



Sri Vani Degree & PG College
Affiliated to SK University
Kakkalapalli Cross, Near Sakshi Office, Ananthapuramu
Andhra Pradesh, India- 515002



Department Profile: Mathematics

Mathematics is an art, a future science, a language and an analytical tool for the natural and social sciences, a means of exploring philosophical questions and a beautiful edifice that is a tribute to human creativity. The Department of Mathematics is established in the year 1997.

Mission:

Our mission is to welcome all students into the study of mathematics support them through their classes and show them how mathematics are not only beautiful but also useful and powerful.

Vision:

We envision a world in which all people embrace the beauty of mathematics, utilize their ability to help us understand the world and harmless their power to promote human flourishing.

Values:

We value hard work and determination to overcome challenges, inquisitiveness to faster learning, creativity to consider new idea, cooperation to work with other and to help them excel, diversity to respect the opinions and backgrounds of others and community to support one other.

Overviews:

Mathematics department offers various mathematics courses to all science streams. Our objective is to make our students more competent, motivated engineers and scientists with a strong mathematical background.

Our faculty members participate in several academic and nonacademic activities. Delivers invited lectures conducted national workshop, presented Research paper national and International conferences attended in various national and International workshops/ seminars.

Every year number of events and programs are being organized to enrich the knowledge and interests for mathematics such as Guest lectures, paper presentations along with various competitions like mathematical puzzles, writing programs etc during institutional technical events in the campus.

Courses / Programs offered:

Level	Course
UG	B.Sc (MPCS)- Maths, Physics, Computer Science
	B.Sc (MECS)- Maths, Electronics, Computer Science
	B.Sc (MSCS)- Maths, Stats, Computer Science

Course Structure under CBCS:

Year	Sem	Course	Title of the Course	Internal Marks	External Marks	Total Marks
I	I	I	Differential Equations	25	75	100
	II	II	Solid Geometry	25	75	100
II	III	III	Abstract Algebra	25	75	100
	IV	IV	Real Analysis	25	75	100
III	V	V	Ring Theory and Vector Calculus	25	75	100
		VI	Linear Algebra	25	75	100
	VI	VII-A	Laplace Transforms	25	75	100

- Participation of Interdisciplinary Courses and the departments/ units involved : NIL
- Participation of the department in the courses offered by other departments : NIL
- Courses collaboration with other universities, Industries, foreign institutions : NIL
- Details of courses/ programmes discontinued (if any) with reasons : NIL

Number of teaching posts:

Post	Sanctioned	Filled
Teaching	02	02

Program outcomes, Program specific outcomes & Course outcomes:

Program outcomes	
PO1	Acquire the knowledge of mathematics, basic/science, core and advanced fundamentals in the field of Group theory, Real Analysis, Vector Calculus, Differential equations, partial and ordinary differential equations, Laplace transforms and Linear Algebra.
PO2	Ability to identify and solve the complex real time problems
PO3	Ability to apply mathematical foundations, algorithmic principles and computer science theory in the modeling and design of computer based systems.
PO4	Ability to design and conduct experiments as well as to analyze and interpret data.
PO5	Ability to effectively use modern software tools and technologies for computer science and engineering practice.
PO6	Ability to develop solutions for societal needs with the use of computer science and engineering techniques.
PO7	Ability to understand and appreciate various professional, ethical, legal, security and social issues and responsibilities.
PO8	Ability to achieve professional and individual excellence and capability to work in teams
PO9	Ability to communicate the engineering solutions effectively with the peers, customers and end users
P10	Ability to understand and apply management and core engineering principles in real time project management

P11	Attitude for independent and continuous learning to improve knowledge professional competence
P12	Ability to practice computer science and engineering in compliance with environmental standards.

Programme Specific outcomes	
PSO1	Ability to understand and apply the concepts of mathematics, basic sciences, basic computing, in analyzing the real world problems and solving them
PSO2	Ability to imbibe ethical and professional skills required to work in teams and lead the team.

