	Р				
Theo	ory								
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			
1	<b>Total Credits</b>		11	0	16	16			

8<sup>th</sup> SEMESTER

**Total Credits = 42+118= 160** 

SI.	OF ELECTIV						Total
No.	Course Code	Semester	Course Title	L	Т	Р	Credits
<b>NO.</b> 1	CSB621	6	Data Mining	3	0	0	3
2	CSB621 CSB622	6	Data Mining Data Analytics	3	0	0	3
3	CSB622 CSB623	6	Information Retrieval	3	0	0	3
4	CSB623 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	EC0T00 EC8T01	6	Digital Image Processing	3	0	0	3
8	MAT6T1	6	Operations Research	3	0	0	3
0	MATUIT	0	Operations Research	5	0	0	5
		1	Design & Management of Computer				
1	CSB721	7		3	0	0	3
			Network				
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 &	3	0	0	3
			parallel pro-gramming				
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)

			3 <sup>-4</sup> Semester							
SL.	Subject	T		Ţ	E	5	a li	Contact		
No.	Code	Туре	Course Name	L	T	Р	Credits	Hrs/Week		
THE	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		
PR	ACTICAL									
7	EC3L01	PC	Electronic Devices & Circuits Lab	-		2	1	2		
8	EC3L02	PC	Digital Electronics & Logic Design	-		3	1.5	3		
			Lab							
9	ITB312	OE	Data Structures Lab	-	-	3	1.5	3		
Total							21	25		

# SECOND YEAR

## 3<sup>rd</sup> Semester

4 <sup>th</sup> Semester											
SL.	Subject	Туре	Course Name	L	Т	Р	Credits	Contact			
No.	Code	- )   -						Hrs/Week			
THE	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	-		3	3			
5	EC4T05	PC	Electronic Measurements & Instrumentation	3	-		3	3			
6	MAT4T1	BS	Mathematics –IV	3	-		3	3			
PR	ACTICAL										
7	EC4L01	PC	Microprocessor Lab		-	3	1.5	3			
8	EC4L02	PC	Linear Integrated Circuits Lab		-	3	1.5	3			
Total	Total 21 24										

# THIRD YEAR

# 5<sup>th</sup> Semester

SL.	Subject	Tuno	Course Name	L	Т	Р	Credits	Contact
No.	Code	Туре		L	1	P	Credits	Hrs/Week
THE								
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	3			3	3
5	EC5T05	PC	Control Systems	3			3	3
6	EC5T06	OE	Management & Entrepreneurship	3			3	3
PR	ACTICAL							
7	EC5L01	PC	Microcontroller Lab			3	1.5	3
8	EC5L02	PC	VHDL Lab			3	1.5	3
Total							21	23

	6 <sup>th</sup> Semester											
SL.	Subject	Tuno	Course Name	L	Т	Р	Credits	Contact				
No.	Code	Туре		L	I	1	Cituits	Hrs/Week				
THE	ORY											
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				
PRA	ACTICAL											
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

## 7<sup>th</sup> Semester

SL.	Subject	Туре	Course Name	L		Т	Р	Credits	Contact		
No.	Code								Hrs/Week		
THE	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		
PRAG	CTICAL										
4	EC7SM	PC	Colloquium*	-				1	-		
5	EC7L01	OE	Microwave Engineering Lab	-			2	1	2		
6	EC7PJ	PC	Project**					6	6		
Total	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.

8 <sup>th</sup> Semester									
SL. No.	Subject Code	Туре	Course Name	L	Т	Р	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	МС	Constitution of India(MC)				(No Credit)		
PRAC	PRACTICAL								
5	EC8PJ	PC	Project			16	8		
Total							17		

**Total Credits = 42+118= 160** 

## Electives (I, II, III & IV)

Subject				Preferred
0.1	Course name	Credit	L:P:T	<b>G</b> .
Code				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	T	<u></u>		Preferred
Code	Туре	Course name	Credit	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/			Contact	hours p	er	
SL/	Subject Code	Course Name		week		Credits
No			L	Т	Р	
Theo	ory		1		I	
1	ECB303	Digital Electronics & Logic Design	2	1	-	3
2	ITB301	Object Oriented Programming	3	-	-	3
3	ITB302	Computer Organization & Architecture	3	-	-	3
4	ITB303	Data Structures	3	-	-	3
5	MAT3T2	Differential Calculus	3	1	-	4
		Total	Credits	(The	eory)	16
Prac	tical					
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)					
			To	tal Cre	dits	20.5

