



**Goswami Ganesh Dutta Sanatan Dharma College**

**Internship for Enhancing Employability**

**Department of Mathematics**

**Hands-on Training in  
Mathematical Computations & Applications**

**Summer, 2026**

<b>Important dates</b>	-- Classes begin: June 08, 2026 -- Classes end: July 01, 2026 Holidays <ul style="list-style-type: none"><li>• Martyrdom Day of Sri Guru Arjun Dev Ji: June 18, 2026 (Thursday)</li></ul>
<b>Internship Supervisor</b>	Dr. Puneet Sharma
<b>Contact</b>	<a href="mailto:internship@ggdsd.ac.in">internship@ggdsd.ac.in</a>
<b>Training Timing</b>	Monday to Saturday (9:00 am to 3:00 pm)
<b>Credits</b>	B.Sc./BCA – 4 Credits (120 hrs/ 20 days) B.A./B.Com./BBA and other courses– 2 Credits (60 hrs/ 10 days)
<b>Core Training Areas</b>	Scientific Computing, Data Handling, Number Theory & Cryptography, LaTeX for Academic Excellence, Algorithmic & Numerical Methods, and Mathematical Finance.

<p><b>Learning outcomes</b></p>	<p>By the end of this training programme, participants will be able to:</p> <ol style="list-style-type: none"> <li>1. Use mathematical software tools such as SageMath, Mathematica, and Python for mathematical computation and problem solving.</li> <li>2. Perform graphing, differentiation, integration, numerical computation, and data visualisation using computational tools.</li> <li>3. Apply matrix operations and solve systems of linear equations computationally.</li> <li>4. Write simple programs using loops, conditional statements, and basic mathematical algorithms.</li> <li>5. Analyse and interpret statistical data using measures such as mean, median, variance, and standard deviation.</li> <li>6. Create professional graphs, charts, plots, and mathematical visualisations.</li> <li>7. Prepare academic documents, reports, and presentations using LaTeX, TikZ, and Beamer.</li> <li>8. Understand fundamental concepts of number theory, modular arithmetic, and introductory cryptography including RSA.</li> <li>9. Apply numerical methods for solving equations and differential equations using software tools.</li> <li>10. Explore applications of mathematics in finance and the stock market, including compounding, Fibonacci tools and moving averages.</li> </ol>
<p><b>Employability Focus</b></p>	<p>This module is designed to improve readiness for internships, data analytics, software support, fintech, teaching and technical writing.</p>
<p><b>Evaluation</b></p>	<p>The evaluation of the internship shall be based on a combination of continuous assessment and final performance review.</p> <p>The evaluation process will include</p> <p><b>I. Internship Report and Viva Voce (80% Weightage):</b> Students must submit a detailed report documenting their activities, learning outcomes, challenges faced, and skills developed during the internship. Students are required to appear for a viva-voce before a 2-members internal evaluation committee (including a supervisor) to discuss their internship experience and learning outcomes.</p> <p><b>II. Supervisor’s Evaluation (20% Weightage):</b> Feedback from the Internship Supervisor/Mentor at the host organization or within the department, assessing the student's engagement, skill development, professionalism, and attendance based on Activity Log Book.</p>

**Internship Activity Logbook**

Students will maintain an internship activity logbook for the “Enhancing Employability” internship throughout the training period. The logbook will be duly signed by the mentor and the internship supervisor upon completion of the training. The format of the Internship Activity Logbook is given below:

Week	Dates	Activities Performed	Skill Learned	Remarks from Mentor
1				
2				
3				
4				

**Feedback Report**

The mentor will prepare a Feedback/Evaluation Report for each student enrolled in the Internship for Enhancing Employability. The format for the Feedback/Evaluation Criteria is provided below:

Criteria	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)
Punctuality and Attendance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Professionalism and Work Ethics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communication Skills (Oral and Written)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Initiative and Enthusiasm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability to Work Independently	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Technical/Subject Knowledge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Problem-Solving and Analytical Ability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Teamwork and Collaboration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality and Timeliness of Work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adaptability and Learning Ability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Moreover, the mentor will provide remarks on the key strengths of the student intern, areas requiring improvement, and any special contributions or achievements demonstrated by the student during the internship.

## Training Schedule

Week	Date	Topics
1	8/6/2026	Introduction to mathematical software tools such as SageMath and Mathematica, including their basic interface, simple commands, and general use for mathematical computation
	9/6/2026	Graphing functions, basic study of limits, differentiation, integration, maxima-minima, and numerical computation using Python, Mathematica, and SageMath.
	10/6/2026	Matrices, determinants, inverse of a matrix, and solution of systems of linear equations using mathematical software tools
	11/6/2026	Functions, loops, basic understanding of <b>Do</b> , <b>For</b> , and <b>While</b> , conditional statement <b>If</b> and small mathematical computing exercises
	12/6/2026	Mean, median, mode, variance, standard deviation, and basic interpretation of statistical results using software tools
	13/6/2026	Line plots, bar charts, pie charts, legends, styling, and basic interpretation of graphs and plotted data
Week	Date	Topics
2	15/6/2026	Introduction to LaTeX, basic document structure, equations, tables, chapters, and sections
	16/6/2026	TikZ diagrams, figures, plots, and professional mathematical writing in LaTeX
	17/6/2026	Beamer slides, mathematical presentation design, and basic slide preparation for academic presentations
	18/6/2026	<b>Holiday</b>
	19/6/2026	Reports, books, and CV writing using LaTeX, with proper formatting and professional structure
	20/6/2026	Prime numbers, divisibility, greatest common divisor, Euclidean algorithm, and least common multiple

Week	Date	Topics
3	22/6/2026	Modular operations, basic ideas of Euler and Fermat, and introductory cryptographic thinking
	23/6/2026	Introduction to cryptography and basic ideas of RSA
	24/6/2026	Factorization methods, primality test, and a small cryptography demonstration
	25/6/2026	Bisection method, fixed-point iteration, Newton-Raphson method, and basic error analysis using software tools
	26/6/2026	Numerical integration, Euler method and Picard method using software tools, numerical solutions of basic differential equations, and their visualisation
	27/6/2026	Applications of mathematics in the stock market, return calculation, percentage change, and compounding
Week	Date	Topics
4	29/6/2026	Introduction to Fibonacci numbers and the golden ratio, moving averages, and their applications in trading signals
	30/6/2026	Integrated Mini Project: students analyse data, create plots, apply statistics and numerical methods, and prepare a professional report
	1/7/2026	Beamer presentation of the project, interview-style viva, and career orientation session

**Note: Internship report and viva voce and supervisor's evaluation for 2 credit courses will be conducted after 10 days.**