



JAIN (Deemed-to-be University)

NAAC A++, UGC-Entitled, NIRF #62

B.Sc (Physics Mathematics & Computer Science)

Type

Ug Program

Mode

Distance

Duration

3 Years

Total fees

₹ 44,000

JAIN (Deemed-to-be University)

JAIN (Deemed-to-be University), based in Bengaluru, is a leading institution committed to academic excellence, innovation and holistic development. The University offers diverse programs across engineering, management, commerce, sciences, humanities, design and other disciplines. With a strong emphasis on research, entrepreneurship, sports and industry-focused education, it prepares students for evolving global opportunities. Its vibrant campuses bring together learners and faculty from diverse cultural and academic backgrounds. Through classroom, online and open-distance learning, JAIN provides accessible and future-ready education that empowers students to make a meaningful impact.

B.Sc (Physics Mathematics & Computer Science)

Highlights

- ◆ A structured open and distance learning format that helps learners pursue computer science, software systems, and computational thinking with continuity and manageable academic progress.
- ◆ Subject areas such as algorithms, data structures, operating systems, and programming make the course relevant to learners comparing similar programmes.
- ◆ Designed to strengthen both conceptual understanding and communication in discipline-specific contexts.
- ◆ Focuses on practical interpretation, case-based thinking, and problem-solving linked to computing problems, software design choices, and system behaviour.
- ◆ Supports academic progression and career exploration across software engineering, systems development, computing research, and technical problem-solving roles, including areas such as Research Associate, Academician, and Content Writer without making unsupported placement claims, with added focus on domain curiosity.

Learning outcomes

- ◆ Within B.Sc (Physics, Mathematics and Computer Science) from JAIN (Deemed-to-be University), relate theories, methods, or tools from algorithms, data structures, operating systems, and programming to computing problems, software design choices, and system behaviour.
- ◆ Address algorithmic, programming, and systems-development challenges through structured reasoning and subject-specific approaches.
- ◆ Critically evaluate software design choices based on efficiency, reliability, and maintainability while maintaining logical precision, scalability, and disciplined engineering practice.
- ◆ Develop clear code modules, system designs, and technical explanations for assignments, projects, or professional communication.
- ◆ Use the learning foundation to plan further academic or professional growth in software engineering, systems development, computing research, and technical problem-solving roles, including areas such as Research Associate, Academician, and Content Writer, while strengthening domain curiosity.

Eligibility Criteria

The minimum qualification required to apply to this degree is a pass in 10+2 examination with Physics and Mathematics as core subjects from PUC / ISC / CBSE or an equivalent board.

Curriculum Overview

Semester I (9 subjects)

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| ◆ Mechanics and Properties of Matter | ◆ Mind Management & Human Values - I |
| ◆ Matrices & Differential Calculus I & Analytical Geometry 3D | ◆ Mechanics and Properties of Matter- Lab |
| ◆ Digital Fundamentals and Object Oriented Programming Using C++ | ◆ Mathematics I Lab |
| ◆ General English I | ◆ Digital Fundamentals and Object Oriented Programming Using C++ Lab |
| ◆ Kannada/ Hindi/ Sanskrit / Additional English | |



Curriculum Overview (continued)

Semester II (10 subjects)

- ◆ Thermal and Statistical Physics and Acoustics.
- ◆ Integral Calculus & Differential Calculus II & Group theory
- ◆ Data Structures
- ◆ General English II
- ◆ Kannada/ Hindi/ Sanskrit/ Additional English II
- ◆ Mind Management & Human Values - II
- ◆ Thermal and Statistical Physics and Acoustics Lab
- ◆ Mathematics-II Lab
- ◆ Data Structures Lab
- ◆ Project I

Semester III (9 subjects)

- ◆ Optics & Electricity and Magnetism
- ◆ Differential Equation I & Sequences & Series of Real numbers & Summation of Series & Numerical solution to Differential Equation
- ◆ Java Programming
- ◆ Social Networking/Financial Economics
- ◆ Introduction to Python Programming
- ◆ Indian Constitution
- ◆ Optics & Electricity & Magnetism Lab
- ◆ Mathematics-III Lab
- ◆ Java Programming Lab



Curriculum Overview (continued)

Semester IV (9 subjects)

- ◆ Elements of modern Physics
- ◆ Elements of Modern Physics Lab
- ◆ Laplace Transforms & Group Theory II & Differential Equation II & Differential Calculus III
- ◆ Mathematics IV Lab
- ◆ Operating System and Unix
- ◆ Operating System and Unix Lab
- ◆ E-Commerce/ Karnataka Janapada Kalegalu
- ◆ Project II
- ◆ Environmental Studies

Semester V (9 subjects)

- ◆ DSCE-1 Analogue and Digital Electronics /Molecular Spectroscopy
- ◆ Basic Statistics
- ◆ DSCE-2- Line and Multiple Integrals & Integral theorem & Differential Calculus of two variables / Ring Theory and PDE
- ◆ DSCE-2- Line and Multiple Integrals & Integral theorem & Differential Calculus of two variables / Ring Theory and PDE Lab
- ◆ DSCE-3- Data mining/ Computer Networks
- ◆ DSCE-3- Data mining/ Computer Networks Lab
- ◆ Emotional Intelligence/ Entrepreneurship
- ◆ Renewable Energy and Energy Harvesting



Curriculum Overview (continued)

Semester VI (9 subjects)

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| ◆ DSCE-4 Astrophysics/ Materials Science | ◆ DSCE-4 Astrophysics/ Materials Science Lab |
| ◆ DSCE-5 Vector Differential Calculus/ Complex Analysis | ◆ DSCE-5 Vector Differential Calculus/ Complex Analysis Lab |
| ◆ DSCE-6 Artificial Intelligence/ Cloud Computing | ◆ DSCE-6 Artificial Intelligence/ Cloud Computing Lab |
| ◆ Visual Narratives/Shabd se Celluloid tak | |
| ◆ Mathematical Modeling | ◆ Project III |

Fee Structure

Fee heads	Year 1	Year 2	Year 3	Total
Registration Fees (Payable at the time of admission)	₹ 500	—	—	₹ 500
Examination Fee / Year	₹ 4,500	₹ 4,500	₹ 4,500	₹ 13,500
Course Fee	₹ 10,000	₹ 10,000	₹ 10,000	₹ 30,000
Total	₹ 15,000	₹ 14,500	₹ 14,500	₹ 44,000