Course outcomes:

TITLE OF THE COURSE: Ordinary Differential Equations

- To know the order and degree of the ODE's
- To identify some specific methods and solve them
- To solve them some standard methods
- To make difference between ODE and PDE
- To know the concept of Laplace Transforms and its inverse with applications

TITLE OF THE COURSE: Real Analysis

- To lay a good foundation for classical analysis
- To studies the behavior of sequence and series
- To understand the real number of system
- To know the concepts of continuity and Riemann integrals

TITLE OF THE COURSE: Algebra

- To introduce the concept of Groups, Rings and Fields
- To study the concept of homomorphism
- To facilitate a better understanding of vector space
- To solve problems in matrices
- To introduce the some of the most fundamental algebraic structures like inner product space, Determinants etc
- The algebra of linear transformations
- To gain knowledge in fields in the theory of numbers, the theory of equations

HoD Profile:



Name : Smt.Y.Usha Rani

Qualification : M.Sc in Mathematics, B.Ed

Experience : 26 Years

Other Positions: Principal

The department is headed by Smt.Y.Usha Rani who is an experienced academician of Mathematics and guides the faculty members of the Department to work for the betterment of students & the college.

Faculty Profile:

	<p>Name : M.Hari Krushna Qualification : M.Sc., B.Ed. Designation : Lecturer in Mathematics Experience : 17 Years Specialization : Mathematics No. of Years worked in the college : 01 (2015-2016)</p>
	<p>Name : S.Chithambaramma Qualification : M.Sc., B.Ed. Designation : Lecturer in Mathematics Experience : 4 Years Specialization : Mathematics No. of Years worked in the college : 04 (2016-2020)</p>
	<p>Name : Dr.D.S.Irfana Qualification : M.Sc., M.Phil, PhD Designation : Assistant Professor Experience : 16 Years Specialization : Algebra No. of Years worked in the college : 01 (2019 to till date)</p>

Percentage of Lecturers delivered and Practical Classes handled:

Name of the faculty	Total work load	Classes handled	Practical Classes handled
Smt.Y.Usha Rani	2 per day	B.Sc(CS)	Nil
Dr.D.S.Irfana	4 per week	B.Sc(CS)	Nil

Student-Teacher Ratio:

Level	Class	Number of Teachers	Student Teacher Ratio
UG	I BSC	02	45:1
	II BSC		35:1
	III BSC		25:1

Qualification of Teaching Faculty:

PDF	PhD	M.Phil	PG with B.Ed	PG
-	01	01	01	02

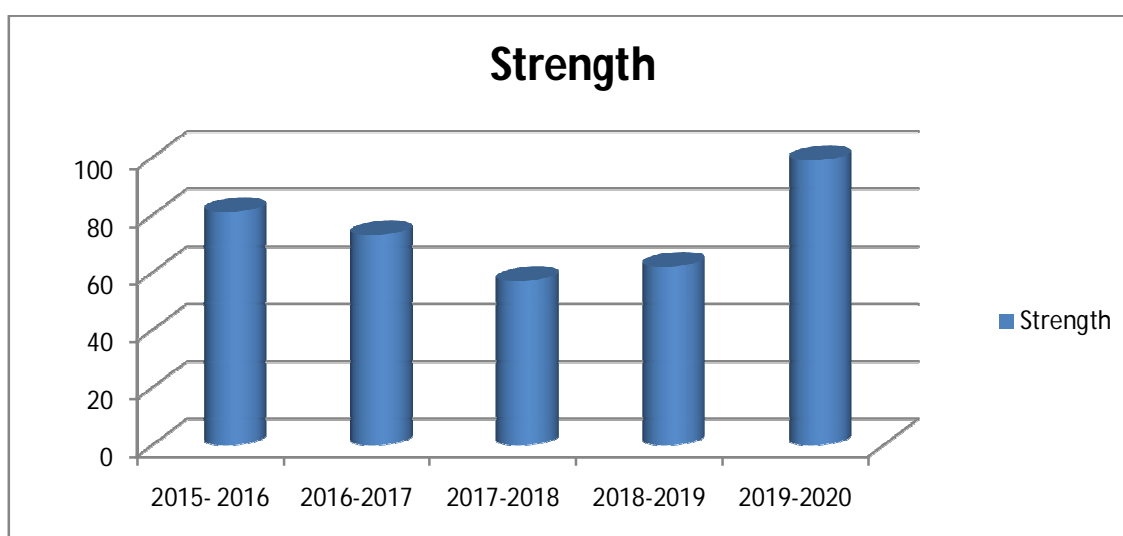
- List of eminent academicians and scientists / visitors to the department : NIL
- Seminars/ Conferences/ Workshops organized : NIL

