## ADARSH SHIKSHAN SANSTHA BEED

## KALIKADEVI ARTS, COMM. \& SCI.

## COLLEGE TQ, SHIRUR (KA) DIST- BEED



## DEPARTMENT PROFILE OF MATHEMATICS

## PROFILE OF DEPARTMENT

## INTRODUCTION:-

Mathematics play important role in the development of human life. The department of mathematics of Kalikadevi Arts, commerce \& Science College, shirur-kasar was established in July 2004. Department of Mathematics and is offering B.Sc. Mathematics degree course under UG program since 2004 is Affiliated to Dr. Babasaheb Ambedkar Marathwda University, Aurangabad Now the department has one full time faculty members and Two C.H.B teaching faculty C.H.B .The department has succeeded in this endeavours. It has produced highly qualified and motivated mathematicians to provide leadership in educational institutions. Graduate of this department are distinctively placed in reputed institutions and organizations. Department motivates and ignites the minds of students through several co-curricular and extracurricular activities of students.

## Vision:-

1. To achieve a high standard of excellence in generating and disseminating knowledge in mathematics.
2. Imparting quality mathematics education and inculcating the spirit of research through innovative teaching and research methodologies.
3. To develop the ability to apply mathematical knowledge to solve problems in real life situations.
4. To provide an environment where students can learn become competent users of mathematics, and understand the use of mathematics in other disciplines.
5. To develop the analytical, logical thinking, and problem solving abilities of students.

## Mission:-

1. To make students aware of technology to explore mathematical concepts through activity and experimentation.
2. To provide students with knowledge and insight in mathematics.
3. To prepare them to pursue higher studies.
4. to produce UG graduate students with a strong foundation to join research. Or to serve in the industry.
5. To work towards the transformation of students to competent and motivated professions with sound theoretical and applied knowledge.

## AIM of department:-

1. To create and impart knowledge of Mathematics among the students.
2. To develop the mathematical attitude in the minds of students.
3. To clear basic concepts and aware of the learning process in mathematics
4. To provide a stimulating teaching environment of graduate students of the department.
5. To make the students fit for society.

## SCOPE \& IMPORTANCE OF SUBJECT:-

Mathematics is a subject which has wide scope. It plays important role in in many disciplines. Mathematics has always been the language of science and technology. Mathematics is more the just a useful tool. Many. People enjoy mathematics for its own sake. The find deep satisfaction and indeed beauty in its order, precision and complex structures mathematics develops the skills of reasoning developing new ideas and formulating new approach and finally drawing logical conclusions in the working word. Mathematics have immense scope in government job also, mathematics degree graduates are respected for their excellent quantitative and problem solving abilities and win a wide range of rewarding positions in the public and private sectors. The has been an increase in the number of students. Studying maths being employed in the highest paying jobs are directly or indirectly related with mathematics.

Mathematics jobs are available in both government as well as private organizations. In the government sector mathematics graduates may consumed in government departments, semigovernments PSUs, and research organisations, technical branches, banking sectors, colleges and universities. Besides academics jobs, trained mathematicians are also engaged at good remuneration and package in Indian Space Research Organization (ISRO), Defence Research and Development Organization (DRDO), National Aeronautic Limited (NAL) and society for Electronic Transaction and security (SETS) Good opportunities are in specific areas such as financial mathematics and computing along with mathematics.

## OBJECTIVES OF DEPARTMENT:-

1. To develop positive attitude among the students to wards instruction mathematics.
2. To develop analytical and logical acumen for problem solving.
3. To train the students for interdisciplinary applications.
4. To provide excellent information of mathematics for higher studies and suitable career.
5. To develop an appreciation for symbolic notations.

## ROLE OF DEPARTMENT IN PROVIDING VALUE BASED EDUATION:-

1. National Mathematics day.
2. To publish wall papers.
3. To organize guest lectures.
4. Department Library.

YEAR OF ESTABLSHMENT: - 09 July 2004.
COURCES OFFERED: - GU

| Admission Criterion | Course Name | Duration | Intake |
| :--- | :--- | :--- | :--- |
| $12^{\text {th }}$ Science <br> Mathematics | B.SC General Mathematics | 3 Years | B.SC F.Y=240 <br> B.SC S.Y=240 <br> B.SC T.Y=120 |

## > COURSE STRUCTURE:-

[I]. B.SC First Year (MATHEMATICS) Syllabus semester-I \& II (First Year)
Choice Based Credit \& Grading System [Curriculum will be progressively effective from the Academic Year 2022-2023onwards REF.NOSU/2022/6852-62 Date: 10/08/2022]
[II]. B.SC Second Year (MATHEMATICS) Syllabus semester-III \& IV (Second Year)
Semester Pattern [Effective for-June, 2014-2015].
[III]. B.SC Third Year (MATHEMATICS) Syllabus semester \&VI (Third Year)
Semester Pattern [Effective for-June, 2015-16].

