



GAYATRI VIDYA PARISHAD INSTITUTE OF HIGHER LEARNING AND RESEARCH

(Deemed to be University under Distinct Category
under Section 3 of the UGC Act, 1956)

Kommdi, Madhurawada, Visakhapatnam – 530 048, Andhra Pradesh

School of Sciences

(GVPIHLR-SOUTHEAST CAMPUS, Rushikonda)

B.Sc (Hons)-Mathematics and Computer Science

(A Four Year Undergraduate Honours / Five Year Integrated Program
with multiple entry and exit Options)



About GVP & GVPIHLR:

Gayatri Vidya Parishad (GVP) is established in 1988 with a service motive, committed to develop education in India. The basic aim is "to promote, establish, maintain and assist or aid in maintaining educational and other institutions with a view to impart education in all branches in general and in Advanced Technology, Management, Education and Science (including Healthcare) in particular and thus to facilitate securing gainful employment for the youth of the country.

In line with this and in tune with National Educational Policy 2020, the GVP established Gayatri Vidya Parishad Institute of Higher Learning (GVPIHLR), a deemed to be university under distinct category that promotes integration of Multidisciplinary, Interdisciplinary and Transdisciplinary fields. It enables the blend of ancient wisdom and traditional values with modern science and technology for the health and well-being of the society among the youth.

GVPIHLR provides students with an integrated learning experience that transcends conventional disciplinary boundaries and offers abundant opportunities for academic exploration, innovation, and holistic development. It will foster multidisciplinary and transdisciplinary education and research through flexible curricular structures that enable students to creatively combine diverse disciplinary areas of study and pursue emerging areas of knowledge in multidisciplinary contexts.

Through this integrated academic ecosystem, GVPIHLR enable learners attain critical thinking, creativity, innovation, collaboration, and problem-solving, while drawing upon the strengths of diverse disciplines to address complex societal challenges and contribute meaningfully to the advancement of knowledge and the well-being of society.



Vision

- GVPIHLR, our vision is Creating Human Excellence for a better society through holistic and multidisciplinary education.



Mission

- GVPIHLR, our mission is propelled by an unwavering dedication to achieving human excellence and contributing to a better society through a holistic and multidisciplinary approach to education. Our mission connects three key pillars.



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SCHOOLS UNDER GVPIHLR:

- School of Arts and Humanities
- School of Chemical, Mechanical and Civil Engg.
- School of Electrical and Electronics Engg.
- School of Commerce and Management
- School of Computer Science and Engg.
- School of Sciences



UNDERGRADUATE HONORS PROGRAMS UNDER SCHOOL OF SCIENCES:

AICTE- FOUR YEAR UNDERGRADUATE HONORS PROGRAM

- BCA (Hons)-Bachelor of Computer Applications

UG FOUR YEAR HONORS / FIVE YEAR INTEGRATED PROGRAM

- B.Sc.(Hons.) Computer Science and Artificial Intelligence
- B.Sc (Hons) Embedded Electronics and Artificial Intelligence
- B.Sc.(Hons) Quantum Computing and Artificial Intelligence
- B.Sc. (Hons) Bioinformatics with Artificial Intelligence
- B.Sc. (Hons) Statistics and Data Science
- **B.Sc. (Hons) Mathematics and Computer Science**
- B.Sc. (Hons) Statistics and Quantitative Methods
- B.Sc. (Hons) Chemistry and Pharmaceutical Applications



POSTGRADUATE PROGRAMS UNDER SCHOOL OF SCIENCES:

AICTE- TWO YEAR POSTGRADUATE PROGRAM

- MCA -Master of Computer Applications

TWO YEAR POSTGRADUATE PROGRAM

- M.Sc (CS & AI) -Master of Science in Computer Science and Artificial Intelligence-
- M.Sc (OC-DD Master of Science in Organic Chemistry with Drug Design -)



B.Sc.(Honours) Mathematics and Computer Science Vision:

Shape future technological and scientific progress through strong quantitative and computational foundations.



B.Sc.(Honours) Mathematics and Computer Science Mission:

Provide high-standard education in logic, math theory, and computer systems.

