

Cross Cutting Issues : In the FYUGP curriculum

Integration of Crosscutting Issues in Mathematics Curriculum

◆ Professional Ethics □

Application: In topics like Numerical Methods, Optimization etc. ethical use of data, accuracy in computation, and responsible presentation of results are emphasized.

Outcome: Students develop integrity in problem-solving and research, recognizing the impact of mathematical decisions on industries, technology, and also in society issues.

◆ Gender Sensitivity □

Application: Classroom teaching and learning are designed to be inclusive, avoiding gender bias. Encouragement is given to all genders equally in problem solving, research, and presentation activities. Evaluation process is also universal.

Outcome: Promotes equity and creates an inclusive learning environment encouraging participation from all demographics.

◆ Human Values □

Application: Through historical insights in Vedic Mathematics, Number theory, Classical Algebra, Abstract Algebra, and Analysis, students are introduced to contribute from diverse global cultures and mathematicians, fostering respect and appreciation. □

Outcome: Encourages values like perseverance, cooperation, critical thinking, and respect for diverse intellectual contributions.

◆ Environment and Sustainability □

Application: Real and Complex Analysis, Number Theory, Multivariate Calculus, Differential Equations, Numerical Analysis, Optimization Theory and PDEs are used in modeling real-life scenarios including climate patterns, population growth, resource optimization, and ecosystem dynamics. □

Outcome: Students gain tools to understand and address environmental challenges through mathematical modeling, supporting sustainable practices.