

DIRECTORATE OF DISTANCE & ONLINE EDUCATION

B.SC. (PHYSICS, CHEMISTRY & BOTANY)

COURSE BROCHURE
2026-27

NAAC GRADE A+

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INTRODUCTION

The Bachelor of Science (B.Sc. PCB) is offered by Mangalayatan University (MUDE). The programme curriculum covers the fundamentals of physics, chemistry, and biological sciences. This six-semester curriculum consists of both the theoretical and practical applications of science to cultivate students' academic knowledge. With the online distance learning mode, students will learn digital literacy and balance their personal, academic, and professional obligations. This semester's course prepares students to build their careers in research, healthcare, education, biotechnology, and environmental science. The online distance programme acts as the onset of the learning path for academic specialization and future learning approaches to enhance knowledge and explore diverse scientific fields.

MISSION

- To motivate students to develop a thorough understanding of core concepts of physics, chemistry, and biology to strengthen interdisciplinary connections of science, resulting in enhanced skills of critical thinking, analytical skills, and problem-solving abilities, along with research tactics.
- To cultivate experimental skills, enabling students to understand the real-world application of science.
- To prepare them for higher studies, to shape their knowledge of specialized subjects, and to deepen their theoretical understanding to take challenging roles in research, environmental science, healthcare, and technology.

OBJECTIVES

The primary objective of the B.Sc. PCB (Online Distance Learning Mode) is to provide comprehensive scientific education that integrates the study of physics, chemistry, and biology. The programme demonstrates both conceptual understanding and practical laboratory skills to prepare them for both scholarly and professional prospects. With the semester modules, they strengthen their grasp on the core principles of physical and life sciences to foster interpersonal and technical skills to tackle intricate scientific issues. Training students to prepare scientific research papers, prepare presentations, and boost their digital literacy to convey their scientific ideas.

INSTRUCTIONAL DESIGN

The programme is segmented into six semesters, and the total credit requirement is 120 to get an ODL B.Sc. PCB degree from Mangalayatan University. The minimum time period to complete the B.Sc. PCB degree programme will be two years, and the maximum time period (extended) is three years to pursue the ODL B.Sc. PCB degree.

SEMESTER - I					
S.No.	Course Code	Course Name	Credit Marks	Total Marks	Pass Marks
1.	PHB-1111	Mechanics and Wave Motion	4	100	40
2.	CHB-1111	Fundamentals of Inorganic Chemistry	4	100	40
3.	BOB-1111	Microbiology and Plant Pathology	4	100	40
4.	PHB-1151	Physics Lab - I	2	100	40
5.	CHB-1151	Chemistry Lab - I	2	100	40
6.	BOB-1151	Botany Lab - I	2	100	40
7.	ENB-1101	English Communication	2	100	40
8.	CSB-1101	Fundamentals of Computer System and Office Automation	2	100	40
TOTAL			20	800	320

SEMESTER - II					
S.No.	Course Code	Course Name	Credit Marks	Total Marks	Pass Marks
1.	PHB-1211	Electricity and Magnetism	4	100	40
2.	CHB-1211	Organic Chemistry	4	100	40
3.	BOB-1211	Archegoniates and Plant Architecture	4	100	40
4.	PHB-1251	Physics Lab - II	2	100	40
5.	CHB-1251	Chemistry Lab - II	2	100	40
6.	BOB-1251	Botany Lab - II	2	100	40
7.	ENB-1201	Creative Writing	2	100	40
8.	MMB-1201	Logical Reasoning	2	100	40
		TOTAL	22	800	320

SEMESTER - III					
S.No.	Course Code	Course Name	Credit Marks	Total Marks	Pass Marks
1.	PHB-2111	Optics	4	100	40
2.	CHB-2111	Physical Chemistry	4	100	40
3.	BOB-2111	Flowering Plants Identification and Aesthetic Characteristics	4	100	40
4.	PHB-2151	Physics Lab - III	2	100	40
5.	CHB-2151	Chemistry Lab - III	2	100	40
6.	BOB-2151	Botany Lab - III	2	100	40
7.	MMB-2101	Basic Statistics	3	100	40
8.	VAC-2101	Environmental Education	3	100	40
		TOTAL	24	800	320