| SR.NO | CLASS | SEMESTER | Paper Code | Paper No.Title of the papers |
| :---: | :--- | :---: | :--- | :--- |
| 1 | B.SC F.Y | I | MAT-101 | Geometry- I |
| 2 | B.SC F.Y | I | MAT-102 | Differential Calculus- II |
| 3 | B.SC S.Y | III | MAT-301 | Number Theory - V |
| 4 | B.SC S.Y | III | MAT-302 | Integral Transforms - VI |
| 5 | B.SC S.Y | III | MAT-303 | Mechanics - VII |
| 6 | B.SC T.Y | V | MAT-501 | Real Analysis- XI |
| 7 | B.SC T.Y | V | MAT-502 | Abstract Algebra- XII |
| 8 | B.SC T.Y | V | MAT-504 | Ordinary Differential Equation- XIII |
|  |  |  |  |  |
| 9 | B.SC F.Y | II | MAT-201 | Number Theory- III |
| 10 | B.SC F.Y | II | MAT-202 | Integral Calculus- IV |
| 11 | B.SC S.Y | IV | MAT-401 | Numerical Methods- VIII |
| 12 | B.SC S.Y | IV | MAT-402 | Partial Differential Equations- IX |
| 13 | B.SC S.Y | IV | MAT-403 | Mechanics- X |
| 14 | B.SC T.Y | VI | MAT-601 | Real Analysis- XIV |
| 15 | B.SC T.Y | VI | MAT-602 | Abstract Algebra- XV |
| 16 | B.SC T.Y | VI | MAT-604 | Ordinary Differential Equations - XVI |

NO OF TEACHING POSTS :

| Designation | Available |
| :---: | :---: |
| Assistant Professor | Mr. GHADGE RAMESH BHASKARRAO |
| Part-Time Teacher | Mr. SUYOG NAVATH BADE (C.H.B) |
|  | Mr. UMESH LAXMAN AGHAV (C.H.B) |

> FACULTY PROFILE WITH NAME, QUALIFICATION, DESIGNATION, AREA OF SPECIALIZATION, EXPERIENCE AND RESEARCH UNDER GUIDANCE:

| Name | Qualification | Designation |  | Npecialization <br> No. of <br> Years of <br> Experience | Nof Ph. D. <br> Students <br> guided for <br> the last 4 <br> years |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Mr. GHADGE R.B | M.sc B.Ed. <br> NET, | Asst.prof | MATHEMATICS | 09 |  |
| Mr. BADE S.N | M.sc B.Ed. <br> NET, SET | Asst.prof <br> (C.H.B | MATHEMATICS | 02 |  |
| Mr. AGHAV U.L | M.sc B.Ed. <br> NET | Asst.prof | (C.H.B) | MATHEMATICS | 02 |

## > PUBLICATIONS:

| Name of the <br> Faculty | Total No. of <br> Publication | Chapter in <br> Books | Books <br> Edited | Seminar/ Conference Attended |
| :---: | :---: | :---: | :---: | :---: |
| Mr.GHADGE <br> R.B | 08 | NIL | 02 | 16 |
|  |  |  |  |  |
|  |  |  |  |  |

## > IMPORTANT RATIOS:

| Sr. No. | Description Ratio |  |
| :--- | :--- | :--- |
| 1 | Teacher-Student Ratio | $\mathbf{8 5}(\mathbf{2 0 2 2 - 2 3 )}$ |
| 2 | Teacher-Research Scholar Ratio |  |

> PARTICIPATION OF FACULTY IN ACADEMIC EVENTS ORGANIZED BY UNIVERSITIES / OTHER INSTITUTIONS :

| Sr. <br> No. | Academic Events Attended | Papers <br> presented | Sessions <br> chaired |
| :--- | :--- | :---: | :---: |
| $\mathbf{1}$ | Conferences | 07 |  |
| 2 | Seminars | 00 |  |
| 3 | Workshops | 01 |  |
| 4 | Symposia | 00 |  |
| 5 | F D Programmes | 02 |  |
| 6 | Total | 10 |  |

DOCTORAL GUIDANCE:

| Sr. <br> No | Description | Total |
| :--- | :--- | :---: |
| 1 | Enrolment of Ph. D. students (during the last <br> years) |  |
| 2 | Ph. D. degree awarded to students (during the <br> last 5 years) |  |
| 3 | Pursuing Ph.D (as on date) |  |

