

Academic Regulations
School of Agricultural and Bio-Engineering

B. Tech. Dairy Technology



Centurion
UNIVERSITY

Shaping Lives...
Empowering Communities...

School of Agricultural and Bio-engineering
Centurion University of Technology and Management

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About School of Agricultural and Bio-Engineering

The School of Agricultural and Bio-Engineering (SoABE) was established in 2013 in the aspirational and left-wing extremism affected district of South Odisha by Centurion University of Technology and Management (CUTM) at its Paralakhemundi campus, Gajapati district, Odisha.

The school comprises of three departments, Agricultural Engineering, Dairy Technology and Phytopharmaceuticals. The department of Agricultural Engineering was established in 2012 followed by Dairy Technology and Phytopharmaceuticals in the year 2018 and 2019, respectively. The mandate of the school is to provide support to the farming community, research & development organization and establishing industrial linkages. The prime objective of the school is to produce globally competitive graduates in the discipline of Agricultural Engineering, Dairy Technology and Phytopharmaceuticals. In addition to that, the school also focuses on developing technologies in agricultural mechanization, agricultural process development & equipment design and land & water management.

At SoABE, students are offered education in Agricultural Engineering and Dairy Technology, as per ICAR 5th Dean's committee recommendations and CBCS systems, through different departments such as Agricultural Engineering and Dairy Technology. Agricultural Engineering department has three sub-departments i.e., Food Process Engineering, Farm Machinery and Power, Soil and Water Conservation Engineering. Curriculum for Phytopharmaceuticals have been formulated in collaboration with Himalaya Wellness organization pertaining to the needs of Industrial sector. The school has 3 departments i.e., Agricultural Engineering, Dairy Technology and Phytopharmaceuticals. Each Department has well equipped laboratories for meeting the needs of practical learning and experiment. There are 4 laboratories namely Food Process Engineering, Advance Food Process Engineering, Soil and Water Conservation, Farm Machinery and Power Lab. In addition to that, there are fields for operation of farm machineries and live stations for dairy and milk processing and baking of cereal products. Core Phytopharmaceutical lab facilities related to phytochemistry, pharmacology, pharmacognosy, basic extraction techniques etc., are available to students which will enable them to build strong technical and practical knowledge.

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**Regulations Governing
B. Tech, Dairy Technology, Programme of
School of Agricultural and Bio-Engineering
Centurion University of Technology and Management**

1. Scope

The provisions indicated in this document shall be applicable for governing the B.Tech., Dairy Technology course study and students admitted from 2018-19 Academic Year leading to the award of B. Tech Degree from School of Agricultural and Bioengineering (SoABE), Centurion University of Technology and Management, Odisha.

2. Definitions

2.1 Duration of B. Tech, Dairy Technology

The Duration of B. Tech, Dairy Technology programme is 4 academic years. The student has to complete this degree programme in a maximum duration of 8 academic years.

2.2 Choice Based Credit System

The Choice Based Credit System (CBCS) is made available to all Engineering students (Excluding Agriculture).

BASKET STRUCTURE (Regular B. Tech Dairy Technology: 4 years)

Basket	Basket Category	Minimum Credits to be acquired	Scope
I	Foundation Courses in Sciences	17	Choice
II	Foundation Courses in Humanities & Management	12	Choice
III	Smart Stack	25	Core
IV	IV.A Foundation Engineering Courses	26	Core
	IV.B Core Dairy Technology s	64	Core
	IV.C Summer Training one month (2*3)	6	Core
V	Domain Courses (Project, Industrial Internship).	30	Choice
	Total Credits	180	

2.3 Guidelines

- At the time of joining the University, the student need not be constrained by the engineering discipline she/he has chosen. The student has the flexibility to choose the

required Credit from different baskets of Subjects, as she/he moves from one semester to next and graduate in her/his discipline(s) of interest.

- The student can choose her/his pace of Credit Acquisition based on a predetermined academic plan, with the support of faculty mentor.
- The entire syllabus is divided into Baskets of subjects comprising of Foundation Courses in Sciences (Basket I), Humanities & Management Sciences (Basket II), and Smart Stack (Basket III); Foundation Engineering Courses (Basket IV.A); Core Dairy Technology courses (Basket IV.B), Summer Internship (Basket IV.C) and Domain Centric Courses Sciences (Basket V).
- From a portfolio of courses in each Basket, a student has the option of choosing any combination of Subjects, fulfilling minimum Credit requirement from that Basket.
- There is no limit on the number of Credits to be registered in any semester. However, while offering courses, all the subjects must be set in timetable without overlap and a subject must have minimum strength of students to offer. For the award of degree in a particular discipline/branch, a regular B. Tech. Dairy Technology student has to acquire 180 Credits, complete the requisite Credits from each basket.
- The student has the flexibility to decide the duration of his/her degree program completion period. However, the maximum duration that a student can take to graduate shall not be more than 8 years from the date of registration to the degree program.
- Subjects are divided in to different types, e.g., Theory, Practice, Project, Theory & Practice, Theory & Project, Practice & Project, and Theory & Practice & Project. A Student has no restriction on crediting any number of Subjects from any type. The student can obtain a certificate of acquisition of Skill for most of the Practice Subjects.
- A student must pass in all prerequisite subject(s), if any, before registering for a particular subject.
- While the student has the option of exercising her/his choice in crediting a subject, the same will not be offered by the University, if a minimum number of students do not register for the said subject. The concerned department/faculty will notify the minimum student requirements, based on their specific need.
- The CBCS is not for selecting a subject on the basis of how easy or difficult it is, but on the basis of student's goal of getting right employment/higher education/entrepreneurship.