		SEMESTER 4									
				Contact	hours p	er					
SL/	Subject Code	Course Name			moole		Cradita				
No	Subject Code				week		Credits				
110				L	Г	Р					
Theo	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	(The	ory)	16				
Prac	tical										
1	ITB411	Algorithm Analysis and Design Lab		-	-	3	1.5				
2	ITB412	Operating System Lab		-	-	3	1.5				
3	ITB413	Computer Graphics Lab		-	-	3	1.5				
			Total	Cred	lits(Prac	tical)	4.5				
	Total Credits 2										

## **SEMESTER 5**

SL/			Contact	hours pe	r	
SL/	Subject Code	Course Name		Week		Credits
No			Ĺ	Т	Р	
Theo	ory		I	I	Ι	
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	(The	eory)	16
Pract	tical					
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	Crec	lits(Prac	tical)	4.5
			То	tal Cree	lits	20.5

# SEMESTER 6

SL/				Contact 1	hours per	r	
SL/	Subject Code	Course Name			week		Credits
No				L	Т	Р	
Theo	ory			I		1	
1	ITB601	Industrial Economics & Principles of Man	agement	3		-	3
2	ITB602	Web Technology		3	-	-	3
3	ITB603	Software Engineering		3		-	3
4		Elective II		3			3
			Total	Credits	(The	eory)	12
Pract	tical						
1	ITB611	System Programming Lab			1	3	2.5
2	ITB612	Web Technology Lab				3	1.5
3	ITBPJ1	Project (Minor)				6	3
			Total	Cred	its(Pract	tical)	7
				Tot	al Crec	lits	19

	SEMESTER 7										
SL/ No	Subject Code	Course Name		Contact L	hours p week T	er P	Credits				
Theo	ory										
1	ITB701	Machine Learning		3	-	-	3				
2		Elective III		3	-	-	3				
3		Elective IV		3	-	-	3				
4		Open Elective I		3	-	-	3				
			Total	Credits	(The	eory)	12				
Prac	tical										
1	ITBCQ1	Colloquium*		-	-	-	-				
2	ITBPJ2	Project (Major) #		-	-	12	6				
			Total	Cred	its (Prac	ctical)	6				
				Tot	tal Cre	dits	18				

FOURTH YEAR SEMESTER 7

\* 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
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SL/			Contact	hours p	er	
	Subject Code	Course Name		week		Credits
No			L	Г	Р	
Theo	ory					
1		Elective V	3			3
2		Open Elective II	3			3
3	G8T01	Constitution of India (Mandatory Course)	-			-
		Total	Credits	(The	eory)	6
Prac	tical					
1	ITB811	Communication Skills Lab	-		3	1.5
2	ITBPJ3	Project (Major) **	-		20	10
		Total	Credits	(Practic	al)	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								
	Course Name	Credits	Lectures	Tutorials	Practical			
code		3	3					
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	3	3		-			
	Knowledge Management							
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		-			
	Cryptography and Information							
ITBEL19	~ ·							
	Security							
	Software Quality Assurance	3	3	-	-			
	Soft Computing	3	3	-	-			
	Blockchain Architecture & Design	3	3	-	-			
	Advanced Database Systems	3	3	-	-			
EC8T01	Digital Image Processing	3	3	-	-			

#### LIST OF OPEN ELECTIVE COURSES

Subject					
	Course Name	Credits	Lectures	Tutorials	Practical
code					
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 COURSE WORK

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

## AGRICULTURAL ENGINEERING AND TECHNOLOGY

#### 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

SI 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

# COURSE STRUCTURE FOR M.Sc. PROGRAM in Biotechnology

## First Semester

Theory							
SL/No	Subject	Course Name	Co	ntact h	ours pe	r week	Credits
	Code		L	Т	Р	Total	
1	BTM101	Biochemistry	3			3	3
2	BTM102	Cell and Molecular Biology	3			3	3
3	BTM103	Plant and Animal Biotechnology	3			3	3
4	BTM104	Microbiology	3	-		2	3
5	BTM105	Genetics	2			2	2
6	BTM106	Basics of Mathematics and Statistics	2			2	2
7	BTM107	Basics of Chemistry and Physics	2			2	2
				Total T	heory	18	18
Practical							
1	BTB111	Biochemistry and Analytical Techniques Lab			4	4	2
2	BTB112	Microbiology Lab			4	4	2
3	BTB113	Plant and Animal Biotechnology Lab			4	4	2
Total Practical						12	6
	Total of Semester						