SEMESTER - IV					
S.No.	Course Code	Course Name	Credit Marks	Total Marks	Pass Marks
1.	PHB-2211	Perspectives of Modern Physics	4	100	40
2.	CHB-2211	Analytical Chemistry - I	4	100	40
3.	BOB-2211	Economic Botany, Ethnomedicine & Phytochemistry	4	100	40
4.	PHB-2251	Physics Lab - IV	2	100	40
5.	CHB-2251	Chemistry Lab - IV	2	100	40
6.	BOB-2251	Botany Lab - IV	2	100	40
7.	ENB-2101	Personality Development	2	100	40
8.	VAC-2201	Understanding India	3	100	40
		TOTAL	23	800	320

SEMESTER - V					
S.No.	Course Code	Course Name	Credit Marks	Total Marks	Pass Marks
1.	PHB-3112	Classical Mechanics	4	100	40
2.	CHB-3112	Analytical Techniques	4	100	40
3.	BOB-3112	Cell Biology and Genetics	4	100	40
4.	PHB-3151	Physics Lab - V	2	100	40
5.	CHB-3151	Chemistry Lab - V	2	100	40
6.	BOB-3151	Botany Lab - V	2	100	40
		TOTAL	18	600	240

SEMESTER - VI					
S.No.	Course Code	Course Name	Credit Marks	Total Marks	Pass Marks
1.	PHB-3212	Solid State Physics	4	100	40
2.	CHB-3212	Material Chemistry	4	100	40
3.	BOB-3211	Plant Physiology, Metabolism and Biochemistry	4	100	40
4.	PHB-3251	Physics Lab - VI	2	100	40
5.	CHB-3251	Chemistry Lab - VI	2	100	40
6.	BOB-3251	Botany Lab - VI	2	100	40
		TOTAL	18	600	240

SYLLABI AND COURSE MATERIALS

Syllabi and self-learning materials are developed by our experienced faculty members of Mangalayatan University. The course content is approved by CIQA and the Board of Studies/Academic Council/Executive Council of India (UGC).

STUDY MATERIAL

The study material for the programme is developed in a digital format and shall be supplied to the students unit-wise for each course per semester.

ONLINE COUNSELLING SESSIONS

The online counselling sessions shall be scheduled beforehand by the subject coordinator. There shall be 6 online counselling sessions of 1 hour each for a 4-credit course, held on Saturdays and Sundays. For courses with 2 credits, there shall be 4 sessions of 1 hour each; for 6-credit classes, 8 sessions of 1 hour each.

STUDENT SUPPORT SYSTEMS

The university appoints programme coordinators, course coordinators, and course mentors to support learners in their studies. Additionally, the university has made appropriate arrangements for various support services, including online counselling and resource-oriented services and evaluation methods for both online and offline modes, for efficient and smooth assistance to the students through the online mode.

PROCEDURE FOR ADMISSIONS, CURRICULUM, TRANSACTION AND EVALUATION

ACTIVITY SCHEDULE					
		Tentative months schedule (specify months) during year			
		July Division		January Division	
S.NO.	Name of the Activity	From(Month)	To (Month)	From(Month)	To (Month)
1	Admission	Jul	Sep	Jan	Mar
2	Assignment submission (if any)	Sep	Oct	Mar	Apr
3	Evaluation of Assignment	Oct	Nov	Apr	May
4	Examination	Dec	Dec	Jun	Jun
5	Declaration of Result	Jan	Jan	Jul	Jul
6	Re-registration	Jul	Jul	Jan	Jan

*** These dates are tentative.**

CREDIT SYSTEM			
Duration of the Programme	Credits	Name of the Programme	Level of the Programme
3 Year	120	UG	Bachelor of Science (PCB)

FEE STRUCTURE							
Name of the Program	Degree	Duration	One Time Reg. Fee	Semester Fee	Exam Fee Per Semester	One Year Fee	Total Fees
Bachelor of Science (PCB)	UG	3 Years	1000	12000	1000	27000	79,000
Total							79,000

WHY DISTANCE EDUCATION?

- Convenience of studying classes from home.
- Cost-Effective.
- Time saving.
- No commuting.
- Monetary benefits- No textbooks required.
- Study anytime, anywhere.

ADMISSION PROCESS

- Register with Mangalayatan Distance learning Programmes
- Pay Registration fees through our available payment gateways
- Upload relevant documents and mark sheets
- Get provisional admission
- Pay semester fees
- Get admission confirmation from the University
- Roll number allotted to every student

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