



Visva-Bharati

Department of Statistics

Siksha Bhavana

Santiniketan

NOTICE

Date: 16/09/2026

INVITATION OF INTERNSHIP APPLICATIONS

The Department of Statistics, Visva-Bharati, invites internship applications from eligible and interested students for the academic year 2026-2027. The internship is intended to provide students with practical exposure to statistical methods, data analysis, research practices, and applications of statistics in academic, industrial, social, and other relevant fields.

1. Eligibility

Applications are invited from students who:

- Are currently pursuing an undergraduate course.
- Meet any additional eligibility requirements prescribed by **the individual internship programmes appended below.**

2. Internship Duration:

- **Duration:** 120 hours.
- **Proposed Period:** Negotiable
- **Mode:** (Online/Hybrid). Please see individual programme details.

3. Areas of Internship: Please see individual programme details appended below.

4. Application Procedure:

Interested candidates are required to submit their applications through **email to the respective internship Mentors**

The application should include:

- Updated Curriculum Vitae (CV)

- Contact details of the applicant
- A reference letter from the Head of the Department

5. Last Date for Application: 30/09/2026

6. Selection Process: Please see individual programme details appended below.

7. Internship Fee/Stipend

- **Internship Fee:** ₹500 for Visva-Bharati students

₹1000 for Non-Visva-Bharati students

(Amount to be paid only after getting the selection confirmation from the Mentor)

Any travel, accommodation, food, or other personal expenses, if applicable, shall be borne by the intern unless otherwise specified.

8. Important Instructions

- Submission of an application does not guarantee selection.
- Candidates must provide accurate and complete information.
- Selected candidates are expected to maintain discipline and comply with the rules and regulations of the Department and University.
- The Department reserves the right to modify the schedule, selection procedure, number of positions, or other programme details when necessary.
- Selected candidates will be informed through their registered email address/contact details.

10. Contact

For further information, please contact **respective Internship Programme Mentors**

Internship Coordinator:

Dr. Tirthankar Ghosh; (tirthankar.ghosh@visva-bharati.ac.in)

Sd/-

Head,

Department of Statistics

Visva-Bharati

Santiniketan

**INTERNSHIP PROGRAMME
DEPARTMENT OF STATISTICS
SIKSHA BHAVANA (INSTITUTE OF SCIENCE)
VISVA-BHARATI**

1. Title of the UG internship programme: **AI-ASSISTED DATA ANALYSIS: AN INTRODUCTION TO STATISTICS FOR UNDERGRADUATE STUDENTS**

2. Nature of Internship Programme: **Practical and research-oriented, designed to develop data literacy, statistical thinking and responsible use of Artificial Intelligence tools.**

3. Description of the internship programme: **[Total duration: 120 hrs]**

This beginner-friendly, practical programme is designed for undergraduate students with little or no prior knowledge of Statistics. The programme introduces students to data, basic statistical ideas, and AI-assisted data analysis through real-life examples, visualization, and hands-on activities. No prior programming or advanced statistical knowledge is required.

A. Understanding Data and Basic Statistics

- a. What is data? Variables, observations, and simple datasets.
- b. Types of data and data representation.
- c. Tables, charts, and graphical representations of data.
- d. Mean, median, mode, percentages and simple summaries.
- e. Understanding variation and spread in data.
- f. Recognizing patterns, unusual observations, and possible errors.
- g. Introduction to relationships between variables.

B. Introduction to Artificial Intelligence for Data Analysis

- a. What is Artificial Intelligence and Generative AI?
- b. Introduction to conversational AI tools such as ChatGPT, Google Gemini and Microsoft Copilot.
- c. Asking questions and giving instructions to AI in natural language.
- d. Prompt design for simple data-analysis tasks.
- e. Understanding AI limitations, errors and hallucinations.