Publications:

Name of the faculty	Research Papers Published		Papers published in Conferences		Books	Edited Book
	International	National	International	National		
Dr.D.S.Irfana	09	Nil	03	05	Nil	Nil

Student Profile program wise:

Name of the course	Year	Total Seats	Enrolled		Total
			Male	Female	
B.Sc (CS)	2015- 2016	150	31	50	81
	2016-2017	150	31	42	73
	2017-2018	150	30	27	57
	2018-2019	150	24	38	62
	2019-2020	150	52	47	99



List of Visiting Faculty:

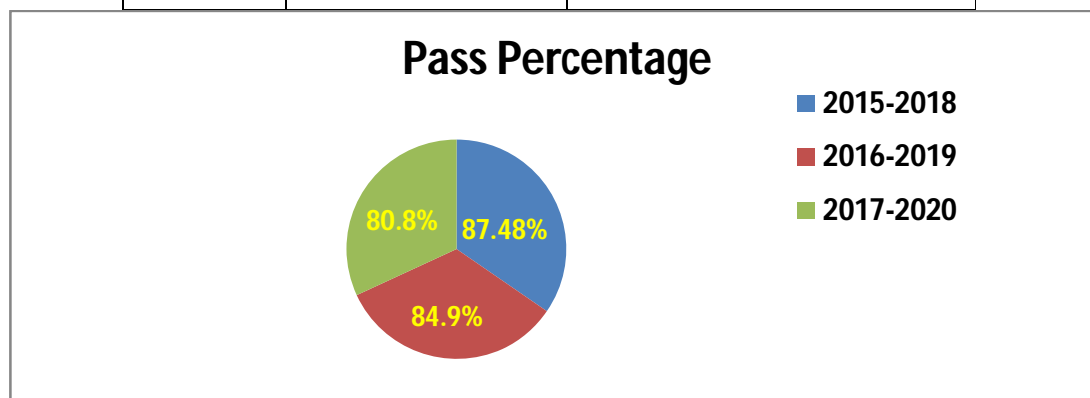
Name	Qualification	Designation	Institute	Teaching Experience
M.Hari Krushna	M.Sc., B.Ed.	Assistant Professor	DRKVSRTIT, Kurnool	17
Siva Prasad	M.Sc	Assistant Professor	Govt.Degree College for Men, Ananthapuramu	20
Dr.S.Srilakshmi	M.Sc,M.phil, P.hD, MCA	Assistant Professor	J.N.T.U.A College of Engineering	23
Dr.D.S.Irfana	M.Sc,M.phil, P.hD	Assistant Professor	St.Joseph PG & Degree College, Kurnool	16

Pass percentage (Semester Wise):

Year	Month	Sem	Appeared		Pass		Pass Percentage
			M	F	M	F	
2015-16	Nov/Dec	I	31	50	20	47	82.7
	Mar/Apr	II	27	46	18	43	83.5
2016-17	Nov/Dec	I	30	43	29	39	94.7
		III	27	49	25	45	92.1
	Mar/Apr	II	29	38	24	31	83.7
		IV	26	48	21	48	87.8
2017-18	Nov/Dec	I	29	27	17	26	76.76
		III	29	38	22	33	82.7
		V (P-5)	26	48	20	45	89.66
		V (P-6)	26	48	21	45	90
	Mar/Apr	II	24	26	13	26	77.9
		IV	28	35	20	28	77.8
VI (ELE)	26	42	18	39	86.66		
2018-19	Nov/Dec	I	23	39	15	32	75
		III	21	24	12	22	75.73
		V (P-5)	20	38	19	38	96.6
		V (P-6)	27	32	24	21	75.1
	Mar/Apr	II	20	36	15	27	75
		IV	19	25	12	24	82
VI (ELE)	24	35	18	32	83.7		
2019-20	Nov/Dec	I	49	47	31	44	73.68
		III	21	33	13	31	79
		V (P-5)	26	18	19	17	81.9
		V (P-6)	26	18	22	18	90.56
	Mar/Apr	II					
		IV					
VI (ELE)							

Overall (year wise) pass percentage:

SNO	Year	Pass Percentage
1	2015-2018	87.48
2	2016-2019	84.9
3	2017-2020	80.80



Diversity of Students:

Name of Course	% of students from the same state	% of students from other state	% of students from abroad
UG	100	Nil	Nil

Details of Infrastructure facilities:

Library:

There is a central library to cater to the need of the students. Department does not have a library. But the complimentary copies provided by different publisher are provided in the department for the use of the student.