> AWARDS RECEIVED BY THE FACULTY MEMBERS:

| Sr. <br> No. | Name of Faculty | No. of State <br> Level Awards | No. of National <br> Level Awards | No. of <br> International <br> Level Awards |
| :--- | :--- | :--- | :--- | :--- |
|  | Mr.Ghadge R.B | NIL | NIL | NIL |

RESEARCH PROJECTS :

| S. No. | Title of <br> the <br> project | Major/ <br> Minor/ <br> Other <br> Projects | Period of the Project |  | Funding <br> Agency <br> UGC/ICSSR <br> IAICTE// <br> Others | Amount <br> of fund |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  | From | To |  |  |
|  |  |  |  |  |  |  |
|  |  |  | NIL |  |  |  |

> SEMINARS/ CONFERENCES/WORKSHOPS ORGANIZED AND THE SOURCE OF FUNDING (In Last Three Years)

| Sr. No | National / International, Seminars / <br> Conferences /Workshops Organized | Source Of Funding | Year |
| :--- | :--- | :--- | :--- |
| 1 | Application to cryptography Number <br> of Theory Theoretic Function | Self | 5 July-2021 |
| 2 | A systems numerical methods of first <br> order ordinary differential equations | Self | 21 Dec-2021 |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

> DETAILS OF MOUS AND LINKAGES:

| Sr. No | Organization | Nature of Collaboration <br> Research/Faculty Exchange <br> /Student Exchange/Others | Year |
| :--- | :--- | :--- | :--- |
| $\mathbf{1}$ | Please mention Name of the <br> University | NIL |  |
| $\mathbf{2}$ | Please mention Name of the <br> Institutions | NIL |  |
| $\mathbf{3}$ | Please mention Name of the <br> Research Centres | NIL |  |
| $\mathbf{4}$ | Please mention Name of the <br> Industry | NIL |  |
| $\mathbf{5}$ | Please mention Name of the <br> Any Other organization | NIL |  |

> STUDENT PROFILE PROGRAM-WISE:

| Name of the Course/Programme | Enrolled (2022-2023) |  |
| :---: | :---: | :---: |
|  | Male | Female |
| First Year | 76 | 63 |
| Second Year | 56 | 37 |
| Third Year | 13 | 10 |

## > TEACHING METHODS ADOPTED TO IMPROVE STUDENT LEARNING

We taught to students through traditional method and modern method also. We Use black board and new modern techniques e.i. Zoom Meeting, Google Meet, And power point presentation.

## > STUDENTS' PERFORMANCE EVALUATION

We have to use evaluate students through various methods e. i. Group discussion, Seminar,

## > COURCE OUT COME

The is highest paying jobs are directly or indirectly related with mathematics. Mathematics jobs are available in both government as well as private organizations. In the government sector, mathematics graduates may consumed in government departments, semi-governments, PSUs, research organizations, technical branches, banking sectors, colleges and universities. Besides academics jobs, trained mathematicians are also engaged at good remuneration and package in Indian Space Research Organization (ISRO), Defence Research and Development Organization (DRDO), National Aeronautic Limited (NAL) and Society for Electronic Transaction and Security (SETS). Good opportunities are in specific areas such as financial mathematics and computing along with mathematics.

Financial Mathematics is the booming area where one can get one of the best packages in the industry. IT giants like IBM and Microsoft hired candidates as scientists where salary is beyond your expectation.

Teaching is one of the most sought after profession after Ph.D. One may appointed as Assistant Professor, Associate Professor, Reader and Professor in colleges and universities. Schools also offer good jobs for mathematics graduate both in the government as well as in the private sector.

## $>$ Top Job Opportunities in Mathematics

Mathematics best job opportunities are available in the following disciplines.

1. Operation research analyst
2. Software engineers
3. Teaching
4. Computer system analyst
5. Banks
6. Mathematician

## > DETAILS OF INFRASTRUCTURAL FACILITIES

Department Area Size: $12 \times 10.6$ =192 Square Foot

| SR.NO. | HEAD OF DEAD STOCK | QUANTITY |
| :---: | :--- | :---: |
| 1 | TABLE | 01 |
| 2 | CHAIRS FIBER | 02 |
| 3 | STEEL KAPAT | 01 |
| 4 | ELECTRICAL BOARD | 01 |
| 5 | TUEB CFL | 01 |
| 6 | COMPUTER SET | 01 |
| 7 | CILLING FAN | 01 |

## DETAILS OF STUDENT ENRICHMENT PROGRAMMES:

- To organizing Group Discussion.
- To organizing seminar class.
- To Organize A Guest Lecture.
- Poster wall Republic day 26 January
- National Mathematics Day celebration-22-December.
- State Level online Quiz competition to celebrate National Mathematics day-2022.
- Organize national seminar online zoom
- State Level online Quiz competition to celebrate National science - 28 day.