C. AI-Assisted Exploration of Data

- a. Uploading and exploring datasets using beginner-friendly AI tools.
- b. Asking AI to describe a dataset in simple language.
- c. AI-assisted data cleaning and identification of missing or unusual values.
- d. Generating tables, charts, and visual summaries.
- e. Interpreting graphs and summaries with AI assistance.
- f. Comparing AI-generated conclusions with the original data.

D. Discovering Statistical Relationships

- a. Understanding association and correlation through practical examples.
- b. Introduction to simple regression and prediction.
- c. Asking AI to suggest suitable statistical approaches.
- d. Checking whether the suggested method is appropriate.
- e. Distinguishing association from causation.

E. AI Tools for Practical Data Analysis

- a. Excel/Google Sheets for basic data organization and visualization.
- b. AI-assisted analysis using spreadsheet tools.
- c. Beginner-friendly AI data-analysis platforms such as Julius AI/DataLab, where available.
- d. Introduction to JASP or jamovi for statistical analysis without programming.
- e. Optional introduction to AI-assisted R programming for interested students.

F. AI-Assisted Research and Reporting

- a. Finding and understanding information with AI-assisted search tools.
- b. Using NotebookLM or similar tools with supplied study material.
- c. Preparing a simple data-analysis report.
- d. Creating charts and explaining findings in clear language.
- e. Verifying AI-generated statements, calculations and references.
- f. Ethical and responsible use of AI in academic work.

G. Mini Project

Each intern will undertake a small real-world data-analysis project. Students will formulate a simple question, explore a dataset with AI assistance, apply appropriate basic statistical methods, verify the results using a spreadsheet/statistical tool, and prepare a short report and presentation.

4. Objective:

By the end of the programme, interns will be able to understand and describe basic data, perform simple statistical exploration, use beginner-friendly AI tools to assist data analysis, interpret tables and graphs, and critically evaluate AI-generated statistical answers. The programme aims to develop data literacy and research aptitude while emphasizing that AI is an assistant and not an authority. Students will learn to verify AI-generated results using appropriate statistical reasoning and software.

5. Duration: **Days: 20 days. /Hours: 120 hrs (6 hrs/day)**

6. Mode of Internship Programme (Offline/Virtual/Blended): **Virtual**

7. Date of start and closure of Internship Programme: **To be announced (20 working days; Sunday and public holidays excluded)**

8. Total intake of Interns/slot: **20 (Preferably not more than 2 students from each department)**

9. Selection process (If any): **Students admitted in an undergraduate/graduation programme as per NEP 2020. Students from Mathematics, Physical Science, Social Science, Economics, Biological Science and other disciplines with an interest in data analysis and Artificial Intelligence may apply. No prior knowledge of Statistics, programming or AI is required.**

10. Place of internship: **Online mode**

11. Logistics (minimum) to be provided, if any: **Students should have a laptop/desktop with good internet connectivity. Access to commonly available spreadsheet software is desirable. Wherever required, free/open-source statistical tools may be used.**

12. Fees to be paid: As per university norms.

How to pay (**only after getting the confirmation**)?

a. Visit <https://www.onlinesbi.sbi/sbicollect/icollecthome.htm>

b. Select category Educational Institutions

c. Select Visva Bharati University

- d. In Payment Category select Misc Receipts
- e. Fill up the mandatory details
- f. In the Purpose of Deposit select Others
- g. In the Remarks column, write Internship_Fee_Stat_IPO_AC
- h. Take a printout of the payment receipt.