Internet facility for staff and students:

Yes (only for staff)

Classroom with ICT facility:

Yes

Details of student enrichment programme (Special lectures/ workshops/ seminar) with external experts:

05

Number of students receiving financial assistance from college, university, government or other agencies:

Data maintained by the college

Teaching methods adopted to improve student learning:

- Lecture
- Assignments
- PPT's
- Class seminars
- Quiz
- Question and answers
- Question paper discussion
- Test
- Group discussion

Participation in Institutional Social Responsibility (ISR) and Extension Activities:

Our students participated in NSS activities, seminars and quizzes conducted by college.

- 60 number of NSS volunteers are participated in 5th International Yoga Day Celebrations on June 21th 2019
- 55 number of NSS volunteers are attended the awareness program on Solid Waste Management (6th July 2019)
- 45 number of students marched through the streets of kakkalapalli village to spread awareness on solid waste management (7th July 2019)
- 20 number of NSS volunteers participated in tree plantation programme to create social awareness about the importance of tree as well as planted trees in college campus (23rd July 2019)
- 30 number of NSS volunteers are participated in clean campus programme (25th July 2019)
- On occasion of Jal Shakti Abhiyan (JSA) focused on water conservation, our students did removing thorn trees and digging pits in kakkalapalli pond (29th July 2019)
- On the glorious occasion of our mighty country's 73rd independence day, our college hosted a simple and elegant flag hoisting ceremony
- 60 number of NSS volunteers are participated lecture series on the focus of poshan maah (Nutrition Month) on the occasion of Poshan Abhiyan Jan Andolan Dashboard (14th Sep 2019)
- 40 number of students are participated in blood grouping camp conducted in college on 15th Sep 2019
- On the occasion of Foundation Day of NSS, Unit-II conducting awareness program about NSS, Essay writing & poster presentation on NSS activities, in this event 20 number of students are participated (24th Sep 2019)
- On the occasion of Mahatma Gandhi 150th Birth Anniversary (Gandhiji's Nai Talim), 50 number of NSS Unit-II volunteers participated in tree plantation and cleanliness drive in the college campus (3rd Oct 2019)
- On the occasion of Constitution day, NSS Unit-II conducting classroom lecture(26th Nov 2019)
- 20 number of NSS volunteers are participated in activities (Quiz, Elocution, Poster presentation & Painting) carried out in college on the occasion of 150th Birth Anniversary of Mahatma Gandhi (Dec 2019)
- 20 number of NSS volunteers are participated University level Youth festival will be conducted 22nd Jan at Bhuvanavujayam, Sri Krishnadevaraya University, Anantapuramu

Facilities:

- Internet and ICT Based

SWOC analysis of the department and future plans:

Strength:

- ✚ Different research topics discussed with students by the department faculties and by invited guest faculties
- ✚ Qualified and well trained young energetic faculty
- ✚ Competitive and updated syllabi with compulsory project work in all levels
- ✚ Quality students input with high percentage of success rate in examination
- ✚ Good teacher student and stake holder relationship

Weakness:

- ✚ Inadequate annual grant for recurring expenditure
- ✚ Inadequate supporting staff
- ✚ Publication of books and filling of patent

Opportunities:

- ✚ Introduction in new courses in pure mathematics
- ✚ Research in new areas
- ✚ Consultancy and extension activities
- ✚ Adequate floor space for further growth

Challenges:

- ✚ Filling of vacant positions and retaining competent faculty
- ✚ Funds to strengthen the existing research base and for development of department

Future Plan:

In order to translate the vision of the department into reality the department has set short and long term plans some of them are mentioned below.

- ✚ Modernization of class rooms with up to date teaching aids
- ✚ Strengthening of seminar library
- ✚ Up gradation of students laboratories with advanced facilities to improve the practical skill of the students
- ✚ Collaborations of national and international levels as well as with industry
- ✚ Organizations of workshops conferences and seminars
- ✚ Further increase number of publications in reputed journals and filling of patent
- ✚ To extend the instrumental and scientific expertise to the industries of this region to generate funds for the department
- ✚ Developing the department to a centre of excellence in the field of mathematical sciences.