Accordingly, for every student, a dynamic course plan, aligned to his/her goal, needs to be in place.

- A student has the option of dropping a subject (midway/at the end of semester after failure) and register for a new subject of relevant basket in subsequent semester and fulfils the credit requirements.

2.4 Academic Year

Each academic year is divided into two semesters. The 1st (Autumn) semester is during the months of July to December and 2nd (Spring) semester is during months of January to June.

2.5 Semester

The duration of each semester shall be at least 100 days of instruction, excluding semester examinations.

2.6 Credit Hours

Each credit hour represents one-hour lecture or two hours of laboratory work per week in a semester. It is also known as semester credit.

2.7 Academic Calendar

Each year, the University shall draw out a calendar of academic and associated activities, which shall be adhered to. Details of curricula and syllabi shall be as decided by the Academic Council with provision for modification from time to time as per the needs of specializations concerned. It will be available in the University website.

3. Admission

In order to be eligible for admission into B. Tech, Dairy Technology, a student should have passed +2 Science examinations with Physics, Chemistry and Mathematics with following percent of marks in these subjects.

- | | |
|------------------------|-----|
| i. General Candidates: | 50% |
| ii. SC and ST: | 40% |

4. Admission and Registration

4.1 Fees and Documents for Registration: In order to be registered as a student of the university a candidate selected for admission into B. Tech, Dairy Technology, has to pay the fee prescribed by the University as mentioned below and furnish the following documents at

the time of admission.

- i. Admission fees, Academic fees, Examination fees, Hostel fees, Transport fees, fee for Food and any other fee as may be decided by the University.
- ii. Original Rank card/ Score card of State/National/Indian Council of Agricultural Research (ICAR) Entrance examination.
- iii. 10th Class Board Certificate and Mark sheet.
- iv. Higher Secondary Certificate and Mark sheet
- v. Original College Leaving Certificate (CLC)/Transfer Certificate (TC)
- vi. Original Migration Certificate
- vii. Caste Certificate
- viii. Original Conduct Certificate
- ix. Income Certificate
- x. Residential Certificate
- xi. Medical Fitness Certificate
- xii. Blood Group Certificate
- xiii. Six coloured passport size photographs
- xiv. Original money receipt

4.2 Provisional Registration

4.2.1 A candidate who for any reason is unable to submit any of the documents required under clause 4.1 may, with special permission of the Registrar, be admitted and registered provisionally on payment of the prescribed fees, subject to production of the wanting documents/certificates within a stipulated period, failing which admission will be cancelled. A candidate who could not submit the migration certificate at the time of admission must submit the same before appearing the final semester examination, failing which he/she will not be allowed to appear the examination.

4.2.2 A candidate selected for admission, failing to register in the prescribed date, shall forfeit his/her seat and such seats shall be offered to other candidates in the waiting list of subsequent dates of admission and notified in the admission notice.

4.3 Provisional Registration of Continuing Students

A continuing student who cannot register on the prescribed date due to illness or other unavoidable circumstances for which sufficient proof will be given to the satisfaction of the Dean, may obtain provisional registration by paying the required fees by posts on or before the prescribed date of registration. Such a student shall have to complete other aspects of registration within one week from the date of registration, failing which his/ her provisional registration shall be cancelled and all fees paid by him/her shall be forfeited.

4.4 Late Registration

A continuing student who does not register on the scheduled date of registration shall be required to pay a late registration fee at the rate of Rs.100 per day of late. Late registration as per regulation shall not be permitted after seven working days from the scheduled date of registration for any semester. However, University may in very special cases, permit late registration within 15 days on payment of fine of Rs 2000/- in addition to the late registration fee as per regulation.

4.5 University Registration Card

A student is issued University registration card after admission process. University registration number continues to be his/her registration number for all examinations during his/her tenure of study. This card is also essential for attending classes in college and appearing in examinations. This is the most important document and the student must take care of it. Duplicate university registration card will be issued only after recommendation by the Dean of the school on paying the prescribed fees.