ABOUT B.Sc.(HONOURS) MATHEMATICS AND COMPUTER SCIENCE:

- The B.Sc. (HONOURS) MATHEMATICS AND COMPUTER SCIENCE programme offers a strong foundation in Mathematics, Computational Thinking and Software Development.
- It combines theoretical knowledge with practical skills in programming, algorithms, data structures, databases and mathematical modelling.
- Students gain expertise in problem solving, analytical thinking and application development.
- Students preparing them for careers in software development, data analytics, research and higher studies.

PROGRAMME OBJECTIVES:

WHY B.Sc.(HONOURS) MATHEMATICS AND COMPUTER SCIENCE:

- The curriculum integrates core Mathematics with Computer Science – the technology reshaping how people live, work and interact, building problem-solving skills for the digital world.
- Students gain a strong foundation in discrete mathematics, statistics, logic, and computing that prepares them for higher studies, competitive exams, and technical roles in IT, data, and research.
- Personal development programs: development through analytical thinking and computational reasoning that improves decision-making and adaptability in any field, teamwork, and effective communication.
- Leadership at every stage is encouraged, enabling students to model complex problems, work on projects, and communicate technical solutions, skills valued in teams and organizations.
- High career demand with opportunities as Software Developer, Data Scientist/Data Analyst, Cyber security Specialist, and Business Analyst in a rapidly growing tech industry.

PROGRAMME FEATURES:

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| ● Discipline Specific Core | ● Applied Mathematics |
| ● Discipline Specific Electives | ● Computational Mathematics |
| ● Skill Enhancement Courses | ● Mathematical Modelling |
| ● Value Added | ● Financial Mathematics |
| ● Multidisciplinary | ● Quantitative Analysis |
| ● Ability Enhancement | ● Computer Networks |
| ● Social Immersion Project | ● Information Security |
| ● Internships | ● Cybersecurity |
| ● Academic Projects | ● Software Testing & Quality Assurance |

LEARNING BEYOND THE CLASSROOM

- Laboratory Training
- Projects
- Internships
- Workshops
- Guest Lectures
- NCC (Army Wing or Air Wing)
- NSS
- SPORTS

HOW THIS PROGRAMME BENEFITS YOU:

- Strong mathematical reasoning
- Computational thinking, programming, and problem-solving skills.
- The interdisciplinary program prepares graduates for diverse careers in software development, data science, AI, analytics, cyber security
- Higher education

PROGRAM STRUCTURE

CORE BASKETS A:

MATHEMATICS:

- Mathematical Concepts for Computing
- Calculus
- Abstract Algebra
- Linear Algebra
- Real Analysis
- Graph Theory
- Numerical Methods
- Optimization Methods

CORE BASKETS B:

COMPUTER SCIENCE:

- Introduction to Computers and Office Application
- Problem Solving in C
- Data Structures
- OOPs Through Java
- Operating Systems
- Python Programming
- Data base management systems

ELECTIVE BASKETS B:

MATHEMATICS:

- Solid Geometry
- Theory Of Matrices
- Vector Calculus
- Complex Analysis
- Number Theory
- Laplace Transformations
- Cryptography
- mathematical Special Functions

ELECTIVE BASKETS B:

COMPUTER SCIENCE:

- Computer Organization
- Basics of Cloud Computing
- Software Engineering Essentials
- Computer Networks
- Mobile Application Development
- Generative AI and Prompt Engineering
- API Development
- Introduction to Information Security

CAREER PATHWAYS:

- Software & Applications Engineering
- Advanced AI & Machine Learning Models
- Big Data & Predictive Analytics
- Cloud Architecture & Global Cyber Security
- Innovative Tech Entrepreneurship
- Higher Education & Research Pathways



HIGHER EDUCATION

- M.Sc.
- M.Tech.
- MBA & MCA
- MS(Abroad)

GVP PAST RECRUITERS:

The source lists placement/recruitment organizations including

TCS, Cognizant, Tech Mahindra, Amazon, D-Mart, ICICI Bank, Jio, Hansa Group, Asian Paints, HDB Financial Services, Continental, Miracle Software Systems, Wipro, KVB, Infosys, Reliance Industries Limited, Samsung, Mphasis, Salesforce, Quantelo, HSBC.

ELIGIBILITY:

- Intermediate or (10+2)
- Mathematics as one subject