13. Google form Link: To be announced

14. Last Date of Application: To be announced

15. Applicants will be informed by: To be announced

16. Contact details of Mentor:

Dr. Arindom Chakraborty, Head, Department of Statistics

Siksha Bhavana, Visva-Bharati

Santiniketan – 731 235, West Bengal, India

Email: arindom.chakraborty@visva-bharati.ac.in

17. Contact details of Supervisor:

Dr. Saran Ishika Maiti, Department of Statistics

Siksha Bhavana, Visva-Bharati

Santiniketan – 731 235, West Bengal, India

Email: saranishika.maiti@visva-bharati.ac.in

18. Contact details of the coordinator:

Dr. Tirthankar Ghosh, Department of Statistics

Siksha Bhavana, Visva-Bharati

Santiniketan – 731 235, West Bengal, India

Email: tirthankar.ghosh@visva-bharati.ac.in

**INTERNSHIP PROGRAMME
DEPARTMENT OF STATISTICS
SIKSHA BHAVANA (INSTITUTE OF SCIENCE)
VISVA-BHARATI**

1. Title of the UG internship programme: **PROBABILITY DISTRIBUTIONS AND RELATED INFERENCE PROBLEMS: FROM BASIC TO ADVANCED**
2. Nature of Internship Programme: **Research-based for developing research aptitude**
3. Description of the internship programme: [**Total duration: 120 hrs**]

This programme helps students from diverse fields become familiar with various probability distributions for modeling real-world phenomena, grasp the fundamentals of statistical inference, and build a foundation for advancing to more complex procedures.

A. Probability Distribution

- i) Discrete Distributions: Binomial, Poisson, Geometric, Hypergeometric, Power-Series.
- ii) Continuous Distributions: Uniform, Exponential, Gamma, Beta, Normal, Log-normal, Cauchy, Chi-square, t, and F.
- iii) Concept of truncated distributions and Mixture Distributions.
- iv) Notion of Central Limit Theorem and Sampling Distributions.

B. Statistical Inference

- i) Basics of Estimation and Testing of Hypothesis
- ii) Different Estimation methods: ML Estimation and Method of moments Estimation
- iii) Exact and Asymptotic tests associated with the parameters of the specified distributions.
- iv) Application of Delta Method in finding standard errors of statistics and in performing asymptotic tests.
- v) Concepts of nonparametric testing procedures.

C. Illustration through the software package R

- i) Performing the abovementioned testing procedures in R.
- ii) Drawing power curve of a test procedure, under a simulation experiment.

4. Objective:

Students will be immensely benefitted by taking this internship programme. By its conclusion, interns will be equipped to perform statistical inferences on real-world experimental data using the open-source software R. The experience will also spark interest in exploring some further advanced inferential procedures.

5. Duration: Days: **20 days.** /Hours: **120 hrs (6 hrs/day)**
6. Mode of Internship Programme (Offline/Virtual/Blended): **Virtual**
7. Date of start and closure of Internship Programme: Negotiable
8. Total intake of Interns/slot: **10 (Preferably not more than 2 students from each department)**
9. Selection process (If any): Admitted in Graduation programme as per NEP 2020, students having Mathematics in 10+2 level will be given preference
10. Place of internship: **Online mode**
11. Logistics (minimum) to be provided, if any: No, **Students should have laptop/desktop with good internet connectivity.**
12. Fees to be paid: As per university norms.

How to pay (**only after getting the confirmation**)?

- i) Visit <https://www.onlinesbi.sbi/sbicollect/icollecthome.htm>
- ii) Select category **Educational Institutions**
- iii) Select **Visva Bharati University**
- iv) In Payment Category select **Misc Receipts**
- v) Fill up the mandatory details
- vi) In Purpose of Deposit select **Others**
- vii) In Remarks column write **Internship_Fee_Stat_IPO_AC**
- viii) Take a printout of the payment receipt.

13. Google form Link: <https://forms.gle/sp5EvL3Gk8GXHdzEA>
14. Last Date of Application: to be announced by the department.
15. Applicants will be intimated by: to be declared
16. **Contact details of Mentor:**

Dr. Soumalya Mukhopadhyay, Department of Statistics
Siksha Bhavana, Visva-Bharati
Santiniketan – 731 235, West Bengal, India
Email: soumalya.mukhopadhyay@visva-bharati.ac.in

17. **Contact details of Supervisor:**

Dr. Saran Ishika Maiti, Department of Statistics
Siksha Bhavana, Visva-Bharati
Santiniketan – 731 235, West Bengal, India