4.6 Course wise Registration

- a.** All registrations for a course shall be done within the stipulated period from the list of courses notified from year to year or laid down in the semester calendar under the authority of the Academic Council. The date of registration as notified or laid in the semester calendar shall not be changed under any circumstances without approval of the Academic Council.
- b.** Prior to registration, the student should have cleared all fees and arrears due to University, Department, Hostel, Library, etc.

5. Students Advisory System

5.1 The newly admitted as well as continuing students shall present themselves before the Deans/ HOD of the respective departments in the beginning of each semester on date as

prescribed in the prospectus, semester calendar or notified separately, for orientation and advice. The Dean shall assign the students group to different staff Advisors (Mentors).

5.2. The Advisor should discuss regarding course curriculum and other regulations in detail with the student group.

The Advisor (Mentor) shall have periodical meeting with the students and advise them towards maintaining good academic standards. One period per week may be allotted for such meeting. The advisor should bring to the notice of the concerned Dean, the problems of the students that require special measure.

6. Number and duration of classes

- i. The number of classes in a course per week shall be equal to the number of credit hours, allotted for that course.
- ii. The duration of the lecture class shall not be less than 60 minutes.
- iii. The duration of practical class shall be 2 hours for Lab.
- iv. A theory class shall ordinarily consist of 60-65 students.
- v. A practical class shall ordinarily consist of 30-35 students.

7. Attendance

7.1. A student is eligible to appear in a semester examination provided he/she attends at least 75% of classes in each and every subject. In case the student fails to have 75% attendance, he/she will not be allowed to appear for that particular subject or laboratory.

The attendance is considered from the date of commencement of classes as per academic calendar of the University. The schedule of classes is notified through a timetable before the beginning of the classes in a semester.

7.2. A student who is absent for short periods on health ground or due to participation in cultural, sports, other academic/official assignments in the interest of institution/ University/ Government with prior written permission of the head of the institution / college is permitted a maximum of additional concession of 10% in attendance in aggregate both in theory and practical subjects in a semester.

If a student admitted in to first year of B. Tech, Dairy Technology course does not register the courses of semester of that year, he/she should register and study with the students of the next admission batch.

8. Examination

8.1 Internal Examination

The University has a continuous evaluation system for each theory, sessional, design, practical and project. For the purpose the university holds the following examinations.

Internal Examination-1: Online mode

Internal Examination-2: Presentation mode

Assignments and Attendance

- ✓ Assignment (Overall weightage 5%)
- ✓ Attendance (Overall weightage 5%)
- ✓ 90% and above = 5
- ✓ 85% - 89% = 4
- ✓ 80% - 84% = 3
- ✓ 75% - 79% = 2

Internal Practical: Continuous Evaluation

8.2 Semester Final Examination

Semester final examination for each course is conducted by the University at the end of each semester for theory and practical. This is an external examination.

8.3 Examination on Demand (EOD)

EOD will be conducted for the benefit of students who have backlogs from previous semesters on a pre-announced schedule.

8.4 Evaluation

The performance evaluation of the student in a course shall be undertaken through various kinds of examinations and assessment of laboratory records, class work, projects and other instruments.

The marks to be allotted between the theory and practical work shall be in the proportion of their respective credit hours. In the allocation of marks for the course, every credit will be evaluated for 50 marks (theory/ practical) which may finally be converted to 100 marks for award of grade.

The proportion of marks for the end-semester final (external) theory and internal theory examinations shall be 40:60 respectively. Marks for the practical shall be based on

continuous evaluation of practical classes and a final practical examination will be conducted by external which shall include a viva-voce examination. The practical marks allotment between external and internal are 50:50 ratios (Table 1).

Table 1: Distribution of Marks for Theory and Practical Examinations

Sl. No.	Type of Course	Credits (Marks allotted)	Theory		Practical		Total
			Mid-term (Internal)	End-term (Final) (External)	Internal	External	
1	Theory + Practical+ Project	2+1+0 (45+55)	20	30	25	25	100
2	Theory	2+0 (100+0)	40	60	-	-	100
3	Practical	0+1 (0+100)	-	-	50	50	100

In order to pass in a course, a student should secure minimum of 40% marks in theory (in case of subjects having only theory component), 40% marks in practical (in case of subjects having only practical component), 40% marks aggregate in both theory and practical examinations put together (in case of subjects having both theory and practical components). If a student does not achieve this, he/she has to reappear for the final examination in theory/practical or both as the case may be, when next conducted, for such course(s).

8.5 Summer and Industrial Internship

A student has to register total 11 Summer break internship during the 4 years. Summer training-1 (3 credit) during summer break June-July after 4th semester, summer training-2 (3 credit) during summer break June-July after 6th Semester and Industrial Internship (5 credit) during April to May in 8th Semester.

