

ADITI MAHAVIDYALAYA
University of Delhi

TEMPLATE FOR OUTCOME-BASED EDUCATION
(2019-2022)

DEPARTMENT: MATHEMATICS

COURSE/NAME OF THE PAPER: ANALYTICAL GEOMETRY AND APPLIED ALGEBRA

COURSE CODE: 62354343

CREDITS: 6

SEMESTER: III

NO. OF TOTAL STUDENTS: 52


PERCENTAGE OF STUDENTS PASSED: 98

STUDENTS WITH A+: 38

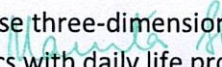
-
1. **SYLLABUS:** SECTION-I : Geometry Techniques for sketching parabola, ellipse and hyperbola. Reflection properties of parabola, ellipse and hyperbola and their applications to signals, classification of quadratic equation representing lines, parabola, ellipse and hyperbola. SECTION-II : 3-Dimensional Geometry and Vectors Rectangular coordinates in 3-space; spheres, cylindrical surfaces cones. Vectors viewed geometrically, vectors in coordinate system, vectors determine by length and angle, dot product, cross product and their geometrical properties. Parametric equations of lines in plane, planes in 3-space. SECTION - III: Applied Algebra Latin Squares, Table for a finite group as a Latin Square, Latin squares as in Design of experiments, Mathematical models for Matching jobs, Spelling Checker, Network Reliability, Street surveillance, Scheduling Meetings, Interval Graph Modelling and Influence Model, Picher Pouring Puzzle,.
 2. **LEARNING OBJECTIVES:** The course aims at identify curves and applying mathematical models in daily life problems studying geometric properties of different conic sections. The purpose of this course is to strengthen the mathematical skill along with the algebraic skills and concepts to assure success in the Algebra.
 3. **LEARNING OUTCOMES FROM ALL THE OBJECTIVES WITH STUDENTS' RESPONSES.**

(Like, Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree)

The course will enable the students to: i) Identify and sketch curves. ii) Use three-dimensional geometry using vectors. iii) Understand mathematical models to relate mathematics with daily life problems.


NAAC
Cordinator
Aditi Mahavidyala
Bawana, Delhi-110039


I.Q.A.C.
Cordinator
Aditi Mahavidyala
Bawana, Delhi-110039


प्रोफेसर ममता शर्मा/Professor Mamta Sharma
प्रोफेसर-प्रधान/Professor-Principal
अदिति महाविद्यालय/Aditi Mahavidyalaya
दिल्ली विश्वविद्यालय/University of Delhi
बवाना, दिल्ली-110039/Bawana, Delhi-110039

4. COURSE CONTENT: As Stated Above

5. Program Outcome according to Bloom's Taxonomy
Not Applicable for Mathematical Sciences as per templates.

6. How paper in the course helped to become technologically updated and made aware?
A practical and Goal oriented results

7. Average attendance of students in the Course?
80-95 percentage

8. Different pedagogical and Peer Learning used for Course Outcome
Most of the paper is based on practical's based on daily routines.

9. Community Outreach Initiatives and Field Visits

Outreach Initiatives	Assignments
Field Visits	N/A
Workshop	N/A
Seminar/Webinar	N/A
Practical Exercises	Yes
Group Activities	Yes

10. Research, Technology Skills, and Project-based Learning Developed in Students

RESEARCH SKILLS	TECHNOLOGICAL SKILL	PROJECT-BASED LEARNING
-----------------	---------------------	------------------------

N/A

11. Skill, Knowledge and value-added after the Course

Analytical Competency	Knowledge Based
Problem-solving competence	General
Leadership	Advanced
Time management	Advanced
Team Work/ Collaboration Skills	N/A
Communication Competence	Appreciable
IT Skill	Basic Level
Critical Thinking	Advanced
Entrepreneurial/ Job	Average
Any Other, Specify	Knowledge Based
Overall Development after Course	Enhanced Decision Making

12. Employment and Placement Opportunities after Course Completion

NAAC
Coordinator
Aditi Mahavidyala
Bawana, Delhi-110039

Ratna
NAAC
Coordinator
Aditi Mahavidyala
Bawana, Delhi-110039

Mamta Sharma
प्रोफेसर-प्राचार्य / Professor-Principal
अदिति महाविद्यालय / Aditi Mahavidyalaya
दिल्ली विश्वविद्यालय / University of Delhi
बवाना, दिल्ली-110039 / Bawana, Delhi-110039

All applications are practical based

13. Overall Analysis

This course aims at providing basic knowledge to Applied Algebra and their programming language in order to apply them for plotting functions, finding roots to polynomials, computing limits and other mathematical tools.

14. Action Taken Report

The course also aims to equip the students to analyse, interpret and draw conclusions from the given data.

15. Mentor and Mentee for Overall Course Outcome

Various Assessments and Tests

16. Does the Outcome support the Program Goals?

Yes

17. Does the outcome describe what the program intends for students to know (Cognitive), think (Affective, Attitudinal), or (Behavioural, Performance)?

Affective Performance

18. Do you have or can you create an activity to enable students to learn and demonstrate the desired outcome?

Yes

19. Can the results from assessing this outcome be used to make decisions on how to improve the program?

Yes

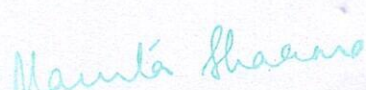
20. Extra Remarks and Students Feedback

Good and Interesting to learn

21. Attach the Students List of the Course


NAAC
Coordinator
Aditi Mahavidyala
Bawana, Delhi-110039


I.Q.A.C.
Coordinator
Aditi Mahavidyala
Bawana, Delhi-110039


प्रोफेसर ममता शर्मा / Professor Mamta Sharma
प्रोफेसर-प्राचार्य / Professor-Principal
अदिति महाविद्यालय / Aditi Mahavidyalaya
दिल्ली विश्वविद्यालय / University of Delhi
बवाना, दिल्ली-110039 / Bawana, Delhi-110039

Can be Collected from the College Exam Cell

Note:

PO1- I feel the program has helped to develop skills and attitudes needed for critical thinking and adopting a comprehension-solving approach.

PO2- The teaching-learning pedagogies used in the program have made me capable enough to deliver and communicate information effectively with a mark.

PO3- The program has helped me to inculcate the qualities to teamwork, cooperation and Solidarity.

PO4- The program has made me capable of comprehending international frameworks keeping in view research aspects in consideration.

PO5- The program has trained me to check unethical behaviour, falsification and manipulation of information in order to avoid debacles which can be seen rising persistently over the period of time.


PO6- I feel my mental horizon has broadened due to understanding of the intricacies of the paper.

Dr. Santosh Kumar Yadav

30/11/2022


NAAC
Cordinator
Aditi Mahavidyala
Bawana, Delhi-110039


I.Q.A.C.
Cordinator
Aditi Mahavidyala
Bawana, Delhi-110039


प्रोफेसर ममता शर्मा/Professor Mamta Sharma
प्रोफेसर-प्रधान/Professor-Principal
अदिति महाविद्यालय/ Aditi Mahavidyalaya
दिल्ली विश्वविद्यालय/University of Delhi
बवाना, दिल्ली-110039/Bawana, Delhi-110039