## LIST OF DISTINGUISHED ALUMNI:

| Sr.No. | Name | Qualification | Present Position | Contact No. |
| :---: | :--- | :--- | :--- | :--- |
| 1 | Kharmate Hanuman <br> Shriram | B.Sc.,B.Ed. | Teacher, Pune | 8975569286 |
| 2 | Bhillare Mahesh Rajendra | B.Sc. | Post Office,Ashti | 9158873573 |
| 3 | Raut Sominath Parmeshwar | B.Sc. | CISF | 9011994048 |
| 4 | Pakhare Ashok Tukaram | B.Sc. | Armi | 9096489239 |
| 5 | Pawal Sachin Ganpatrao | B.Sc. | Police,Ashti | 8379834008 |
| 6 | Tambe Sachin Prabhakar | B.Sc. | Police, Mumbai | 9049152610 |
| 7 | Gadekar Vayabhav Shriram | B.Sc. | Post office, Shirur | 9420180537 |
| 8 | Pawar Paras Darebhan | B.Sc. | Civil Engg.Raigad | 9421330367 |
| 9 | Khole Amol Abasaheb | B.Sc. | M.S.E.B.,Alibag | 9823464396 |
| 10 | Dhakne Vikas Bhagwan | B.Sc. | Teacher,Bavi | 9420575252 |
| 11 | Darade Seema Madhukar | B.Sc. | Teacher,Jalna | 9421331363 |
| 12 | Dhakane Sachin Sharad | B.Sc. | Teacher,Bavi | 9420575252 |
| 13 | Andure Kiran Gangadhar | B.Sc. | Teacher,Midsangvi | 9423671411 |
| 14 | Ghule Prashant Udhavrao | B.Sc. | Teacher,shirur(K) | 9763395418 |

> BEST PRACTICES OF DEPARTMENT:

- Publishing "Wasundhara" wall paper
- Conduct Test
> FUTURE PLANS OF DEPARTMENT
- To increase the books of Mathematics in the central library.
- To undertake department Minor / Major research project.
- To Organizing Seminar or Workshop \& Guest Lectures.
- To establish Well Departmental Library.
> SWOT ANALYSIS OF THE DEPARTMENT
Our department strength is well qualified, enthusiastic and reliable staff members
To compete any activity or work. Our weakness is participation of students are
Poor after COVID - 19 Pandemic. The opportunity is to inculcate students to
Participate all activities which are run by department.
> EVIDENCE OF SUCCESS


Mathematics National Day 22/12/2022


लोकाशा
22DEC2022
गणित तज़ ध़ीनिवास रामानुजन यांची जयंती साजरी


शिरूत, दि. २२ (लोकाशा न्युज):- एस.के, डॉ.पठाण टी.एस, रा.से.यो विभाग येथील कालिकादेवी कला, वाणिज्य व प्रमुख प्रोफे सर डॉ. अशोक घोळवे, विज्ञान महाविद्यालयातील गणित सहयोगी प्रा.डॉ.. सुधीर येवले, सहयोगी
$\begin{array}{ll}\text { विभागच्यावतीने रष्षीय गणित दिवस म्हणन } & \text { प्रा. डॉ.मके पी.एस, डॉ..नवनाथ पवळे, }\end{array}$
 जयंती साजी करण्यात आली. या्र्रसंगी प्रा.विक्षल गुंड, ग्रा.संदीप संपाळ, डॉ.चौधर महान गणितज श्रीनिवास रमानुजन यांच्या यू.एन, डॉं.धम्मपाल घुंबरे, डॉ.चेतना $\begin{array}{ll}\text { प्रतिमेस पुष्पहार अर्पण करून अभिवादन डोंगळीकर, कार्मालययीन अधिक्षक शेळके } \\ \text { करण्यात आले. } & \text { एन.ए., उसाकांत खे डकर तसे च }\end{array}$ याप्रसंगी महाविद्यालयाचे प्राचर्य डॉ.विध्धास कंधारो, विजय गाडेका ग्राचित ड़ॉ.विध्धास कंधारे, विजय गाडेकर, गणित कर्मचारी, विद्या
विभागचे प्रमख़ प्रा.आर. बी.घाडो, डो. तुपे उपस्थित होते. द्यालयातील शिक्षक, शिक्षकेतर


Poster wall Republic Day 26/01/2023

To organizing seminar-class B.sc T.Y Date: 29/09/2022


To organizing Group Discussion

H.O.D

Mr. Ghadge.R.B

