

Brochure For Add-On Course in
FOUNDATIONS IN MATHEMATICS

Offered By

Department of Mathematics and Statistics
St. Xavier's College (Autonomous), Ranchi

Course Coordinator: Dr. Manoj Kumar Singh

Context: In recent time, especially after covid pandemic, declination in level of Mathematical thinking among students has been observed.

Objective: The department has devised an Add-on course "Foundations in Mathematics" for the undergraduate students of our college to acquire basic knowledge and skills in fundamental topics in Mathematics.

Number of Seats: 30.

Target Group: Any student of St. Xavier's College, Ranchi who is eager to learn Mathematics can apply.

Pedagogy and Methodology: The lectures during the course will avoid the conventional class room teaching. It will involve interactive learning and group learning among the students to enhance their ability to understand and learn the basics in Mathematics.

Course Outcome: After completing this course, students will have knowledge of key concepts in analytical mathematics. Also, students will be equipped with problem solving techniques in Mathematics. Their ability to use mathematical and logical thinking to approach a problem will enhance.

Duration: The contact hours for the course will be 30 hours equivalent to 40 lectures. Each lecture will be of 45 minutes.

Certification: Course will be followed by an exam. Students will be awarded with a certificate upon satisfactory performance in the exam.

Course Fee: 2000/-

Course Content:

Contrapositive, converse and negation of statements, Set, Union, intersection and difference of sets, arbitrary union and intersection of sets, Generalized De Morgan's Law, cartesian product.

Functions, Injective and surjective functions, inverse functions, Relation, equivalence relation and partitions, Binary operation.

Well ordering principle, Strong induction principle, Index set, sequence, Countable and Uncountable sets, algebraic number, transcendental number.

How to apply: The application form is available free of cost in the department of Mathematics and Statistics.

Contact Details: Dr. Manoj Kumar Singh
Assistant Professor,
St. Xavier's College, Ranchi
Phone: +91-6200352904
Email: manojkumarsingh@sxcran.org