# Second Semester

Theory							
SL/No	Subject	Course Name	Co	ntact h	ours pe	r week	Credits
	Code		L	Т	Р	Total	
1	BTM201	Genetic Engineering	3			3	3
2	BTM202	Immunology	3			3	3
3	BTM203	Bioinformatics	3			3	3
4	BTM204	Genomics and Proteomics	3	-	-	2	3
5	BTM205	Molecular Diagnostics	2			2	2
6	BTM206	Research Methodology and Scientific Communication Skills	2			2	2
7	BTM207	Elective I	2			2	2
				Total T	Theory	18	18
Practical							
1	BTB211	Seminar			4	4	2
2	BTB212	Molecular Biology and Genetic Engineering Lab			4	4	2
3	BTB213	Immunology Lab			4	4	2
	Total Practical						6
	Total of Semester						24

## Third Semester

Theory							
SL/No	Subject	Course Name	Co	ntact h	ours pe	r week	Credits
	Code		L	Т	Р	Total	
1	BTM301	Bioprocess Engineering and Technology	3			3	3
2	BTM302	Emerging Technologies	3			3	3
3	BTM303	Critical Analysis of Classical Papers	2	1		3	3
4	BTM304	Bioentrepreneurship	2			2	2
5	BTM305	Intellectual Property Rights, Biosafety and Bioethics	3			2	3
6	BTM306	Project Proposal Preparation and Presentation	2			2	2
7	BTM307	Elective II	2			2	2
				Total T	heory	18	18
Practical							
1	BTB311	Bioprocess Engineering and Technology Lab			4	4	2
2	BTB312	Bioinformatics Lab			4	4	2
3	BTB313	Dissertation-I	-	-	4	4	2
			Τc	otal Pra	ctical	12	6
Total of Semester							24

## Fourth Semester

Practical								
SL/No	Subject	Course Name	Contact hours per week			Credits		
	Code		L	Т	Р	Total		
1	BTB411	Dissertation-II			48	48	24	
Total Practical							24	
Total of Semester							24	

## **Electives:**

1. Biological Imaging | 2. Computational Biology | 3. Drug Discovery and Development | 4.

Environmental

Biotechnology | 5. Microbial Technology | 6. Nanobiotechnology | 7. Protein Engineering | 8. Vaccines

**Total Credit: 96** 

# ACTIVITIES



## ACTIVITIES



#### **CONTACT US**

#### **ADMINISTRATIVE OFFICE:**

## NAGALAND UNIVERSITY RESIDENTIAL CAMPUS, LANDMARK COLONY, DIMAPUR – 797112, NAGALAND

## ACADEMIC COMPLEX:

SCHOOL OF ENGINEERING & TECHNOLOGY, NAGALAND UNIVERSITY, D.C COURT JUNCTION, DIMAPUR – 797112, NAGALAND

#### Admission Convenor: Dr. Pramod Ch. Dihingia: 9531211665 Admission committee member:

Mr. Shanchamo Yanthan: 8731826326 Dr. Hanumant Singh Rathore: 9402992640 Mrs. Bendangchila Longkumer :9774066061 Mr.Ramesh Singh :7906748596

Email:

set.admin@nagalanduniversity.ac.in Website: www.nagalanduniversity.ac.in Online Application Link: https://nagalanduniversity.ac.in/English/Admission

## IMPORTANT DATES AND APPLICATION FEES

Starting of online Application (B.Tech and Ph.D)	10 <sup>th</sup> April, 2024				
Last date for online form submission (B.Tech, Ph.D, M.Sc)	12 <sup>th</sup> July, 2024				
Declaration of merit list(B.Tech, M.Sc)	16 <sup>th</sup> July 2024				
Date of Counselling and Admission(B.Tech, M.Sc)	25 <sup>th</sup> July 2024				
Declaration of shortlisted candidates for Entrance Exam and Interview (Ph.D)	20 <sup>th</sup> July 2023				
Entrance exam and Interview (Ph.D)	24 <sup>th</sup> July, 2023, 10 am, Academic complex				
Starting of classes for B.Tech. / Ph.D/ M.Sc	31 <sup>st</sup> July, 2023				
Application fors	FOR B.TECH: 250 (GEN/OBC) 200 (SC/ST) FOR PH.D: 200 (GEN/OBC)				
Application fees	150 (SC/ST) FOR M.Sc: 200 (GEN/OBC) 150 (SC/ST)				