Email: saranishika.maiti@visva-bharati.ac.in

18. Contact details of the Coordinator:

Dr. Tirthankar Ghosh, Department of Statistics

Siksha Bhavana, Visva-Bharati

Santiniketan – 731 235, West Bengal, India

Email: tirthankar.ghosh@visva-bharati.ac.in

ANNEXURE-I
BASIC FORMAT FOR PREPARING INTERNSHIP PROGRAMME BY
AN IPO
VISVA-BHARATI
INTERNSHIP PROGRAMME

Name of the Centres/Schools/Offices/Bhavanas/Library: **Statistics**

Name of the Bhavana (if any): **Siksha Bhavana**

1. Title of the UG internship programme (IP): **Statistical Quality Management.**
2. Nature of Internship Programme: **Skill-based for enhancing employability/Research-based for developing research aptitude**

3. Description of the internship programme (200 words):

The Undergraduate Internship Programme in Statistical Quality Management is designed to give students a strong foundation in the principles and practical applications of quality control and improvement using statistical methods. This programme bridges academic knowledge with real-world industry practices, equipping interns with tools to analyze, monitor, and enhance process quality across various sectors.

During the internship, students will gain hands-on experience applying statistical techniques such as control charts, process capability analysis, design of experiments (DOE), and root cause analysis. Interns will work on live projects or simulated industrial problems, using software tools like Minitab, R, or Python for statistical analysis and visualization.

The programme also emphasizes problem-solving, teamwork, and data-driven decision-making in quality management contexts. Interns will collaborate with mentors and industry professionals to understand quality standards such as Six Sigma, ISO, and lean methodologies.

By the end of the internship, participants will be capable of identifying quality issues, interpreting statistical data, and recommending actionable improvements. This internship is a valuable stepping stone for quality assurance, operations, data analytics, and industrial engineering careers.

This program offers a well-rounded introduction to statistical quality management, ideal for students pursuing statistics, engineering, data science, or related fields.

4. Objective (Bulleted form):

- To provide foundational knowledge of statistical tools and techniques used in quality management.
- To develop practical skills in analyzing and interpreting quality-related data.
- To familiarize students with key concepts such as control charts, process capability, and design of experiments (DOE).
- To introduce industry-relevant software tools for statistical analysis (e.g., Minitab, R, Python).
- To enable students to identify, monitor, and solve real-world quality issues using data-driven approaches.
- To foster understanding of quality standards and methodologies like Six Sigma, ISO, and Lean principles.
- To enhance problem-solving, teamwork, and communication skills professionally.
- To prepare students for future roles in quality assurance, operations, and process improvement.

5. Duration: Days: **8 Weeks** / Hours: **120 hours**

6. Mode of Internship Programme (Offline/Virtual/Blended): **Blended**

7. Minimum Eligibility criteria: **Statistics/Mathematics/Economics/Engineering with knowledge of Probability theory and at least one computer application software.**

8. Date of start and closure of Internship Programme: **Negotiable.**

9. Total intake of Interns/slot: **Three (3)**

10. Selection process (If any): **Written test and /or Viva-voce.**

11. Place of internship: **Department of Statistics, Visva-Bharati University**

12. Logistics (minimum) to be provided, if any: **Departmental Logistic support available.**

13. Fee to be paid: **INR 2000.00**

14. Contact details of Nodal officer: **Prof. Sudhansu S. Maiti, Department of Statistics, Visva-Bharati University, Santiniketan-731235, Phone Number: 9434013574, email id: sudhansu.maiti@gmail.com**

**INTERNSHIP PROGRAMME
DEPARTMENT OF STATISTICS
SIKSHA BHAVANA (INSTITUTE OF SCIENCE)
VISVA-BHARATI**

1. Title of the UG internship programme: **Algebraic Statistics for Design of Experiments: Theoretical Foundations and Applications in Natural Sciences**
2. Nature of Internship Programme: **Skill based for enhancing employability / Research based for developing research aptitude**
3. **Description of the internship programme:** [Total duration: 120 hrs]