8.6 Duration of Examinations and General Features

The duration of examination will be as follows

- a. Individual mid-term theory examination: 1hr
- b. Individual practical examination: 2hr
- c. End semester theory examination: 2 to 3hr
- d. End semester practical examination: 2 to 3hr

8.6.1 The schedule of classes shall be notified through a timetable before the beginning of the classes in the semester. Attendance records will be compiled at the time of each midterm examination and the students with poor attendance will be informed through notification. The guardian shall be informed through a letter/email regarding the short of attendance of the students before he/she is debarred from appearing the University examination.

9.6.2 A student shall be admitted to any examination in a subject only if he/she has registered for that subject and paid necessary registration and examination fees at the beginning of the semester.

9.6.3 Students, detained from appearing at the end-semester examination due to shortage of attendance, have to register for course once again and appear at the subsequent examination to pass.

9.6.4 A student shall be allowed in a semester examination only after he/she is issued an admit card for the relevant examination by the SoABE.

9.6.5 Students who have been found to indulge in malpractice during examination will be awarded “M” grade in that subject. The University may take any additional disciplinary action at its discretion. Such candidates will be allowed to appear in subsequent examinations based only on the decision of the university.

9.6.6 A student who is absent in either external theory or external practical or both of any course will be awarded 'S' grade. He/she will be allowed to appear in those courses in subsequent supplementary examination/EOD after permission from the authorities and with due fee.

9.6.7 A student may register with a fee to appear in a supplementary examination/EOD for a paper which he/she has already failed. However, such facility is available only for the external final examination.

9.6.8 In case of failure in a theory paper, internal marks will be carried forward and the student has to reappear in external theory only.

9.7.9 In case of failure in internal practical, the candidate is given the chance to improve his/her marks by undertaking additional work/experiments as prescribed by the Department/School.

9. Categorization of Grades and Their Correlation

This section gives the details of the Grading system being followed by the University.

Category	Grade	Score on 100 Percentage Point	Point
Outstanding	‘O’	90 & above up to 100	10
Excellent	‘E’	80 & above but less than 90	9
Very Good	‘A’	70 & above but less than 80	8
Good	‘B’	60 & above but less than 70	7
Fair	‘C’	50 & above but less than 60	6
Pass	‘D’	40 & above but less than 50	5
Failed	‘F’	Below 40	2
Malpractice	‘M’	---	0
Absent	‘S’	---	0

N.B. Grade C shall be considered as average, Grade D shall be pass Grade for theory and Grade C shall be Pass Grade for Practical / Sessional /Project

10. Grading System

10.1 Grade point of a course

The terms used in the above table are defined as follows:

- a) Point – Integer equivalent of each letter grade
- b) Credit – Integer signifying the relative emphasis of individual Subject item(s) in a semester as indicated by the course structure and syllabus
- c) Credit Point – (b) multiplied by (a) for each Subject item
- d) Credit Index – Sum of Credit Points, [i.e., Sum of (c)] of Subject items in a semester
- e) Grade Point – (c) / (d)
- f) Grade Point Average – Represented by Grade Point Indices as per section 1.4.3.
 - Semester Grade Point Index (SGPI)
 - Cumulative Grade Point Index (CGPI)

10.2 Grade Point Index

The formulas for calculating the SGPI and CGPI are as follows:

$$SGPI = (Credit\ Index) / (Sum\ of\ Credits\ for\ a\ Semester)$$

$$CGPI = (Sum\ of\ Credit\ Index\ of\ all\ previous\ Semester) / (Credits\ of\ all\ previous\ Semesters)\ up\ to\ a\ semester$$

11. Declaration of result

11.1 In order to pass a course, a candidate must secure at least pass grade as defined in grading system (grade points) in each of the final theory and practical examination.

11.2 The promotional status between two consecutive semesters and two consecutive levels / year shall be indicated on the semester grade sheet.

11.3 The GPA of the semester shall be updated after the candidate clears the subjects, in which he/ she has failed, in a subsequent examination.

11.4 The University shall publish list of all successful candidates of each of the semester examinations within the date prescribed in academic calendar.

11.5 The overall performance of successful candidate for the award of a degree shall be based as the combined results of all examinations of the concerned programme.

11.6 Gold medal will be awarded to the student who has secured the highest OGPA for that batch. However, the student is eligible for gold medal if only he/ she has passed each subject in the first attempt itself.

12. Eligibility for award of degree certificate.

A candidate will be eligible for the award of B. Tech, Dairy Technology degree if he/she satisfies the following conditions.

- a) Completed the credit requirements of 180 hr (regular degree).
- b) Passed in NSS activity during study period.
- c) Has no due to the University, Library, Hostels, Transportation, etc.
- d) Has no disciplinary action pending against him/her.

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