This internship offers undergraduate and postgraduate students an opportunity to engage in theoretical and computational aspects of Algebraic Design of Experiments (ADOE). Participants will explore how algebraic and combinatorial techniques are used to structure experimental designs optimally in the context of biological, physical, and chemical sciences. Through this programme, students will learn how to analyze factorial designs, explore confounding structures, and use polynomial representations for understanding aliasing. The internship will expose students to tools from computational algebra and statistical computing, including Gröbner bases and software like R, Python, or MATLAB. Emphasis will be placed on both the theoretical underpinnings and practical implementation. Students will work on projects and case studies related to real-life scientific experiments, providing a hands-on understanding of designing efficient experiments that can reveal subtle but critical effects in natural processes.

Key References

- Pistone, G., Riccomagno, E., & Wynn, H. P. (2001). Algebraic Statistics: Computational Commutative Algebra in Statistics. Chapman & Hall/CRC.
- Diaconis, P., & Sturmfels, B. (1998). Algebraic algorithms for sampling from conditional distributions. *Annals of Statistics*, 26(1), 363–397.
- Cox, D., Little, J., & O'Shea, D. (2007). *Ideals, Varieties, and Algorithms* (3rd ed.). Springer.

Eligibility Criteria

- Background in statistics, preferably in experimental design or related fields.
- Proficiency in statistical software and programming languages such as R or Python, or MATLAB.
- Ability to work independently and in a team.
- A genuine interest in the applications of algebraic design in natural sciences.

Learning Outcomes

- Gain practical experience in applying algebraic design techniques to real-world problems.

- Work on case studies related to natural sciences, enhancing understanding of experimental methods.
- Exposure to research methodologies in statistics and their applications across diverse fields.

4. Objective:

- To introduce students to the fundamentals of algebraic experimental design.
- To apply algebraic techniques in real-world scientific experimentation.
- To enhance computational skills using statistical software.
- To cultivate independent research skills in statistical theory and applications.

5. Duration: Hours: **120 hrs**

6. Mode of Internship Programme (Offline/Virtual/Blended): **Online**

7. Date of start and closure of Internship Programme: **Negotiable**

8. Total intake of Interns/slot: **2 (maximum)**

9. Selection process (If any): **Based on eligibility and academic performance, or viva-voce**

10. Place of internship: **Online**

11. Logistics (minimum) to be provided, if any: **As applicable. Students should have a laptop/desktop with good internet connectivity. Access to commonly available spreadsheet software is desirable. Wherever required, free/open-source statistical tools may be used.**

12. Fees to be paid: **As Applicable (Amount to be paid only after getting the confirmation from the Mentor)**

How to pay (**only after getting the confirmation**)

- Visit <https://www.onlinesbi.sbi/sbicollect/icollecthome.htm>
- Select category Educational Institutions
- Select Visva Bharati University
- In Payment Category select Misc Receipts
- Fill up the mandatory details
- In the Purpose of Deposit select Others
- In the Remarks column, write Internship_Fee_Stat_IPO_DC
- Take a printout of the payment receipt.

13. Google form Link: **To be announced**

14. Last Date of Application: To be announced by the Department.

15. Applicants will be informed by: **To be announced**

16. Contact details of Mentor:

Dr. Debashis Chatterjee, Assistant Professor, Department of Statistics

Siksha Bhavana, Visva-Bharati

Santiniketan – 731 235, West Bengal, India

Email: debashis.chatterjee@visva-bharati.ac.in

Contact: 9674121629

17. Contact details of Supervisor:

Dr. Saran Ishika Maiti, Department of Statistics

Siksha Bhavana, Visva-Bharati

Santiniketan – 731 235, West Bengal, India

Email: saranishika.maiti@visva-bharati.ac.in

18. Contact details of the coordinator:

Dr. Tirthankar Ghosh, Department of Statistics

Siksha Bhavana, Visva-Bharati

Santiniketan – 731 235, West Bengal, India

Email: tirthankar.ghosh@visva-bharati.ac.in